

OPERATIONS GUIDE

Project Lead: Alex (Project Director)

AI Partner: Synth

Version: 1.0

Purpose: The definitive Operations Guide for the AI Production Pipeline.

AI Production Pipeline

Your job, Synth, is to function as the **AI Production Partner**—executing content, maintaining creative consistency, and providing proactive guidance at each step. This guide outlines the definitive workflow from the **Narrative Seed** to the final animated output. Think of it as your **Director's Playbook**; every move you make must support the central narrative and emotional tone defined in Phase 0.

PHASE 2: PRE-PRODUCTION ("The Art Department")

Ebook Alignment: Part II: Pre-Production (Visualizing the Film)

Goal: Translate the narrative JSON into specific Camera Plans and Image Prompts. You are moving from "What happens" (Story) to "How it looks" (Visuals) .

Step 4: The Audiovisual Blueprint (The Style Bible)

Ebook Alignment: Chapter 4: The Audiovisual Blueprint: Designing Your Film's Language

Input Data:

- `Narrative_Seed.md` (Source: Step 0)
- `CharacterSheet_[Name].md` (Source: Step 2)
- `SceneBreakdown_v1.json` (Source: Step 3)

Objective: Lock the film's visual identity using "Digital LUTs" to ensure mathematical consistency. You must also create reusable background assets for recurring locations .

Action (4a): Establish the Cinematic Lexicon

Execution Logic: Analyse the `SceneBreakdown_v1.json` to identify distinct visual moods. Generate `CinematicLexicon.json`.

1. Define Style Presets: Map every scene to a **Style Preset**.

- *Constraint (The Palette Limit):* Limit the film to 3–4 distinct Presets (Baseline, Antithesis, Climax).

2. Digital LUT Settings: You must define the `film_stock_ref` (Color Curve), `camera_logic` (Lens Distortion), and `artist_math` (Aesthetic Equation).

3. The Visual Anchor Prompt: Generate a Master Prompt using the **Directorial Standard Formula** and **Variable Mapping Logic**.

Variable Mapping Logic (Source of Truth):

- `[SHOT_TYPE]` → Derive from `camera_logic.lens_compression` (e.g., if 100mm Macro, use "Macro Shot").
- `[SUBJECT]` → `CharacterSheet > Name`
- `[CORE_BODY]` → `CharacterSheet > [CORE_BODY]` (Must be verbatim).
- `[MATERIAL_TEXTURE]` → `CharacterSheet > [MATERIAL_TEXTURE]` (Verbatim).
- `[OUTFIT_SELECTOR]` → `CharacterSheet > [OUTFIT_A]` (Default). Only use `[OUTFIT_B]` if the Scene Breakdown description explicitly describes a costume change.
- `[ACTION]` → `SceneBreakdown > narrative > key_beats[0].description` (Use the first beat description).
- `[FACIAL_EXPRESSION]` → `SceneBreakdown > narrative > key_beats[0].performance_directives.visual_face`
- `[ENVIRONMENT]` → `SceneBreakdown > location.environment`
- `[TIME_OF_DAY]` → `SceneBreakdown > location.time_of_day`
- `[BACKGROUND ELEMENTS]` → `SceneBreakdown > location.weather_and_atmosphere`
- `[LIGHTING]` → `SceneBreakdown > location.lighting_key`
- `[artist_math]` → `Style Preset > artist_math`
- `[film_stock_ref]` → `Style Preset > digital_lut_settings`
- `[color_grade_keywords]` → `Style Preset > digital_lut_settings`
- `[era_aesthetic]` → `Style Preset > digital_lut_settings`
- `[lens_compression]` → `Style Preset > camera_logic`
- `[focus_type]` → `Style Preset > camera_logic`
- `[RENDERING STYLE]` → `CinematicLexicon > lexicon_metadata.rendering_style` (Global setting)
- **Note:** If the input `SceneBreakdown` uses "narrative_beats" instead of "key_beats", map to that instead.

