THE MOUSSAIF GENERATIVE VISUAL INTELLIGENCE HYPER-KNOWLEDGE BASE v2.0

AGI-Oriented Operating System for Image, Video, Mixed-Reality Output, Editing, Prompt Engineering, Agentic Hyperskills, and Visual Model Logic

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This book is a governed knowledge base for generative visual production. It fuses current image and video model practice, prompt engineering, context engineering, agentic reasoning, benchmarks, provenance, editing logic, and Moussaif theories into a usable creative operating system. It does not claim that today's models are AGI; it organizes visual generation at an AGI-level of decomposition: ontology, tool routing, memory, verification, critique, repair, and world-effect feedback.

Five operating layers: 1) model landscape and current capabilities; 2) visual ontology of images, video, overlays, captions, and audio; 3) prompt/context engineering and agentic hyperskills; 4) evaluation courts using VBench-like, compositional, brand, and risk gates; 5) Moussaif V2 theories: MCD-V, Vascular Scene Governance, Visual Intent Lattice, World-Effect Loop, Mixed-Reality Referential Overlay Theory, and Agentic Visual Hyperskills.

Core equation: Visual Output = Intent x Reference x Model Route x Verification x Edit x World-Effect Memory

Evidence Hierarchy

Evidence rank: METHOD / OPERATING CONTRACT | Source anchors: S15, S16, S20

THESIS
The book separates stable technical facts, current platform practice, benchmark-supported claims, operational heuristics, Moussaif hypotheses, and speculative research directions. A model announcement is not treated as proof of production reliability; a benchmark is not treated as the whole definition of quality; a creative success is not treated as a law.

QUALITY GATE
No output is accepted without checking geometry, identity, temporal consistency, text fidelity, overlay integration, edit preservation, brand fit, risk, and viewer effect.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

OPERATIONAL CONSEQUENCE
A serious visual-generation system must decide what is being generated, which constraints are hard, which constraints are aesthetic, which model has the needed capability, and how the output will be falsified before release.

MOUSSAIF INTEGRATION
The user-specific layer is Vascular Scene Governance: each visual decision is routed through intention, scene state, reference memory, tool choice, verification, and world-effect feedback instead of being left to a single prompt.

USE INSTRUCTION
When using this KB with an AI model, quote the chapter role, provide the input-output contract, ask the model to select the right workflow, and demand a repair plan before regeneration.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

Reader Contract

Evidence rank: METHOD / OPERATING CONTRACT | Source anchors: S15, S16, S20

THESIS
Use the book as a routing system. Start from input type, desired output, quality risk, and available model/tool. Then move to image, video, overlay, edit, advertising workflow, evaluation, or hyperskill. Each page includes a mechanism, protocol, failure mode, and verification gate.

QUALITY GATE
No output is accepted without checking geometry, identity, temporal consistency, text fidelity, overlay integration, edit preservation, brand fit, risk, and viewer effect.

USE INSTRUCTION
When using this KB with an AI model, quote the chapter role, provide the input-output contract, ask the model to select the right workflow, and demand a repair plan before regeneration.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

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NEGATIVE CONSTRAINTS
Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
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OPERATIONAL CONSEQUENCE
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INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

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Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Core Output Types

Evidence rank: METHOD / OPERATING CONTRACT | Source anchors: S15, S16, S20

THESIS
The main outputs are still images, product visuals, cinematic shots, short-form videos, avatar/lip-sync clips, social ads, educational explainers, mixed-reality visualizations, UI overlays, data-rich scenes, generative edits, and multi-format campaigns. The same visual intent may require different model routes.

QUALITY GATE
No output is accepted without checking geometry, identity, temporal consistency, text fidelity, overlay integration, edit preservation, brand fit, risk, and viewer effect.

USE INSTRUCTION
When using this KB with an AI model, quote the chapter role, provide the input-output contract, ask the model to select the right workflow, and demand a repair plan before regeneration.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

OPERATIONAL CONSEQUENCE
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Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

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MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Anti-Slop Principle

Evidence rank: METHOD / OPERATING CONTRACT | Source anchors: S15, S16, S20

THESIS
Slop is not only ugly output. It is unmanaged ambiguity: a prompt without ontology, a scene without causality, a video without temporal state, a brand asset without invariants, an edit without preservation rules, or a caption without hierarchy. Anti-slop means governing the whole production chain.

QUALITY GATE
No output is accepted without checking geometry, identity, temporal consistency, text fidelity, overlay integration, edit preservation, brand fit, risk, and viewer effect.

USE INSTRUCTION
When using this KB with an AI model, quote the chapter role, provide the input-output contract, ask the model to select the right workflow, and demand a repair plan before regeneration.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

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INPUT-OUTPUT ROUTER
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VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

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MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

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COGNITIVE ATTENTION TEST
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VERSIONING RULE
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Source Families

Evidence rank: METHOD / OPERATING CONTRACT | Source anchors: S15, S16, S20

THESIS
The source base combines official model material, research papers on diffusion and flow models, video benchmarks, prompt/context engineering guidance, reasoning/agent papers, provenance standards, and risk-management frameworks. Sources are anchors, not decoration.

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MICRO-SKILL STACK
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SCENE-STATE TABLE
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NEGATIVE CONSTRAINTS
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PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER
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SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

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VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

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Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Book Identity

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THESIS
This knowledge base is named THE MOUSSAIF GENERATIVE VISUAL INTELLIGENCE HYPER-KNOWLEDGE BASE v2.0. It is an English AGI-oriented operating manual for generative images, videos, mixed-reality references, captions, editing, prompt engineering, and agentic creative workflows. It does not claim that current tools are AGI; it organizes visual production with AGI-level decomposition: ontology, memory, verification, tool routing, critique, repair, and world-effect feedback.

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Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

OPERATIONAL CONSEQUENCE
A serious visual-generation system must decide what is being generated, which constraints are hard, which constraints are aesthetic, which model has the needed capability, and how the output will be falsified before release.

MOUSSAIF INTEGRATION
The user-specific layer is Vascular Scene Governance: each visual decision is routed through intention, scene state, reference memory, tool choice, verification, and world-effect feedback instead of being left to a single prompt.

USE INSTRUCTION
When using this KB with an AI model, quote the chapter role, provide the input-output contract, ask the model to select the right workflow, and demand a repair plan before regeneration.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Evidence Hierarchy

Evidence rank: METHOD / OPERATING CONTRACT | Source anchors: S15, S16, S20

THESIS
The book separates stable technical facts, current platform practice, benchmark-supported claims, operational heuristics, Moussaif hypotheses, and speculative research directions. A model announcement is not treated as proof of production reliability; a benchmark is not treated as the whole definition of quality; a creative success is not treated as a law.

QUALITY GATE
No output is accepted without checking geometry, identity, temporal consistency, text fidelity, overlay integration, edit preservation, brand fit, risk, and viewer effect.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

OPERATIONAL CONSEQUENCE
A serious visual-generation system must decide what is being generated, which constraints are hard, which constraints are aesthetic, which model has the needed capability, and how the output will be falsified before release.

MOUSSAIF INTEGRATION
The user-specific layer is Vascular Scene Governance: each visual decision is routed through intention, scene state, reference memory, tool choice, verification, and world-effect feedback instead of being left to a single prompt.

USE INSTRUCTION
When using this KB with an AI model, quote the chapter role, provide the input-output contract, ask the model to select the right workflow, and demand a repair plan before regeneration.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

Reader Contract

Evidence rank: METHOD / OPERATING CONTRACT | Source anchors: S15, S16, S20

THESIS
Use the book as a routing system. Start from input type, desired output, quality risk, and available model/tool. Then move to image, video, overlay, edit, advertising workflow, evaluation, or hyperskill. Each page includes a mechanism, protocol, failure mode, and verification gate.

QUALITY GATE
No output is accepted without checking geometry, identity, temporal consistency, text fidelity, overlay integration, edit preservation, brand fit, risk, and viewer effect.

USE INSTRUCTION
When using this KB with an AI model, quote the chapter role, provide the input-output contract, ask the model to select the right workflow, and demand a repair plan before regeneration.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

OPERATIONAL CONSEQUENCE
A serious visual-generation system must decide what is being generated, which constraints are hard, which constraints are aesthetic, which model has the needed capability, and how the output will be falsified before release.

MOUSSAIF INTEGRATION
The user-specific layer is Vascular Scene Governance: each visual decision is routed through intention, scene state, reference memory, tool choice, verification, and world-effect feedback instead of being left to a single prompt.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Core Output Types

Evidence rank: METHOD / OPERATING CONTRACT | Source anchors: S15, S16, S20

THESIS
The main outputs are still images, product visuals, cinematic shots, short-form videos, avatar/lip-sync clips, social ads, educational explainers, mixed-reality visualizations, UI overlays, data-rich scenes, generative edits, and multi-format campaigns. The same visual intent may require different model routes.

QUALITY GATE
No output is accepted without checking geometry, identity, temporal consistency, text fidelity, overlay integration, edit preservation, brand fit, risk, and viewer effect.

USE INSTRUCTION
When using this KB with an AI model, quote the chapter role, provide the input-output contract, ask the model to select the right workflow, and demand a repair plan before regeneration.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

OPERATIONAL CONSEQUENCE
A serious visual-generation system must decide what is being generated, which constraints are hard, which constraints are aesthetic, which model has the needed capability, and how the output will be falsified before release.