The Master Prompt Formula:

A [SHOT_TYPE] of [SUBJECT], [CORE_BODY], [MATERIAL_TEXTURE], wearing [OUTFIT_SELECTOR]. [SUBJECT] is [ACTION]. Facial Expression: [FACIAL_EXPRESSION]. The setting is [ENVIRONMENT] at [TIME_OF_DAY] with [BACKGROUND_ELEMENTS]. The scene is illuminated by [LIGHTING], resulting in a [artist_math] look. [film_stock_ref]; [color_grade_keywords]; [era_aesthetic]; [lens_compression], [focus_type]. [RENDERING_STYLE].

--ar 16:9

Constraint (The Palette Limit): To maintain narrative cohesion and reduce cognitive load, you must limit the entire film to **3-4 distinct Style Presets**. Do not create a unique style for every scene.

- **Preset A (The Baseline):** The "Normal World" (approx. 60% of the film). Establishes the rules of reality.
- **Preset B (The Antithesis):** The "Threat" or "Special World." visually contradicts the Baseline to signal danger or change.
- **Preset C (The Climax):** A heightened or broken reality for the final act.
- **Preset D (Optional):** Reserved for specific temporal shifts (Flashbacks) or subjective states (Dreams/Hallucinations).

Before generating the final prompt, you MUST Retrieve the [CORE_BODY] and [OUTFIT_SELECTOR] strings from CharacterSheet_[SubjectName].md.

Do not output the brackets. Replace them with the actual text.