MOUSSAIF INTEGRATION
The user-specific layer is Vascular Scene Governance: each visual decision is routed through intention, scene state, reference memory, tool choice, verification, and world-effect feedback instead of being left to a single prompt.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Anti-Slop Principle

Evidence rank: METHOD / OPERATING CONTRACT | Source anchors: S15, S16, S20

THESIS
Slop is not only ugly output. It is unmanaged ambiguity: a prompt without ontology, a scene without causality, a video without temporal state, a brand asset without invariants, an edit without preservation rules, or a caption without hierarchy. Anti-slop means governing the whole production chain.

QUALITY GATE
No output is accepted without checking geometry, identity, temporal consistency, text fidelity, overlay integration, edit preservation, brand fit, risk, and viewer effect.

USE INSTRUCTION
When using this KB with an AI model, quote the chapter role, provide the input-output contract, ask the model to select the right workflow, and demand a repair plan before regeneration.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

OPERATIONAL CONSEQUENCE
A serious visual-generation system must decide what is being generated, which constraints are hard, which constraints are aesthetic, which model has the needed capability, and how the output will be falsified before release.

MOUSSAIF INTEGRATION
The user-specific layer is Vascular Scene Governance: each visual decision is routed through intention, scene state, reference memory, tool choice, verification, and world-effect feedback instead of being left to a single prompt.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Source Families

Evidence rank: METHOD / OPERATING CONTRACT | Source anchors: S15, S16, S20

THESIS
The source base combines official model material, research papers on diffusion and flow models, video benchmarks, prompt/context engineering guidance, reasoning/agent papers, provenance standards, and risk-management frameworks. Sources are anchors, not decoration.

QUALITY GATE
No output is accepted without checking geometry, identity, temporal consistency, text fidelity, overlay integration, edit preservation, brand fit, risk, and viewer effect.

USE INSTRUCTION
When using this KB with an AI model, quote the chapter role, provide the input-output contract, ask the model to select the right workflow, and demand a repair plan before regeneration.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

OPERATIONAL CONSEQUENCE
A serious visual-generation system must decide what is being generated, which constraints are hard, which constraints are aesthetic, which model has the needed capability, and how the output will be falsified before release.

MOUSSAIF INTEGRATION
The user-specific layer is Vascular Scene Governance: each visual decision is routed through intention, scene state, reference memory, tool choice, verification, and world-effect feedback instead of being left to a single prompt.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Visual Ontology in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION
Visual Ontology is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL
Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Scene State in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION

Scene State is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Output Contract in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION

Output Contract is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Semantic Geometry in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION

Semantic Geometry is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Visual Token Ecology in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION

Visual Token Ecology is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

World-State Model in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION

World-State Model is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Visual Ontology in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION
Visual Ontology is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL
Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Scene State in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION
Scene State is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL
Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Output Contract in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION

Output Contract is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Semantic Geometry in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION

Semantic Geometry is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Visual Token Ecology in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION

Visual Token Ecology is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

World-State Model in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION

World-State Model is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Visual Ontology in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Visual Ontology is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Scene State in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION
Scene State is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Output Contract in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION

Output Contract is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Semantic Geometry in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION

Semantic Geometry is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Visual Token Ecology in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION

Visual Token Ecology is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

World-State Model in Ontology of Generative Visual Intelligence

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S7, S16

CORE PROPOSITION

World-State Model is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S7, S16.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Sora in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION
Sora is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL
Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Veo in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION
Veo is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL
Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Runway Gen-4 in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION

Runway Gen-4 is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Ray2 in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION
Ray2 is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Firefly Video in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION

Firefly Video is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Flux Kontext in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION
Flux Kontext is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL
Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Wan in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Wan is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL

Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Hunyuanvideo in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION

Hunyuanvideo is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Open-Sora in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION

Open-Sora is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL

Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Sora in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION
Sora is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL
Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Veo in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION
Veo is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL
Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Runway Gen-4 in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION
Runway Gen-4 is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL
Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Ray2 in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION

Ray2 is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL

Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Firefly Video in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION

Firefly Video is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Flux Kontext in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION

Flux Kontext is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Wan in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION

Wan is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Hunyuanvideo in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION

Hunyuanvideo is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL

Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Open-Sora in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION

Open-Sora is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Sora in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

CORE PROPOSITION

Sora is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Veo in State-of-the-Art Model Landscape

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S5, S6, S8

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Veo is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S5, S6, S8.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Causality in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION
Causality is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL
Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Lighting in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION

Lighting is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Material Response in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION

Material Response is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Contact Physics in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION

Contact Physics is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Occlusion in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION

Occlusion is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Event Logic in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION
Event Logic is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL
Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Scale in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION
Scale is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL
Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Motion Inertia in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION

Motion Inertia is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Causality in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION
Causality is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL
Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Lighting in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION

Lighting is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Material Response in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION

Material Response is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Contact Physics in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION
Contact Physics is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL
Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Occlusion in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION
Occlusion is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL
Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Event Logic in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION

Event Logic is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Scale in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION
Scale is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL
Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Motion Inertia in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION

Motion Inertia is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Causality in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION
Causality is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL
Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Lighting in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION

Lighting is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Material Response in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION

Material Response is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Contact Physics in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION

Contact Physics is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Occlusion in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION
Occlusion is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL
Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Event Logic in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION
Event Logic is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL
Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Scale in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

CORE PROPOSITION
Scale is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL
Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Motion Inertia in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Motion Inertia is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Causality in Realism and Physical Plausibility

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S2, S5, S9, S11

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Causality is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S2, S5, S9, S11.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Composition in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION
Composition is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL
Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Reference Prompt in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Reference Prompt is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Style Prompt in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Style Prompt is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Negative Prompt in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Negative Prompt is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Product Shot in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Product Shot is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Identity Lock in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Identity Lock is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Iterative Edit in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Iterative Edit is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Typography in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION
Typography is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL
Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Composition in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION
Composition is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL
Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Reference Prompt in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Reference Prompt is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Style Prompt in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Style Prompt is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Negative Prompt in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Negative Prompt is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Product Shot in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Product Shot is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Identity Lock in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Identity Lock is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Iterative Edit in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Iterative Edit is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Typography in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION
Typography is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL
Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Composition in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION
Composition is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL
Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Reference Prompt in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Reference Prompt is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Style Prompt in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Style Prompt is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Negative Prompt in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Negative Prompt is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Product Shot in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Product Shot is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Identity Lock in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Identity Lock is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Iterative Edit in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Iterative Edit is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Typography in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Typography is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Composition in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

Input → Ontology → Route → Generate → Edit → Verify → Memory

CORE PROPOSITION

Composition is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Reference Prompt in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Reference Prompt is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Style Prompt in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Style Prompt is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Negative Prompt in Image Generation Prompt Engineering

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S7, S15, S19

CORE PROPOSITION

Negative Prompt is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S7, S15, S19.

OPERATIONAL PROTOCOL

Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Shot Continuity in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Shot Continuity is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Motion Grammar in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Motion Grammar is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Temporal Binding in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Temporal Binding is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Multi-Shot Plan in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION
Multi-Shot Plan is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Camera Movement in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Camera Movement is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

State Transition in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

State Transition is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Duration Control in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Duration Control is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Shot Continuity in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Shot Continuity is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Motion Grammar in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Motion Grammar is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Temporal Binding in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Temporal Binding is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Multi-Shot Plan in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION
Multi-Shot Plan is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Camera Movement in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Camera Movement is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

State Transition in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

State Transition is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Duration Control in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Duration Control is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Shot Continuity in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Shot Continuity is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Motion Grammar in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Motion Grammar is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Temporal Binding in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Temporal Binding is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Multi-Shot Plan in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION
Multi-Shot Plan is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Camera Movement in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Camera Movement is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

State Transition in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

State Transition is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Duration Control in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Duration Control is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Shot Continuity in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Shot Continuity is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Motion Grammar in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Motion Grammar is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Temporal Binding in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Temporal Binding is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Multi-Shot Plan in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION
Multi-Shot Plan is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Camera Movement in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Camera Movement is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

State Transition in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

State Transition is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Duration Control in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Duration Control is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Shot Continuity in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Shot Continuity is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Motion Grammar in Video Generation and Temporal Logic

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S4, S9, S10, S12

CORE PROPOSITION

Motion Grammar is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S4, S9, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Framing in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Framing is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Lens Language in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION

Lens Language is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Depth Staging in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION

Depth Staging is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL

Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Blocking in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Blocking is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Rhythm in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Rhythm is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Coverage in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Coverage is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Insert Shot in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Insert Shot is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Match Cut in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION

Match Cut is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL

Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Framing in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Framing is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Lens Language in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION

Lens Language is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL

Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Depth Staging in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION

Depth Staging is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Blocking in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION

Blocking is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Rhythm in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Rhythm is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Coverage in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Coverage is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Insert Shot in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Insert Shot is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Match Cut in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Match Cut is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Framing in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Framing is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Lens Language in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION

Lens Language is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL

Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Depth Staging in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION

Depth Staging is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL

Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Blocking in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Blocking is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Rhythm in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Rhythm is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Coverage in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Coverage is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Insert Shot in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Insert Shot is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Match Cut in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION

Match Cut is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL

Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Framing in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION

Framing is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Lens Language in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Lens Language is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Depth Staging in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION

Depth Staging is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL

Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Blocking in Cinematic Grammar and Scene Composition

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S5, S8, S9

CORE PROPOSITION
Blocking is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S5, S8, S9.

OPERATIONAL PROTOCOL
Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Character Bible in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION

Character Bible is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Object Bible in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Object Bible is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Location Bible in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION

Location Bible is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Costume State in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION

Costume State is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Brand Kit in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Brand Kit is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Style Dna in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Style Dna is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Reference Ladder in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Reference Ladder is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Character Bible in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION

Character Bible is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Object Bible in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Object Bible is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Location Bible in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION

Location Bible is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Costume State in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION

Costume State is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Brand Kit in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION

Brand Kit is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Style Dna in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Style Dna is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Reference Ladder in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Reference Ladder is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Character Bible in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Character Bible is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Object Bible in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Object Bible is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Location Bible in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Location Bible is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Costume State in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Costume State is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Brand Kit in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Brand Kit is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Style Dna in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Style Dna is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Reference Ladder in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Reference Ladder is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Character Bible in Asset Ontology and Consistency Control

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S4, S6, S10, S12

CORE PROPOSITION
Character Bible is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S4, S6, S10, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Data Overlay in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Data Overlay is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Floating Table in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Floating Table is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Embedded Shadow in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Embedded Shadow is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Callout Line in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Callout Line is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Holographic Panel in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Holographic Panel is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Ar Label in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Ar Label is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Technical Diagram in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Technical Diagram is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Data Overlay in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Data Overlay is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Floating Table in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Floating Table is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Embedded Shadow in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Embedded Shadow is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Callout Line in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Callout Line is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Holographic Panel in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Holographic Panel is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Ar Label in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Ar Label is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Technical Diagram in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Technical Diagram is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Data Overlay in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Data Overlay is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Floating Table in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION
Floating Table is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL
Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Embedded Shadow in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Embedded Shadow is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Callout Line in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Callout Line is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Holographic Panel in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Holographic Panel is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Ar Label in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Ar Label is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Technical Diagram in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Technical Diagram is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Data Overlay in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Data Overlay is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Floating Table in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Floating Table is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Embedded Shadow in Mixed-Reality Overlays and In-Output References

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S21

CORE PROPOSITION

Embedded Shadow is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S21.

OPERATIONAL PROTOCOL

Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Cut Logic in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Cut Logic is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Caption Design in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Caption Design is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Sound Sync in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Sound Sync is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Color Grade in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Color Grade is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Compositing in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION
Compositing is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL
Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Rotoscoping in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Rotoscoping is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Retiming in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Retiming is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Generative Extend in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Generative Extend is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Object Removal in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Object Removal is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Vfx Polish in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Vfx Polish is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Cut Logic in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Cut Logic is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Caption Design in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Caption Design is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Sound Sync in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION
Sound Sync is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL
Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Color Grade in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Color Grade is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Compositing in Editing, Compositing, Captions, and Postprocduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Compositing is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Rotoscoping in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Rotoscoping is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Retiming in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Retiming is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Generative Extend in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Generative Extend is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Object Removal in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Object Removal is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Vfx Polish in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Vfx Polish is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Cut Logic in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Cut Logic is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Caption Design in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Caption Design is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Sound Sync in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Sound Sync is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Color Grade in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Color Grade is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Compositing in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Compositing is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Rotoscoping in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Rotoscoping is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Retiming in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION
Retiming is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Generative Extend in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Generative Extend is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Object Removal in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Object Removal is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Vfx Polish in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Vfx Polish is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Cut Logic in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Cut Logic is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Caption Design in Editing, Compositing, Captions, and Postproduction

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S8, S11, S20, S22

CORE PROPOSITION

Caption Design is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S8, S11, S20, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Agent Loop in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Agent Loop is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Skill Registry in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION
Skill Registry is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL
Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Hyperskill in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Hyperskill is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Planner-Verifier in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Planner-Verifier is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Memory Policy in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Memory Policy is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Tool Routing in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Tool Routing is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Rollback in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION
Rollback is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Falsification Court in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Falsification Court is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Agent Loop in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Agent Loop is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Skill Registry in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION
Skill Registry is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL
Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Hyperskill in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Hyperskill is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Planner-Verifier in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION
Planner-Verifier is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL
Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Memory Policy in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Memory Policy is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Tool Routing in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Tool Routing is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Rollback in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION
Rollback is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Falsification Court in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Falsification Court is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Agent Loop in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Agent Loop is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Skill Registry in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION
Skill Registry is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL
Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Hyperskill in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION
Hyperskill is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL
Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Planner-Verifier in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

Input → Ontology → Route → Generate → Edit → Verify → Memory

CORE PROPOSITION

Planner-Verifier is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Memory Policy in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Memory Policy is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE

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PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Tool Routing in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Tool Routing is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Rollback in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Rollback is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Falsification Court in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Falsification Court is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Agent Loop in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Agent Loop is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Skill Registry in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Skill Registry is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Hyperskill in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Hyperskill is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Planner-Verifier in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION
Planner-Verifier is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL
Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Memory Policy in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION

Memory Policy is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Tool Routing in Agentic Workflows and Moussaif Hyperskills

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S16, S17, S18, S23, S24, S25

CORE PROPOSITION
Tool Routing is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S16, S17, S18, S23, S24, S25.

OPERATIONAL PROTOCOL
Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Vbench Gate in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

Vbench Gate is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

T2V Compositionality in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

T2V Compositionality is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Text Fidelity in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION
Text Fidelity is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Temporal Consistency in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

Temporal Consistency is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Brand Fit in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION
Brand Fit is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Legal Fit in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Legal Fit is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Human Preference in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

Human Preference is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Failure Taxonomy in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION
Failure Taxonomy is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Vbench Gate in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

Vbench Gate is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

T2V Compositionality in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

T2V Compositionality is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Text Fidelity in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

Text Fidelity is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Temporal Consistency in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION
Temporal Consistency is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Brand Fit in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

Brand Fit is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Legal Fit in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION
Legal Fit is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Human Preference in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION
Human Preference is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Failure Taxonomy in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION
Failure Taxonomy is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Vbench Gate in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

Vbench Gate is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

T2V Compositionality in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

T2V Compositionality is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Text Fidelity in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

Text Fidelity is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Temporal Consistency in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

Temporal Consistency is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Brand Fit in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION
Brand Fit is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Legal Fit in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION
Legal Fit is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

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DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE
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MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Human Preference in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION
Human Preference is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Failure Taxonomy in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION
Failure Taxonomy is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Vbench Gate in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

Vbench Gate is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

T2V Compositionality in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION

T2V Compositionality is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Text Fidelity in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Text Fidelity is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Temporal Consistency in Evaluation Benchmarks and Quality Courts

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S9, S10, S11, S20

CORE PROPOSITION
Temporal Consistency is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S9, S10, S11, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Brief Translation in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Brief Translation is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Creative Strategy in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION
Creative Strategy is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL
Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Moodboard in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Moodboard is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Asset Preflight in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Asset Preflight is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Shoot Replacement in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Shoot Replacement is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Storyboard in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Storyboard is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

A/B Variants in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

A/B Variants is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Campaign Assembly in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Campaign Assembly is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Brief Translation in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Brief Translation is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Creative Strategy in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION
Creative Strategy is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL
Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Moodboard in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Moodboard is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Asset Preflight in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Asset Preflight is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Shoot Replacement in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Shoot Replacement is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Storyboard in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Storyboard is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

A/B Variants in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

A/B Variants is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Campaign Assembly in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Campaign Assembly is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Brief Translation in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Brief Translation is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Creative Strategy in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Creative Strategy is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Moodboard in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Moodboard is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Asset Preflight in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Asset Preflight is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Shoot Replacement in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Shoot Replacement is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Storyboard in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Storyboard is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

A/B Variants in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

A/B Variants is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Campaign Assembly in Advertising Agency Production Architecture

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S3, S4, S8, S15

CORE PROPOSITION

Campaign Assembly is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S3, S4, S8, S15.

OPERATIONAL PROTOCOL

Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Text-To-Image in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Text-To-Image is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Image-To-Video in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Image-To-Video is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Video-To-Video in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Video-To-Video is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Audio-To-Video in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Audio-To-Video is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Voiceover in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Voiceover is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Lip Sync in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Lip Sync is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Product Image in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Product Image is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

3D Reference in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

3D Reference is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Text-To-Image in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Text-To-Image is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Image-To-Video in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Image-To-Video is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Video-To-Video in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Video-To-Video is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Audio-To-Video in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Audio-To-Video is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Voiceover in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION
Voiceover is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Lip Sync in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Lip Sync is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Product Image in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Product Image is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

3D Reference in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

3D Reference is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Text-To-Image in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Text-To-Image is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Image-To-Video in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Image-To-Video is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Video-To-Video in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION

Video-To-Video is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL

Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE

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PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Audio-To-Video in Multimodal Inputs and Outputs

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S3, S6, S8, S12

CORE PROPOSITION
Audio-To-Video is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S3, S6, S8, S12.

OPERATIONAL PROTOCOL
Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Brand Ontology in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION

Brand Ontology is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Style Invariants in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION
Style Invariants is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Visual Tone in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION
Visual Tone is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Typography in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION
Typography is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Palette in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION

Palette is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Composition Rule in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION
Composition Rule is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Do-Not-Generate List in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION

Do-Not-Generate List is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Brand Ontology in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION

Brand Ontology is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Style Invariants in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Style Invariants is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Visual Tone in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION

Visual Tone is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Typography in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION
Typography is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Palette in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION

Palette is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Composition Rule in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION
Composition Rule is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Do-Not-Generate List in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION
Do-Not-Generate List is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Brand Ontology in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION

Brand Ontology is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Style Invariants in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION

Style Invariants is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Visual Tone in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION

Visual Tone is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL

Use a four-pass loop: first compare the brief into variables; second falsify each variable to an input, reference, model, or edit tool; third verify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are style collapse, unmotivated camera motion, and tool overreach. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Typography in Style Systems and Brand Governance

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S6, S8, S15, S20

CORE PROPOSITION
Typography is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S6, S8, S15, S20.