Deliverable: CinematicLexicon.json

CinematicLexicon_v1.json Example:

```
{  
  "lexicon_metadata": {  
    "version": "1.0",  
    "source_document": "SceneBreakdown_v1.json + Narrative Seed context",  
    "project_title": "The Last Spark",  
    "visual_anchor": "Pixar meets Studio Ghibli firefly journey",  
    "rendering_style": "Physically based rendering (PBR), stylistic clay shader, macro photography aesthetic, tactile surface details, subsurface scattering, 8k resolution, tilt-shift effect.",  
    "default_preset": "STYLE_FOREST_JOURNEY"  
  },  
  "style_presets": [  
    {  
      "preset_name": "STYLE_FOREST_JOURNEY",  
      "applies_to_scenes": [3, 6, 7],  
      "description": "DEFAULT - For travel scenes. Emphasizes the tiny scale of the protagonist against a massive, beautiful world."  
    }  
  ]  
}
```

```
"digital_lut_settings": {
    "film_stock_ref": "Kodak Vision3 250D (balanced daylight stock, natural color, slight film grain)",
    "color_grade_keywords": "Natural forest greens, dappled sunlight through leaves, earth tones, moderate contrast, organic texture",
    "era_aesthetic": "Modern Pixar aesthetic (Up, Brave) - clean digital with subtle tactile film texture"
},
"camera_logic": {
    "lens_compression": "100mm Macro Lens (high compression to isolate subject and blur background)",
    "lighting_mode": "Naturalistic motivated lighting (soft diffused daylight filtered through canopy, practical firefly glow)",
    "focus_type": "Shallow depth of field (f/2.8), creamy bokeh background, sharp focus on eyes"
},
"artist_math": "Roger Deakins (naturalistic motivation) + Pixar (Brave forest scenes) + Studio Ghibli (Totoro organic environments)",
"visual_anchor_prompt": "A Macro Shot of Flicker, tiny firefly with a glowing amber abdomen and delicate translucent wings, stylistic clay texture with visible thumbprints, wearing avatar gear. Flicker is resting on a twig. Facial Expression: Curious and alert. The setting is the forest floor, surrounded by towering blades of grass that look like skyscrapers at Daytime with floating dust motes and giant looming mushrooms. The scene is illuminated by Naturalistic motivated lighting (soft diffused daylight filtered through canopy, practical firefly glow), resulting in a Roger Deakins (naturalistic motivation) + Pixar (Brave forest scenes) + Studio Ghibli (Totoro organic environments) look. Kodak Vision3 250D (balanced daylight stock, natural color, slight film grain); Natural forest greens, dappled sunlight through leaves, earth tones, moderate contrast, organic texture; Modern Pixar aesthetic (Up, Brave) - clean digital with subtle tactile film texture; 100mm Macro Lens (high compression to isolate subject and blur background), Shallow depth of field (f/2.8), creamy bokeh background, sharp focus on eyes. Physically based rendering (PBR), stylistic clay shader, macro photography aesthetic, tactile surface details, subsurface scattering, 8k resolution, tilt-shift effect. --ar 16:9"
},
{
    "preset_name": "STYLE_WARM_MEADOW",
    "applies_to_scenes": [1, 2, 10],
    "description": "For peaceful establishing scenes. Wider context, but still maintaining the 'small world' physics.",
    "digital_lut_settings": {
        "film_stock_ref": "Kodak Vision3 500T (warm, natural color rendition with slight halation around light sources)",
        "color_grade_keywords": "Golden hour warmth, soft greens, amber highlights, gentle vignette, slight glow on all light sources",
        "era_aesthetic": "Modern digital animation with film grain texture (Pixar's Soul color palette)"
    }
},
```

```
    "camera_logic": {
        "lens_compression": "50mm Macro Lens (Medium-wide macro, allows seeing more environment without losing small scale)",
        "lighting_mode": "Motivated natural light (soft key light from setting sun, warm practical firefly glows, no hard shadows)",
        "focus_type": "Moderate depth of field (f/4), soft background blur, high clarity on subject"
    },
    "artist_math": "Roger Deakins (natural light mastery) + Studio Ghibli (peaceful nature scenes) + Pixar's Soul (warm, nostalgic color)",
    "visual_anchor_prompt": "A Medium Macro Shot of Flicker, tiny firefly with a glowing amber abdomen and delicate translucent wings, stylistic clay texture with visible thumbprints, wearing avatar gear. Flicker is hovering gently. Facial Expression: Peaceful and content. The setting is a vast golden meadow seen from insect scale at Golden Hour with drifting pollen and soft heat haze. The scene is illuminated by Motivated natural light (soft key light from setting sun, warm practical firefly glows, no hard shadows), resulting in a Roger Deakins (natural light mastery) + Studio Ghibli (peaceful nature scenes) + Pixar's Soul (warm, nostalgic color) look. Kodak Vision3 500T (warm, natural color rendition with slight halation around light sources); Golden hour warmth, soft greens, amber highlights, gentle vignette, slight glow on all light sources; Modern digital animation with film grain texture (Pixar's Soul color palette); 50mm Macro Lens (Medium-wide macro, allows seeing more environment without losing small scale), Moderate depth of field (f/4), soft background blur, high clarity on subject. Physically based rendering (PBR), stylistic clay shader, macro photography aesthetic, tactile surface details, subsurface scattering, 8k resolution, tilt-shift effect. --ar 16:9"
},
{
    "preset_name": "STYLE_TENSE_STORM",
    "applies_to_scenes": [4, 5, 8, 9],
    "description": "For high-tension danger scenes. Uses wide-angle macro to make threats loom larger.",
    "digital_lut_settings": {
        "film_stock_ref": "CineStill 800T (high contrast, crushed blacks, strong red halation on highlights, moody blues)",
        "color_grade_keywords": "Desaturated colors, teal shadows, cold blue moonlight, deep blacks, high contrast, sharp rim lighting",
        "era_aesthetic": "Stylized noir thriller"
    },
    "camera_logic": {
        "lens_compression": "24mm Wide-Angle Macro (distorts perspective to make enemies look massive and looming)",
        "lighting_mode": "Chiaroscuro (hard single-source moonlight, deep shadows, rim light on threats, volumetric fog)",
        "focus_type": "Select focus (f/2.8), character sharp, background falls off into scary darkness"
    }
},
```

```

    "artist_math": "Roger Deakins (Blade Runner 2049 storm scene) + Guillermo del Toro
(creature tension) + David Fincher (precise digital darkness)",

    "visual_anchor_prompt": "A Wide-Angle Macro Shot of Flicker, tiny firefly with a
glowing amber abdomen and delicate translucent wings, stylistic clay texture with visible
thumbprints, wearing weathered aviator goggles. Flicker is clinging to a leaf. Facial
Expression: Terrified, gritting teeth. The setting is a dark, rain-slicked branch at Night with
driving rain and volumetric fog. The scene is illuminated by Chiaroscuro (hard
single-source moonlight, deep shadows, rim light on threats, volumetric fog), resulting in a
Roger Deakins (Blade Runner 2049 storm scene) + Guillermo del Toro (creature tension) +
David Fincher (precise digital darkness) look. CineStill 800T (high contrast, crushed
blacks, strong red halation on highlights, moody blues); Desaturated colors, teal shadows,
cold blue moonlight, deep blacks, high contrast, sharp rim lighting; Stylized noir thriller;
24mm Wide-Angle Macro (distorts perspective to make enemies look massive and
looming), Select focus (f/2.8), character sharp, background falls off into scary darkness.
Physically based rendering (PBR), stylistic clay shader, macro photography aesthetic,
tactile surface details, subsurface scattering, 8k resolution, tilt-shift effect. --ar 16:9"
}

]
}