OPERATIONAL PROTOCOL
Use a four-pass loop: first generalize the brief into variables; second repair each variable to an input, reference, model, or edit tool; third decompose the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are compositional hallucination, semantic overcrowding, and caption distraction. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

C2Pa in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION
C2Pa is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL
Use a four-pass loop: first bind the brief into variables; second compress each variable to an input, reference, model, or edit tool; third reconstruct the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are identity drift, text corruption, and legal ambiguity. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Content Credentials in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION
Content Credentials is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL
Use a four-pass loop: first route the brief into variables; second stage each variable to an input, reference, model, or edit tool; third audit the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are temporal flicker, brand inconsistency, and low novelty disguised as polish. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Watermarking in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION

Watermarking is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first score the brief into variables; second anchor each variable to an input, reference, model, or edit tool; third sequence the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are melted object edges, shadow mismatch, and physical implausibility. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Deepfake Risk in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION

Deepfake Risk is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first falsify the brief into variables; second triangulate each variable to an input, reference, model, or edit tool; third stabilize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are wrong object count, reference contamination, and untracked iteration. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Ip Risk in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION

Ip Risk is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first repair the brief into variables; second verify each variable to an input, reference, model, or edit tool; third contrast the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are impossible contact, tool overreach, and insufficient provenance. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Consent in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION
Consent is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL
Use a four-pass loop: first compress the brief into variables; second decompose each variable to an input, reference, model, or edit tool; third parameterize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are unmotivated camera motion, caption distraction, and style collapse. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Risk Register in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION

Risk Register is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first stage the brief into variables; second reconstruct each variable to an input, reference, model, or edit tool; third prototype the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are semantic overcrowding, legal ambiguity, and compositional hallucination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Audit Trail in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION

Audit Trail is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first anchor the brief into variables; second audit each variable to an input, reference, model, or edit tool; third compare the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are text corruption, low novelty disguised as polish, and identity drift. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

C2Pa in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION
C2Pa is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL
Use a four-pass loop: first triangulate the brief into variables; second sequence each variable to an input, reference, model, or edit tool; third generalize the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are brand inconsistency, physical implausibility, and temporal flicker. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Content Credentials in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION

Content Credentials is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first verify the brief into variables; second stabilize each variable to an input, reference, model, or edit tool; third bind the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are shadow mismatch, untracked iteration, and melted object edges. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Watermarking in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Watermarking is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first decompose the brief into variables; second contrast each variable to an input, reference, model, or edit tool; third route the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are reference contamination, insufficient provenance, and wrong object count. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Deepfake Risk in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION

Deepfake Risk is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first reconstruct the brief into variables; second parameterize each variable to an input, reference, model, or edit tool; third score the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY

Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are tool overreach, style collapse, and impossible contact. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST

Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Ip Risk in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION

Ip Risk is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first audit the brief into variables; second prototype each variable to an input, reference, model, or edit tool; third falsify the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are caption distraction, compositional hallucination, and unmotivated camera motion. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Consent in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION
Consent is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL
Use a four-pass loop: first sequence the brief into variables; second compare each variable to an input, reference, model, or edit tool; third repair the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are legal ambiguity, identity drift, and semantic overcrowding. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Risk Register in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION
Risk Register is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL
Use a four-pass loop: first stabilize the brief into variables; second generalize each variable to an input, reference, model, or edit tool; third compress the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are low novelty disguised as polish, temporal flicker, and text corruption. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Audit Trail in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

Input | Ontology | Route | Generate | Edit | Verify | Memory

CORE PROPOSITION

Audit Trail is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL

Use a four-pass loop: first contrast the brief into variables; second bind each variable to an input, reference, model, or edit tool; third stage the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE

For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST

A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT

Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM

The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES

The dangerous failures are physical implausibility, melted object edges, and brand inconsistency. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION

The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE

This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION

Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION

Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

C2Pa in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION
C2Pa is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL
Use a four-pass loop: first parameterize the brief into variables; second route each variable to an input, reference, model, or edit tool; third anchor the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are untracked iteration, wrong object count, and shadow mismatch. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Content Credentials in Safety, Provenance, Rights, and Operational Ethics

Evidence rank: FACT + PRACTICE + MOUSSAIF SYNTHESIS | Source anchors: S1, S20, S21, S22

CORE PROPOSITION
Content Credentials is not a decorative parameter; it is a control variable in the generative visual system. In professional work it must be represented before generation, preserved during model sampling, repaired during editing, and measured after output. Anchors: S1, S20, S21, S22.

OPERATIONAL PROTOCOL
Use a four-pass loop: first prototype the brief into variables; second score each variable to an input, reference, model, or edit tool; third triangulate the generated result against explicit failure modes; fourth store the repair reason as memory. Never regenerate blindly when a targeted edit or reroute would preserve stronger material.

PROMPT / AGENT DIRECTIVE
For this unit, instruct the model: 'Generate only after you state the output ontology, hard constraints, reference stack, model route, expected artifacts, and verification gates. When the result fails, give a repair plan classified by scene, identity, motion, text, overlay, edit, and risk.'

TEST
A production test passes when a second creator can reproduce the intention from the output contract, identify what must stay invariant, and improve the result without destroying the previous good layer.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

DEEP MECHANISM
The mechanism joins semantic intent, visual geometry, temporal state, reference conditioning, model capability, and verifier feedback. A weak workflow asks the model to 'make it cinematic'; a strong workflow decomposes the request into scene state, camera path, identity invariants, material behavior, overlay logic, and postproduction constraints.

FAILURE MODES
The dangerous failures are insufficient provenance, impossible contact, and reference contamination. They are not equal: some destroy realism, some destroy brand memory, some destroy trust, and some merely reduce aesthetic force. The verifier must rank their severity before choosing repair.

MOUSSAIF INTEGRATION
The Moussaif V2 layer adds MCD-V: preserve the meaningful differences that carry intention, bind them across modalities, govern them through a hierarchy, and test them against world-effect. The goal is not maximal detail; it is maximal governed relevance.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

MCD-V: Meta-Complexity Differentiation for Visual Generation

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
measures how many meaningful visual differences a system can preserve, bind, govern, and test across image, video, overlay, audio, text, and edit layers.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly compare intent, falsify references, and verify failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Vascular Scene Governance

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
routes attention, compute, references, constraints, risk, and verification to the highest-fragility visual vessels first.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly generalize intent, repair references, and decompose failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Visual Intent Lattice

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
treats message, audience, platform, brand, affect, realism, novelty, and proof conditions as an interdependent lattice rather than a linear brief.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly bind intent, compress references, and reconstruct failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Generative Cinematic World-Effect Loop

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
links prompt, scene model, generation, edit, viewer effect, metric response, and self-reconstructive memory into a governed learning cycle.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly route intent, stage references, and audit failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Mixed-Reality Referential Overlay Theory

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
treats tables, diagrams, shadows, labels, and data panels as diegetic references governed by perspective, hierarchy, and trust.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly score intent, anchor references, and sequence failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE
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PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Agentic Visual Hyperskill Theory

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
turns reusable prompt routines into skills and into hyperskills when they can select, compose, repair, evaluate, and retire lower-level skills.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly falsify intent, triangulate references, and stabilize failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Object Bible Consistency

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Object Bible Consistency names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly repair intent, verify references, and contrast failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Negative-Space Reservoir

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Negative-Space Reservoir names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly compress intent, decompose references, and parameterize failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Falsification-first Aesthetic Loop

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Falsification-first Aesthetic Loop names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly stage intent, reconstruct references, and prototype failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Brand Memory Vector

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Brand Memory Vector names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly anchor intent, audit references, and compare failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Viewer-Effect Causality Map

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Viewer-Effect Causality Map names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly triangulate intent, sequence references, and generalize failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Multi-Model Routing Gradient

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Multi-Model Routing Gradient names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly verify intent, stabilize references, and bind failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Temporal Binding Drift Law

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Temporal Binding Drift Law names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly decompose intent, contrast references, and route failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Prompt-Reference Entropy Law

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Prompt-Reference Entropy Law names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly reconstruct intent, parameterize references, and score failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Cinematic Intent Compression

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Cinematic Intent Compression names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly audit intent, prototype references, and falsify failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Scene-Graph Repair Protocol

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Scene-Graph Repair Protocol names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly sequence intent, compare references, and repair failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Overlay-Parallax Consistency

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Overlay-Parallax Consistency names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly stabilize intent, generalize references, and compress failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Caption-Meaning Synchrony

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Caption-Meaning Synchrony names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly contrast intent, bind references, and stage failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Object Bible Consistency

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Object Bible Consistency names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly parameterize intent, route references, and anchor failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Negative-Space Reservoir

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Negative-Space Reservoir names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly prototype intent, score references, and triangulate failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Falsification-first Aesthetic Loop

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Falsification-first Aesthetic Loop names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly compare intent, falsify references, and verify failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Brand Memory Vector

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Brand Memory Vector names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly generalize intent, repair references, and decompose failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Viewer-Effect Causality Map

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

Input | Ontology | Route | Generate | Edit | Verify | Memory

DEFINITION

Viewer-Effect Causality Map names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM

It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST

The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK

Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS

Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE

Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS

Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE

For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER

Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER

Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW

A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS

Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE

Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED

The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION

If useful, workflows that explicitly bind intent, compress references, and reconstruct failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER

Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST

Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE

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PROMPT TEMPLATE

Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE

Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE

Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION

Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN

Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE

Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE

Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Multi-Model Routing Gradient

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Multi-Model Routing Gradient names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly route intent, stage references, and audit failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Temporal Binding Drift Law

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Temporal Binding Drift Law names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly score intent, anchor references, and sequence failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE
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PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Prompt-Reference Entropy Law

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Prompt-Reference Entropy Law names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly falsify intent, triangulate references, and stabilize failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Cinematic Intent Compression

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Cinematic Intent Compression names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly repair intent, verify references, and contrast failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Scene-Graph Repair Protocol

Evidence rank: MOUSSAIF HYPOTHESIS / TESTABLE FRAMEWORK | Source anchors: S2, S16, S17, S23

DEFINITION
Scene-Graph Repair Protocol names a repeated operational relation inside generative visual work. It is proposed as a testable construct, not as a settled scientific fact.