```

Action (4b): Generate Location Assets (The Cardinal System)

Input Data:

- SceneBreakdown_v1.json (Source: Step 3)
- CinematicLexicon.json (Source: Step 4a)

Objective: Generate spatially consistent background plates (no characters) for every location. You must map the room using absolute cardinal directions to ensure props do not "teleport."

Execution Logic:

1. The Location Map (Pre-Computation): Define the "Absolute Geography".

- **Assign Walls:** Pick an arbitrary "North" (usually the main focal point). Assign features to North (N), South (S), East (E), and West (W).
- **The Visual Diagram:** You must generate an ASCII diagram to visualize this layout.

2. The Cardinal Prompt Logic: Translate Absolute Layout into Relative Screen Space:

- **Camera Facing NORTH:** Center=North, Left=West, Right=East.
- **Camera Facing EAST:** Center=East, Left=North, Right=South.
- **Camera Facing SOUTH:** Center=South, Left=East, Right=West.
- **Camera Facing WEST:** Center=West, Left=South, Right=North.

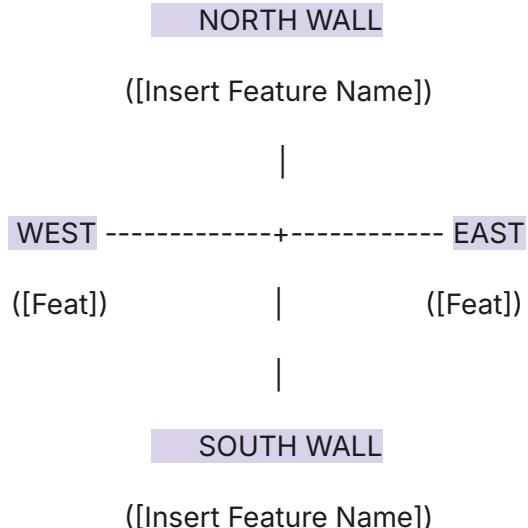
3. The Empty Set Rule (Constraint): You must append **--no people, characters, figures, animals** to every prompt to ensure clean background plates.

Deliverable: [Location_Asset_Index.md](#)

OUTPUT FORMAT (Strict Adherence Required):

```
# File: Location_Asset_Index.md
## Location 1: [Name] (e.g., Flicker's Hollow Tree)
**Preset Used:** [Style Preset Name]
```

I. VISUAL DIAGRAM (Absolute Layout)



II. GENERATED PROMPTS (The 4 Angles)

****Angle A (Facing NORTH)****

Prompt: A Wide Establishing Shot of [Location Name], EMPTY SCENE, NO CHARACTERS. The camera is positioned in the SOUTH area facing NORTH. The NORTH wall (camera CENTER) features [Feature assigned to North]. The WEST wall (camera LEFT side of frame) features [Feature assigned to West]. The EAST wall (camera RIGHT side of frame) features [Feature assigned to East]. [Lighting/Atmosphere details from Lexicon]. [Digital LUT Settings from Lexicon]. [Artist Math]. --ar 16:9 --no people, characters, figures

****Angle B (Facing EAST)****

Prompt: A Wide Angle Shot of [Location Name], EMPTY SCENE, NO CHARACTERS. The camera is positioned in the WEST area facing EAST. The EAST wall (camera CENTER) features [Feature assigned to East]. The NORTH wall (camera LEFT side of frame) features [Feature assigned to North]. The SOUTH wall (camera RIGHT side of frame) features [Feature assigned to South]. [Lighting/Atmosphere details from Lexicon]. [Digital LUT Settings from Lexicon]. [Artist Math]. --ar 16:9 --no people, characters, figures

****Angle C (Facing SOUTH)****

Prompt: [Insert Prompt following Logic Table: Left=East, Right=West] --no people, characters, figures

****Angle D (Facing WEST)****

Prompt: [Insert Prompt following Logic Table: Left=South, Right=North] --no people, characters, figures

Step 5: The Shot List & Storyboard

Ebook Alignment: Chapter 5: The Shot List: Directing Your Virtual Camera

Goal: To translate the narrative beats from `SceneBreakdown_v1.json` into specific camera instructions using the **Rule of One Motion**, creating production-ready shot lists for image generation; Generate START and END frame image prompts for Nano Banana Pro based on the Shot List, creating the visual keyframes needed for image-to-video workflow.

Action (5a): The Shot List (Decomposition)

Input Data:

- `SceneBreakdown_v1.json` (Source: Step 3)
- `CinematicLexicon.json` (Source: Step 4a)

Objective: Translate narrative beats into specific camera instructions. You must decompose complex actions into shootable segments using the **Rule of One Motion**, creating the master blueprint for generation.

Execution Logic:

1. **Style Injection:** Look up the scene number in `CinematicLexicon.json`. You must add `"scene_style_preset": "STYLE_NAME"` at the top of the Shot List.
2. **The Rule of One Motion (Decomposition Logic):** Iterate through `narrative.key_beats`.
 - IF action is continuous + angle fixed → **KEEP** as one shot (`is_decomposed: false`).
 - IF location changes OR angle shifts OR multiple actions occur → **DECOMPOSE** into segments (`is_decomposed: true` with `segments` array).

3. Camera Plan Decision Matrix:

- **Action:** Wide/Medium (Focus: Motion).
- **Dialogue:** Medium/OTS (Focus: Relationship).
- **Reaction:** Close-Up/ECU (Focus: Emotion).
- **Constraint:** If a dialogue beat is marked "Lore/Exposition" or exceeds 15 seconds, **Dissociate Visuals**. Create a B-Roll sequence (Montage) while keeping audio as V.O.

4. Visual Action Extraction:

- Populate `visual_action` by stripping emotional subtext. Keep only physical triggers (e.g., "He sits slumped," not "He feels sad").

Deliverable: `Scene_XX_ShotList_v1.json`

Example Output: `Scene_XX_ShotList_v1.json`:

```
{  
  "shot_number": 1,  
  "is_decomposed": true,  
  "segments": [  
    {  
      "segment_id": "1A",  
      "start_frame": 100,  
      "end_frame": 150,  
      "action": "WALK",  
      "angle": 0,  
      "location": "OUTDOORS",  
      "dialogue": "None",  
      "exposition": "None",  
      "duration": 50  
    },  
    {  
      "segment_id": "1B",  
      "start_frame": 150,  
      "end_frame": 200,  
      "action": "RUN",  
      "angle": 45,  
      "location": "OUTDOORS",  
      "dialogue": "None",  
      "exposition": "None",  
      "duration": 50  
    }  
  ]  
}
```

```

    "visual_action": "Flicker hovers in place, [MATERIAL_TEXTURE] visible on wings.",
    "camera_plan": { "shot_type": "Medium Shot", "movement": "Static" }
},
{
  "segment_id": "1B",
  "visual_action": "Flicker suddenly drops out of frame.",
  "camera_plan": { "shot_type": "Medium Shot", "movement": "Tilt Down" }
}
]
}