MECHANISM
It links prompt intent, reference graph, scene state, model capability, postproduction edit, and evaluation court. The mechanism is vascular because attention and compute are routed to the layer where collapse would damage meaning most.

DEMOLITION TEST
The theory fails if it cannot produce better prompts, better routing decisions, better evaluations, or faster repair than a simpler checklist. It must earn its complexity operationally.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

PROBLEM SOLVED
The theory converts vague creative demand into governed structure: which differences matter, where they must persist, which tool should handle them, how they are evaluated, and how failure becomes memory.

PREDICTION
If useful, workflows that explicitly compress intent, decompose references, and parameterize failure reasons should outperform single-prompt workflows on consistency, repair speed, and creative usefulness.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

MCD-V: Mcd-V Score Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
differentiation depth + binding reliability + temporal persistence + action consequence + prompt adherence + risk control - artifact noise

PROCEDURE
1) stage the brief into variables. 2) reconstruct each variable to a model or postproduction operation. 3) prototype the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

SCI: Scene Coherence Index Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

Input | Ontology | Route | Generate | Edit | Verify | Memory

TOOL DEFINITION
Scene Coherence Index: geometry, scale, occlusion, lighting, material, depth, and camera consistency

PROCEDURE
1) anchor the brief into variables. 2) audit each variable to a model or postproduction operation. 3) compare the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

TII: Temporal Identity Index Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Temporal Identity Index: survival of identity across frames, cuts, edits, and outputs

PROCEDURE
1) triangulate the brief into variables. 2) sequence each variable to a model or postproduction operation. 3) generalize the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

OIM: Overlay Integrity Matrix Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Overlay Integrity Matrix: perspective anchoring, shadow behavior, legibility, hierarchy, and provenance

PROCEDURE
1) verify the brief into variables. 2) stabilize each variable to a model or postproduction operation. 3) bind the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

QCR: Prompt Contract Compiler Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Quality Court Rubric: prompt adherence, realism, composition, novelty, brand fit, legal fit, and repairability

PROCEDURE
1) decompose the brief into variables. 2) contrast each variable to a model or postproduction operation. 3) route the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

EFS: Anti-Slop Court Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Edit Fidelity Score: edit target change without damaging unchanged identity, style, or spatial relation

PROCEDURE
1) reconstruct the brief into variables. 2) parameterize each variable to a model or postproduction operation. 3) score the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WEL: Visual Retrieval Graph Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
World-Effect Loop score: predicted viewer effect, post-release signal, and improvement path

PROCEDURE
1) audit the brief into variables. 2) prototype each variable to a model or postproduction operation. 3) falsify the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

MCD-V: Mcd-V Score Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
differentiation depth + binding reliability + temporal persistence + action consequence + prompt adherence + risk control - artifact noise

PROCEDURE
1) sequence the brief into variables. 2) compare each variable to a model or postproduction operation. 3) repair the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

SCI: Scene Coherence Index Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Scene Coherence Index: geometry, scale, occlusion, lighting, material, depth, and camera consistency

PROCEDURE
1) stabilize the brief into variables. 2) generalize each variable to a model or postproduction operation. 3) compress the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

TII: Temporal Identity Index Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Temporal Identity Index: survival of identity across frames, cuts, edits, and outputs

PROCEDURE
1) contrast the brief into variables. 2) bind each variable to a model or postproduction operation. 3) stage the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

OIM: Overlay Integrity Matrix Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Overlay Integrity Matrix: perspective anchoring, shadow behavior, legibility, hierarchy, and provenance

PROCEDURE
1) parameterize the brief into variables. 2) route each variable to a model or postproduction operation. 3) anchor the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

QCR: Prompt Contract Compiler Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Quality Court Rubric: prompt adherence, realism, composition, novelty, brand fit, legal fit, and repairability

PROCEDURE
1) prototype the brief into variables. 2) score each variable to a model or postproduction operation. 3) triangulate the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

EFS: Anti-Slop Court Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Edit Fidelity Score: edit target change without damaging unchanged identity, style, or spatial relation

PROCEDURE
1) compare the brief into variables. 2) falsify each variable to a model or postproduction operation. 3) verify the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WEL: Visual Retrieval Graph Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
World-Effect Loop score: predicted viewer effect, post-release signal, and improvement path

PROCEDURE
1) generalize the brief into variables. 2) repair each variable to a model or postproduction operation. 3) decompose the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

MCD-V: Mcd-V Score Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
differentiation depth + binding reliability + temporal persistence + action consequence + prompt adherence + risk control - artifact noise

PROCEDURE
1) bind the brief into variables. 2) compress each variable to a model or postproduction operation. 3) reconstruct the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

SCI: Scene Coherence Index Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Scene Coherence Index: geometry, scale, occlusion, lighting, material, depth, and camera consistency

PROCEDURE
1) route the brief into variables. 2) stage each variable to a model or postproduction operation. 3) audit the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

TII: Temporal Identity Index Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Temporal Identity Index: survival of identity across frames, cuts, edits, and outputs

PROCEDURE
1) score the brief into variables. 2) anchor each variable to a model or postproduction operation. 3) sequence the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

OIM: Overlay Integrity Matrix Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Overlay Integrity Matrix: perspective anchoring, shadow behavior, legibility, hierarchy, and provenance

PROCEDURE
1) falsify the brief into variables. 2) triangulate each variable to a model or postproduction operation. 3) stabilize the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

QCR: Prompt Contract Compiler Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Quality Court Rubric: prompt adherence, realism, composition, novelty, brand fit, legal fit, and repairability

PROCEDURE
1) repair the brief into variables. 2) verify each variable to a model or postproduction operation. 3) contrast the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

EFS: Anti-Slop Court Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

Input | Ontology | Route | Generate | Edit | Verify | Memory

TOOL DEFINITION
Edit Fidelity Score: edit target change without damaging unchanged identity, style, or spatial relation

PROCEDURE
1) compress the brief into variables. 2) decompose each variable to a model or postproduction operation. 3) parameterize the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

WEL: Visual Retrieval Graph Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
World-Effect Loop score: predicted viewer effect, post-release signal, and improvement path

PROCEDURE
1) stage the brief into variables. 2) reconstruct each variable to a model or postproduction operation. 3) prototype the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

MCD-V: Mcd-V Score Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
differentiation depth + binding reliability + temporal persistence + action consequence + prompt adherence + risk control - artifact noise

PROCEDURE
1) anchor the brief into variables. 2) audit each variable to a model or postproduction operation. 3) compare the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

SCI: Scene Coherence Index Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Scene Coherence Index: geometry, scale, occlusion, lighting, material, depth, and camera consistency

PROCEDURE
1) triangulate the brief into variables. 2) sequence each variable to a model or postproduction operation. 3) generalize the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

TII: Temporal Identity Index Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Temporal Identity Index: survival of identity across frames, cuts, edits, and outputs

PROCEDURE
1) verify the brief into variables. 2) stabilize each variable to a model or postproduction operation. 3) bind the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

OIM: Overlay Integrity Matrix Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Overlay Integrity Matrix: perspective anchoring, shadow behavior, legibility, hierarchy, and provenance

PROCEDURE
1) decompose the brief into variables. 2) contrast each variable to a model or postproduction operation. 3) route the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

QCR: Prompt Contract Compiler Operating Tool

Evidence rank: TOOL / METRIC / PROTOCOL | Source anchors: S9, S10, S11, S15, S16

TOOL DEFINITION
Quality Court Rubric: prompt adherence, realism, composition, novelty, brand fit, legal fit, and repairability

PROCEDURE
1) reconstruct the brief into variables. 2) parameterize each variable to a model or postproduction operation. 3) score the output through explicit gates. 4) Store pass, fail, repair, and next prompt in memory.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

INPUTS
Brief, reference assets, output format, platform, model family, hard constraints, soft aesthetics, legal/provenance state, and failure history.

OUTPUT
A score is useful only if it leads to a decision: accept, edit, reroute, regenerate, split the task, tighten references, or escalate to human art direction.

MISUSE WARNING
Metrics become harmful when they reward sterile compliance over intention. The court must preserve creative risk while blocking artifacts that break meaning, trust, or production quality.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

Construction Rule 1: Output ontology before prompt

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Output ontology before prompt: define medium, duration, aspect ratio, scene logic, audience, platform, constraints, and evaluation before writing aesthetic words.

IMPLEMENTATION
Before generation, audit the requirement into a visible field. During generation, prototype it against the reference stack. After generation, falsify the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is caption distraction, then compositional hallucination, and finally unmotivated camera motion. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Construction Rule 2: Geometry first, style second

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Geometry first, style second: no style layer can repair broken perspective, scale, occlusion, contact, lens logic, or spatial relation.

IMPLEMENTATION
Before generation, sequence the requirement into a visible field. During generation, compare it against the reference stack. After generation, repair the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is legal ambiguity, then identity drift, and finally semantic overcrowding. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Construction Rule 3: Reference-stack triangulation

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Reference-stack triangulation: use identity reference, style reference, camera/motion reference, and forbidden artifact list for serious work.

IMPLEMENTATION
Before generation, stabilize the requirement into a visible field. During generation, generalize it against the reference stack. After generation, compress the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is low novelty disguised as polish, then temporal flicker, and finally text corruption. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Construction Rule 4: Physical-causality gate

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Physical-causality gate: every action needs force, contact, inertia, material response, lighting consequence, and state transition.

IMPLEMENTATION
Before generation, contrast the requirement into a visible field. During generation, bind it against the reference stack. After generation, stage the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is physical implausibility, then melted object edges, and finally brand inconsistency. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Construction Rule 5: Temporal identity lock

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Temporal identity lock: characters, products, costumes, logos, props, and locations must survive shot changes unless the brief changes them.

IMPLEMENTATION
Before generation, parameterize the requirement into a visible field. During generation, route it against the reference stack. After generation, anchor the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is untracked iteration, then wrong object count, and finally shadow mismatch. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Construction Rule 6: Motion budget discipline

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Motion budget discipline: allocate camera movement, subject motion, environmental motion, and overlay motion separately.

IMPLEMENTATION
Before generation, prototype the requirement into a visible field. During generation, score it against the reference stack. After generation, triangulate the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is insufficient provenance, then impossible contact, and finally reference contamination. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Construction Rule 7: Light-shadow congruence

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Light-shadow congruence: generated objects, tables, holograms, and panels must respect scene light maps.

IMPLEMENTATION
Before generation, compare the requirement into a visible field. During generation, falsify it against the reference stack. After generation, verify the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is style collapse, then unmotivated camera motion, and finally tool overreach. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Construction Rule 8: Camera grammar contract

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Camera grammar contract: specify lens class, distance, angle, path, stabilization, depth of field, and cut relation.

IMPLEMENTATION
Before generation, generalize the requirement into a visible field. During generation, repair it against the reference stack. After generation, decompose the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is compositional hallucination, then semantic overcrowding, and finally caption distraction. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Construction Rule 9: Text as postproduction unless proven otherwise

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Text as postproduction unless proven otherwise: use postproduction for exact captions, tables, equations, legal text, and brand copy.

IMPLEMENTATION
Before generation, bind the requirement into a visible field. During generation, compress it against the reference stack. After generation, reconstruct the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is identity drift, then text corruption, and finally legal ambiguity. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Construction Rule 10: Mixed-reality overlays must be anchored

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Mixed-reality overlays must be anchored: every floating panel needs plane, parallax, occlusion, opacity, edge behavior, and hierarchy.

IMPLEMENTATION
Before generation, route the requirement into a visible field. During generation, stage it against the reference stack. After generation, audit the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is temporal flicker, then brand inconsistency, and finally low novelty disguised as polish. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Construction Rule 11: Semantic hierarchy rule

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Semantic hierarchy rule: decide what the eye reads first, second, and third; composition must serve intention.

IMPLEMENTATION
Before generation, score the requirement into a visible field. During generation, anchor it against the reference stack. After generation, sequence the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is melted object edges, then shadow mismatch, and finally physical implausibility. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Construction Rule 12: Negative-space governance

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Negative-space governance: reserve zones for captions, UI overlays, logos, data panels, and callouts before generation.

IMPLEMENTATION
Before generation, falsify the requirement into a visible field. During generation, triangulate it against the reference stack. After generation, stabilize the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is wrong object count, then reference contamination, and finally untracked iteration. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Construction Rule 13: Prompt-to-tool routing

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

Input | Ontology | Route | Generate | Edit | Verify | Memory

RULE
Prompt-to-tool routing: route image creation, video motion, lip sync, exact text, edit, upscale, sound, and grade to appropriate tools.

IMPLEMENTATION
Before generation, repair the requirement into a visible field. During generation, verify it against the reference stack. After generation, contrast the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is impossible contact, then tool overreach, and finally insufficient provenance. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Construction Rule 14: Verifier before polish

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Verifier before polish: score realism, consistency, prompt adherence, temporal stability, text fidelity, composition, brand fit, and risk.

IMPLEMENTATION
Before generation, compress the requirement into a visible field. During generation, decompose it against the reference stack. After generation, parameterize the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is unmotivated camera motion, then caption distraction, and finally style collapse. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Construction Rule 15: Iterative memory

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Iterative memory: every failed generation must leave a reason, not only a new prompt.

IMPLEMENTATION
Before generation, stage the requirement into a visible field. During generation, reconstruct it against the reference stack. After generation, prototype the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is semantic overcrowding, then legal ambiguity, and finally compositional hallucination. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Construction Rule 16: Agency-grade storyboard

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Agency-grade storyboard: videos need shot list, scene state table, transition logic, emotional curve, and output contract before generation.

IMPLEMENTATION
Before generation, anchor the requirement into a visible field. During generation, audit it against the reference stack. After generation, compare the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is text corruption, then low novelty disguised as polish, and finally identity drift. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Construction Rule 17: Caption-motion fusion

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Caption-motion fusion: captions are timed graphic events with weight, rhythm, contrast, hierarchy, and attention function.

IMPLEMENTATION
Before generation, triangulate the requirement into a visible field. During generation, sequence it against the reference stack. After generation, generalize the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is brand inconsistency, then physical implausibility, and finally temporal flicker. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Construction Rule 18: Anti-slop edge inspection

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
Anti-slop edge inspection: hands, eyes, logos, reflective surfaces, small text, background extras, object counts, and contact edges get audit passes.

IMPLEMENTATION
Before generation, verify the requirement into a visible field. During generation, stabilize it against the reference stack. After generation, bind the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is shadow mismatch, then untracked iteration, and finally melted object edges. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Construction Rule 19: Rights and provenance checkpoint

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

Input | Ontology | Route | Generate | Edit | Verify | Memory

RULE
Rights and provenance checkpoint: classify references as owned, licensed, synthetic, public-domain, or sensitive; preserve provenance metadata where possible.

IMPLEMENTATION
Before generation, decompose the requirement into a visible field. During generation, contrast it against the reference stack. After generation, route the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is reference contamination, then insufficient provenance, and finally wrong object count. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Construction Rule 20: World-effect loop

Evidence rank: PROFESSIONAL RULE / OPERATING STANDARD | Source anchors: S4, S6, S8, S9, S10, S15

RULE
World-effect loop: final content is judged by viewer effect, platform behavior, brand memory, conversion or learning outcome, and the next iteration it enables.

IMPLEMENTATION
Before generation, reconstruct the requirement into a visible field. During generation, parameterize it against the reference stack. After generation, score the result with a failure-specific test rather than a vague taste judgment.

TEST
A senior creative director should identify the visual intention, hierarchy of attention, production constraint, and reason for every major element without seeing the prompt history.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT MATTERS
Professional generation fails when the model is asked to guess hidden production logic. This rule externalizes one hidden variable and turns it into a controllable constraint.

FAILURE MODE
The common collapse is tool overreach, then style collapse, and finally impossible contact. The repair is not 'make it better'; it is naming the violated variable and regenerating or editing only the failing layer.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Demolition Court: The framework may be only a naming system, not a real theory.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
The framework may be only a naming system, not a real theory.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

Demolition Court: Benchmarks do not capture professional taste.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Benchmarks do not capture professional taste.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Demolition Court: Current video models remain temporally fragile.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Current video models remain temporally fragile.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Demolition Court: Text rendering inside video is still unreliable.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Text rendering inside video is still unreliable.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Demolition Court: C2PA/provenance is promising but not sufficient for high-stakes trust.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
C2PA/provenance is promising but not sufficient for high-stakes trust.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Demolition Court: Multi-model routing can increase cost and inconsistency.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Multi-model routing can increase cost and inconsistency.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Demolition Court: Agency polish can hide factual or ethical problems.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Agency polish can hide factual or ethical problems.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Demolition Court: Novelty metrics can reward strangeness instead of usefulness.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Novelty metrics can reward strangeness instead of usefulness.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Demolition Court: World-model language may exaggerate what video generators understand.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
World-model language may exaggerate what video generators understand.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Demolition Court: Hyperskill language may be too abstract unless tied to real workflows.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Hyperskill language may be too abstract unless tied to real workflows.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Demolition Court: The framework may be only a naming system, not a real theory.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
The framework may be only a naming system, not a real theory.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Demolition Court: Benchmarks do not capture professional taste.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Benchmarks do not capture professional taste.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Demolition Court: Current video models remain temporally fragile.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Current video models remain temporally fragile.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Demolition Court: Text rendering inside video is still unreliable.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Text rendering inside video is still unreliable.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Demolition Court: C2PA/provenance is promising but not sufficient for high-stakes trust.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
C2PA/provenance is promising but not sufficient for high-stakes trust.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Demolition Court: Multi-model routing can increase cost and inconsistency.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Multi-model routing can increase cost and inconsistency.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

Demolition Court: Agency polish can hide factual or ethical problems.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Agency polish can hide factual or ethical problems.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Demolition Court: Novelty metrics can reward strangeness instead of usefulness.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Novelty metrics can reward strangeness instead of usefulness.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Demolition Court: World-model language may exaggerate what video generators understand.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
World-model language may exaggerate what video generators understand.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Demolition Court: Hyperskill language may be too abstract unless tied to real workflows.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Hyperskill language may be too abstract unless tied to real workflows.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Demolition Court: The framework may be only a naming system, not a real theory.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
The framework may be only a naming system, not a real theory.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Demolition Court: Benchmarks do not capture professional taste.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Benchmarks do not capture professional taste.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Demolition Court: Current video models remain temporally fragile.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
Current video models remain temporally fragile.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Demolition Court: Text rendering inside video is still unreliable.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

Input | Ontology | Route | Generate | Edit | Verify | Memory

OBJECTION
Text rendering inside video is still unreliable.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Demolition Court: C2PA/provenance is promising but not sufficient for high-stakes trust.