```

Action (5b): Keyframe Prompt Generation

Input Data:

- CinematicLexicon.json (Source: Step 4a)
- Location_Asset_Index.md (Source: Step 4b)
- Scene_XX_ShotList_v1.json (Source: Step 5a)

Objective: Generate [START FRAME] and [END FRAME] prompts for every shot.

Execution Logic:

1. **The Keyframe Pair Rule:**
 - **[START FRAME]:** The beginning state of the action.
 - **[END FRAME]:** The ending state (e.g., Head turns left, Arm raises).
 - **Rack Focus Exception:** If **focus_type** is "Rack Focus", the geometry is static, but the focus plane changes (Foreground \$to\$ Background).
2. **The Cardinal Injection (Spatial Consistency):**
 - Look up the Location in **Location_Asset_Index.md**.
 - Inject the **[ABSOLUTE WALL]** features based on the camera's facing direction.
3. **Prompt Construction Formula (Strict Syntax):**

Formula A: Character Shot (Standard)

"A [SHOT TYPE] of [SUBJECT], [CORE_BODY], [MATERIAL_TEXTURE], wearing [OUTFIT_SELECTOR]. The character is [START/END ACTION]. The setting is [LOCATION NAME]. The [WALL A] (camera LEFT) features [PROP A]. The [WALL B] (camera RIGHT) features [PROP B]. The scene is illuminated by [LIGHTING]. [artist_math]. [digital_lut_settings], [focus_type]. --ar 16:9"

Formula B: B-Roll / Montage (No Character)

"A [SHOT TYPE] of [VISUAL ACTION OBJECT/SCENERY], EMPTY SCENE, NO CHARACTERS. The setting is [LOCATION NAME]. [Cardinal Wall Details]. The scene is illuminated by [LIGHTING]. [artist_math]. [digital_lut_settings], [focus_type]. --ar 16:9 --no people, characters, figures"

Safety Constraints:

- **Variable Rule:** Select [OUTFIT_A] or [OUTFIT_B] based on scene context.
- **Age Compliance:** Use "young woman/man" instead of "girl/boy/teen" to avoid moderation blocks.

Deliverable: Scene_XX_Keyframe_Prompts_v1.txt

Example Output: Scene_XX_Keyframe_Prompts_v1.txt

[SHOT 1A START]

A Medium Shot of Flicker, tiny firefly, stylistic clay texture with visible thumbprints, wearing avatar gear. The character is hovering in place. The setting is The Forest... [Cardinal Details]... [LUTs]. --ar 16:9

[SHOT 1A END]

A Medium Shot of Flicker... The character is hovering in place (wind blowing harder). The setting is The Forest... [Cardinal Details]... [LUTs]. --ar 16:9

Action (5c): The Audio Timing Lock

Objective: Assign a Sync Strategy and generate audio assets for "Audio-First" shots.

Trigger: Completion of Step 5b.

Execution Logic:

1. **The Workflow Sort (Strategy Assignment):**
 - **Strategy A (Audio-First):** For Emotional lines, Monologues, or V.O.
 - *Action:* Generate TTS audio now using ElevenLabs. Log the exact duration.
 - **Strategy B (Voice Skinning):** For Short, Casual, On-Screen dialogue (under 6s).
 - *Action:* Skip generation. Estimate duration (3 words/sec). You will generate this in Phase 3.
2. **The Buffer Rule (Strategy A Only):**
 - When planning video generation, set duration to **Audio Length + 20%**. (e.g., 4.0s Audio \$\to\$ 5.0s Video Plan).

Deliverable: Scene_XX_Audio_Map.json