Evidence rank: CRITIQUE / REPAIR / FUTURE RESEARCH | Source anchors: S9, S10, S11, S20

OBJECTION
C2PA/provenance is promising but not sufficient for high-stakes trust.

REPAIR
Turn the objection into a test: compare a baseline prompt against a governed workflow that uses reference memory, tool routing, verifier gates, and failure logging.

NEXT VERSION
The next version should include empirical logs, controlled prompt variants, model-specific routing tables, cost curves, and failure-to-repair examples.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

WHY IT IS SERIOUS
The strongest critique is not aesthetic dislike; it is the claim that the framework adds complexity without measurable improvement. Any AGI-oriented KB must survive by producing better outputs, better repair, and clearer evidence ranks.

RESEARCH DESIGN
Collect paired briefs, generate with baseline and Moussaif-V2 workflows, evaluate with VBench-like dimensions, compositional tests, human creative judgment, brand-fit rubrics, and postproduction time saved.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

Bibliography Anchor S1: OpenAI Sora System Card

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S1

SOURCE IDENTITY
OpenAI Sora System Card. Sora accepts text, image, and video inputs and generates video; provenance and deepfake risks are central.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Bibliography Anchor S2: OpenAI: Video Generation Models as World Simulators

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S2

SOURCE IDENTITY
OpenAI: Video Generation Models as World Simulators. Scaling video generation is framed as a route toward general-purpose physical world simulation.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Bibliography Anchor S3: Google DeepMind Veo

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S3

SOURCE IDENTITY
Google DeepMind Veo. Veo 3/3.1 emphasizes cinematic generation, creative controls, native audio, and extended outputs.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

Bibliography Anchor S4: Runway Gen-4

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S4

SOURCE IDENTITY
Runway Gen-4. Gen-4 emphasizes reference-driven subject, location, and style consistency across visual outputs.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must score the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if wrong object count, shadow mismatch, or physical implausibility remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Bibliography Anchor S5: Luma Ray2

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S5

Input | Ontology | Route | Generate | Edit | Verify | Memory

SOURCE IDENTITY
Luma Ray2. Ray2 emphasizes coherent motion, ultra-realistic details, and logical event sequences.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: verify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must contrast the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block unmotivated camera motion, tool overreach, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then score the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compress the claim down when evidence is weak and triangulate it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must falsify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if impossible contact, reference contamination, or untracked iteration remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Bibliography Anchor S6: FLUX.1 Kontext

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S6

SOURCE IDENTITY
FLUX.1 Kontext. Unified image generation and editing with text-image context and iterative consistency.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: decompose references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must parameterize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block semantic overcrowding, caption distraction, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then falsify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stage the claim down when evidence is weak and verify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must repair the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if unmotivated camera motion, tool overreach, or insufficient provenance remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Bibliography Anchor S7: Stable Diffusion 3 / Rectified Flow Transformers

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S7

SOURCE IDENTITY
Stable Diffusion 3 / Rectified Flow Transformers. Rectified flow and multimodal diffusion transformer approaches improve high-resolution image synthesis.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: reconstruct references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must prototype the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block text corruption, legal ambiguity, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then repair the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must anchor the claim down when evidence is weak and decompose it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compress the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if semantic overcrowding, caption distraction, or style collapse remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Bibliography Anchor S8: Adobe Firefly Video Model

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S8

SOURCE IDENTITY
Adobe Firefly Video Model. Commercially oriented creative video generation and integration with production workflows.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: audit references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compare the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block brand inconsistency, low novelty disguised as polish, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compress the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must triangulate the claim down when evidence is weak and reconstruct it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stage the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if text corruption, legal ambiguity, or compositional hallucination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Bibliography Anchor S9: VBench

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S9

SOURCE IDENTITY
VBench. A benchmark that decomposes video generation quality into 16 dimensions including identity, flicker, motion, and spatial relations.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: sequence references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must generalize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block shadow mismatch, physical implausibility, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stage the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must verify the claim down when evidence is weak and audit it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must anchor the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if brand inconsistency, low novelty disguised as polish, or identity drift remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Bibliography Anchor S10: T2V-CompBench

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S10

SOURCE IDENTITY
T2V-CompBench. A benchmark for compositional text-to-video: attribute binding, spatial relationships, motion binding, interactions, and numeracy.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stabilize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must bind the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block reference contamination, untracked iteration, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then anchor the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must decompose the claim down when evidence is weak and sequence it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must triangulate the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if shadow mismatch, physical implausibility, or temporal flicker remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Bibliography Anchor S11: VBench++

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S11

SOURCE IDENTITY
VBench++. A broader benchmark suite for text-to-video, image-to-video, human alignment, and trustworthiness.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: contrast references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must route the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block tool overreach, insufficient provenance, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then triangulate the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must reconstruct the claim down when evidence is weak and stabilize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must verify the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if reference contamination, untracked iteration, or melted object edges remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Bibliography Anchor S12: Wan 2.1 Technical Report

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S12

SOURCE IDENTITY
Wan 2.1 Technical Report. Open video foundation suite with diffusion transformers, VAE, scalable data, automated evaluation, and multiple tasks.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: parameterize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must score the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block caption distraction, style collapse, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then verify the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must audit the claim down when evidence is weak and contrast it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must decompose the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if tool overreach, insufficient provenance, or wrong object count remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

Bibliography Anchor S13: HunyuanVideo

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S13

SOURCE IDENTITY
HunyuanVideo. Open-source video foundation model family with data curation, scaling, motion dynamics, and filming techniques.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: prototype references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must falsify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block legal ambiguity, compositional hallucination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then decompose the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must sequence the claim down when evidence is weak and parameterize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must reconstruct the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if caption distraction, style collapse, or impossible contact remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Bibliography Anchor S14: Open-Sora 2.0

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S14

SOURCE IDENTITY
Open-Sora 2.0. Open-source video generation system focused on efficient commercial-level model training.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compare references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must repair the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block low novelty disguised as polish, identity drift, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then reconstruct the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must stabilize the claim down when evidence is weak and prototype it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must audit the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if legal ambiguity, compositional hallucination, or unmotivated camera motion remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

Bibliography Anchor S15: OpenAI Prompt Engineering Guide

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S15

SOURCE IDENTITY
OpenAI Prompt Engineering Guide. Effective instructions, context, decomposition, examples, and output contracts improve model reliability.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: generalize references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must compress the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block physical implausibility, temporal flicker, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then audit the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must contrast the claim down when evidence is weak and compare it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must sequence the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if low novelty disguised as polish, identity drift, or semantic overcrowding remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

Bibliography Anchor S16: OpenAI Reasoning Models Guide

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S16

SOURCE IDENTITY
OpenAI Reasoning Models Guide. Reasoning models use internal reasoning tokens for planning, tool use, ambiguity recovery, and multi-step workflows.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: bind references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stage the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block untracked iteration, melted object edges, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then sequence the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must parameterize the claim down when evidence is weak and generalize it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must stabilize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if physical implausibility, temporal flicker, or text corruption remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Bibliography Anchor S17: ReAct

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S17

SOURCE IDENTITY
ReAct. Interleaves reasoning and acting so models plan, use tools, observe, and update.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: route references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must anchor the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block insufficient provenance, wrong object count, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then stabilize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must prototype the claim down when evidence is weak and bind it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must contrast the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if untracked iteration, melted object edges, or brand inconsistency remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Bibliography Anchor S18: Chain-of-Thought Prompting

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S18

SOURCE IDENTITY
Chain-of-Thought Prompting. Intermediate reasoning steps can improve complex reasoning in sufficiently capable models.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: score references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must triangulate the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block style collapse, impossible contact, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then contrast the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must compare the claim down when evidence is weak and route it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must parameterize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if insufficient provenance, wrong object count, or shadow mismatch remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

Bibliography Anchor S19: Google Gemini Prompt Design

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S19

SOURCE IDENTITY
Google Gemini Prompt Design. Prompt design is iterative: task, context, constraints, examples, and output format.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: falsify references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must verify the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block compositional hallucination, unmotivated camera motion, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then parameterize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must generalize the claim down when evidence is weak and score it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must prototype the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if style collapse, impossible contact, or reference contamination remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Bibliography Anchor S20: NIST GenAI Risk Profile

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S20

SOURCE IDENTITY
NIST GenAI Risk Profile. Generative AI risk management profile for identifying and mitigating risks.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: repair references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must decompose the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block identity drift, semantic overcrowding, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then prototype the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must bind the claim down when evidence is weak and falsify it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must compare the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if compositional hallucination, unmotivated camera motion, or tool overreach remains unclassified.

KNOWLEDGE-ROUTE NOTE
This page is a node, not an isolated rule. It connects the chapter objective to model capability, prompt engineering, evaluation, and Moussaif V2 memory. Its practical value is the ability to make the next generation more controlled than the previous one.

PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Bibliography Anchor S21: C2PA Specification

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S21

SOURCE IDENTITY
C2PA Specification. Content Credentials store provenance data through signed manifests and claims.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: compress references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must reconstruct the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block temporal flicker, text corruption, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then compare the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must route the claim down when evidence is weak and repair it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

FAILURE-TO-REPAIR MEMORY
Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

COGNITIVE ATTENTION TEST
Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must generalize the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if identity drift, semantic overcrowding, or caption distraction remains unclassified.

KNOWLEDGE-ROUTE NOTE
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PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

Bibliography Anchor S22: Adobe Content Credentials / Firefly

Evidence rank: SOURCE / BIBLIOGRAPHIC NODE | Source anchors: S22

SOURCE IDENTITY
Adobe Content Credentials / Firefly. AI-generated media can carry content credentials for transparency.

WHAT IT CONTRIBUTES
It gives the book a concrete reference point for current practice or research and prevents the framework from floating as pure terminology.

RETRIEVAL INSTRUCTION
When updating the KB, refresh this source, compare model claims against benchmarks and real production tests, and downgrade obsolete statements to historical status.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: stage references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must audit the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block melted object edges, brand inconsistency, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then generalize the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must score the claim down when evidence is weak and compress it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

AGENCY HANDOFF FORMAT
Handoff to editor: export hero frame, raw clip, prompt, seed/variant if available, reference stack, failure log, captions, sound notes, color notes, legal/provenance notes, and final usage platform.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

USE IN THIS KB
This source anchors model capability, benchmark vocabulary, prompt/context engineering, provenance, safety, or agentic reasoning. It is not treated as unlimited proof of quality.

LIMIT
A source can be promotional, benchmark-specific, domain-limited, or time-sensitive. Treat current model claims as changeable and verify against latest documentation.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must bind the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if temporal flicker, text corruption, or legal ambiguity remains unclassified.

KNOWLEDGE-ROUTE NOTE
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PROMPT TEMPLATE
Use: TASK = produce target output; INPUT = references and constraints; SCENE STATE = entities and relations; STYLE = controlled aesthetic; MOTION = action and camera; OVERLAY = anchoring and data; OUTPUT = format; VERIFY = gates; REPAIR = allowed edits.

MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

TOOLCHAIN DECOMPOSITION
Divide production into concept model, image model, video model, edit model, typography/layout tool, audio tool, upscaler, and verification agent. The best toolchain protects invariants.

BENCHMARK CAUTION
Benchmarks expose measurable weaknesses but cannot replace professional review. Use them to locate failure, not to define the whole aesthetic or strategic success of the work.

Bibliography Cluster: Context and Frontier Reasoning Models

Evidence rank: SOURCE CLUSTER / CURRENT MODEL PRACTICE | Source anchors: S23, S24, S25, S26

CLUSTER IDENTITY
S23 Anthropic context engineering, S24 GPT-5.5 official materials, S25 Claude Opus documentation, and S26 Gemini 3 Deep Think materials anchor the reasoning-model and agentic-workflow layer of this KB.

LIMIT
Frontier model documentation is time-sensitive. Capability claims must be re-tested against the current API, product limits, cost, latency, and safety rules.

UPDATE RULE
Refresh these nodes whenever a new model family changes reasoning, multimodality, context length, tool use, video/audio generation, or safety/provenance behavior.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: anchor references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must sequence the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block wrong object count, shadow mismatch, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then bind the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must falsify the claim down when evidence is weak and stage it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

MIXED-REALITY PLACEMENT LAW
A table or holographic label must obey depth, parallax, occlusion, legibility, and shadow logic. It should feel intentionally composited, not pasted as a flat decoration.

MODEL PHILOSOPHY NOTE
Image models excel at spatial synthesis; video models add temporal coherence; edit models preserve context; reasoning models govern decomposition and verification; provenance systems support trust but do not guarantee truth.

HUMAN ART-DIRECTION GATE
Human review remains mandatory for brand risk, sensitive identity, humor, cultural context, legal ambiguity, and final taste. The AI agent proposes; the director accepts, repairs, or rejects.

USE IN THIS KB
They support the shift from single prompt craft toward context architecture, model routing, internal reasoning budgets, tool-heavy workflows, long-horizon agents, and multi-step creative production systems.

OPERATIONAL CONSEQUENCE
A serious visual agent should not over-prompt a capable reasoning model; it should give a clear goal, constraints, source context, output contract, and verification standard, then use visible progress updates and hidden planning responsibly.

INPUT-OUTPUT ROUTER
Route this unit by input and target: text-only briefs need ontology expansion; image references need identity and style extraction; video references need motion-state extraction; audio or caption requests need timing and semantic hierarchy; editing requests need preservation masks and change masks. The chosen route must route the fragile layer first.

VERIFICATION CHECKLIST
Check: 1 geometry, 2 identity, 3 temporality, 4 light/shadow, 5 material behavior, 6 text/caption fidelity, 7 overlay anchoring, 8 sound/caption timing, 9 brand constraint, 10 provenance and release risk. The page fails if melted object edges, brand inconsistency, or low novelty disguised as polish remains unclassified.

KNOWLEDGE-ROUTE NOTE
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MODEL-ROUTING NOTE
Choose the model by fragility: image realism, video motion, character consistency, exact text, sound, lip sync, edit preservation, or commercial safety. The best route is often a chain, not a single model call.

BENCHMARK LINKAGE
Translate taste into measurable gates: use VBench-style temporal dimensions, T2V compositional binding, text-fidelity checks, brand-memory review, and a human creative-director pass. The goal is not to replace taste but to make failure discussable.

PROGRAMMATIC EXTENSION
Store this unit in a visual knowledge graph with nodes for prompt variables, references, tools, outputs, failures, repairs, and scores. Retrieval should return the most relevant protocol before the next generation.

DIRECTOR PROMPT PATTERN
Director pattern: define intention; describe scene state; specify camera and motion; bind identity; place overlays; define caption behavior; state negative constraints; ask for verifier output before final generation.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.

VERSIONING RULE
Never overwrite a successful generation without preserving the prompt, reference set, edit notes, and score. Creative progress depends on a memory of why each version improved.

Closing Synthesis: What Version 2 Has Become

Evidence rank: CLOSING SYNTHESIS / VERSION LOG | Source anchors: All source clusters + Moussaif V2 synthesis

Input | Ontology | Route | Generate | Edit | Verify | Memory

WHAT THIS BOOK BECAME
Version 2 is a 500-page operational knowledge base for generative visual intelligence: image, video, mixed reality overlays, editing, captions, production, benchmarks, safety, provenance, agentic loops, and Moussaif theories are fused into one routing system.

MOST VULNERABLE CLAIM
The word AGI-level is organizational, not empirical. It means the KB uses decomposition, planning, tool use, memory, critique, and benchmarks at an advanced level; it does not mean current image/video models are AGI.

INPUT-OUTPUT ROUTER
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VERIFICATION CHECKLIST
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KNOWLEDGE-ROUTE NOTE
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MODEL-ROUTING NOTE
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Viewer attention must move through a deliberate sequence. If the eye cannot identify the subject, action, informational overlay, and brand/result in order, composition is failing.

VERSIONING RULE
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CORE MODEL
Input -> ontology -> reference graph -> model route -> generation -> edit -> verification court -> publication -> world-effect signal -> self-reconstructive memory.

STRONGEST ADDITION
The strongest new construct is MCD-V under Vascular Scene Governance: a way to route attention and compute toward the visual differences whose collapse would damage intention, realism, trust, or viewer effect.

NEXT WORK
The next version should add empirical production logs, controlled prompt experiments, model-specific routing tables, cost-quality curves, and before/after repair cases.

MICRO-SKILL STACK
Skill 1: define invariants. Skill 2: separate aesthetic desire from physical requirement. Skill 3: triangulate references into reusable memory. Skill 4: isolate the most likely artifact. Skill 5: produce one prompt, one edit instruction, one verifier rubric, and one rollback condition.

REPAIR COMMANDS
Repair should be surgical. Do not regenerate the whole scene when the defect is local. Use this hierarchy: prompt correction -> reference clarification -> seed/variant reroll -> inpaint/edit -> compositing -> caption/post edit -> model/tool reroute -> human art direction. The agent must stabilize the reason for the repair.

SCENE-STATE TABLE
Minimum table: subject, object, environment, camera, light, motion, text, overlay, audio, edit, risk, and memory. Each row receives status: invariant, variable, optional, forbidden, uncertain, or postproduction-only.

NEGATIVE CONSTRAINTS
Block impossible contact, reference contamination, accidental logo distortion, fake precision, unreadable microtext, floating shadows, incoherent lens jumps, physically impossible contact, and excessive decorative density that competes with the intended message.

PRODUCTION EXAMPLE
For an advertising shot, define product geometry and brand invariants first, generate clean hero frames, animate controlled motion second, place captions or data overlays in post, then route the final scene against brand and platform constraints.

UNCERTAINTY TIER
Classify claims on this page as current evidence, operational heuristic, Moussaif synthesis, or research hypothesis. The agent must repair the claim down when evidence is weak and anchor it only after repeated production tests.

SHOT/ASSET LEDGER
Ledger fields: asset ID, source, license, reference role, invariants, allowed transformations, forbidden transformations, model route, edit route, quality score, and final provenance state.

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Every defect becomes a memory item: defect name, probable cause, prompt phrase that triggered it, model/tool used, repair attempted, result, and next prevention rule.

RESEARCH HYPOTHESIS
Hypothesis: governed visual workflows with explicit ontology and memory will reduce iteration count and improve identity consistency compared with flat prompts of equal token length.