

## OpsPilot

# Stage-Gate / FEL Review — User Manual

Pre-FID Gate Readiness · IPA FEL Index · AI Engineering Co-Pilot



### AI-GENERATED CONTENT · INDEPENDENT VERIFICATION REQUIRED

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**What this guide covers** — what a Front-End Loading review is, how the OpsPilot module assesses gate readiness, what to have ready, and the scorecard you receive.

## 1. What is a Stage-Gate / FEL review?

Front-End Loading (FEL) is the degree to which a project has been defined before money is committed to build it. A Stage-Gate / FEL review is the disciplined check, at each gate, of whether the project is mature enough to advance — most critically the gate before Final Investment Decision (FID). The reason it matters is the most robust finding in capital projects: projects that pass FID with weak front-end definition overrun on cost and schedule far more often than well-defined ones. The gate exists to stop an under-cooked project advancing.

OpsPilot assesses maturity per *IPA Independent Project Analysis methodology*, *IChemE FEL stages and AACE 18R-97*, scoring the FEL Index across Site Factors, Engineering Definition and Project Execution Planning.

## 2. What the OpsPilot module does

Role	Responsibility
 <b>AI Coach (OpsPilot)</b>	Assesses deliverable maturity, scores the FEL Index across the three areas, verifies the AACE estimate class, identifies gaps, and recommends Pass / Conditional / Fail.
 <b>Project Engineer / FEL Lead / Project Director (you)</b>	Provide the deliverable status, engineering completeness, schedule and cost class, and execution-plan maturity — and validate the scores and confirm gate readiness.

## 3. What you will be asked — have this ready

- The deliverable inventory and the status/completeness of each.
- The engineering definition maturity (P&IDs, equipment lists, scope).
- The schedule and cost-estimate class.
- The execution-plan maturity.

## 4. What you receive — the output

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A complete FEL Review (Word): the project context, deliverable inventory and maturity, the FEL Index scorecard across Site Factors / Engineering Definition / Execution Planning, the AACE cost-class verification, a gap analysis and a Pass / Conditional / Fail recommendation with a remediation plan.

## 5. Worked example (illustrative)

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A project is pushing for FID. The FEL review scores its three dimensions: Site Factors are well-defined, but Engineering Definition is thin — the P&IDs aren't issued for design and the equipment list is incomplete — and the cost estimate is claimed as Class 3 while the inputs are really Class 4. The honest scorecard lands the FEL Index in the weak band. Rather than a clean Pass, the recommendation is Conditional: advance only once the engineering deliverables reach the required maturity and the estimate is genuinely Class 3. That gate decision is exactly what prevents the overrun — passing FID on Class 4 dressed as Class 3 is one of the most-cited causes of capital blowout.

## 6. Getting the best result

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- **Score maturity honestly.** A flattering FEL score before FID is the most expensive shortcut in capital projects.
- **Match estimate class to inputs.** Class 3 with Class 4 inputs is the classic overrun trigger.
- **Use the Conditional verdict.** “Not yet, fix these gaps” is often the right and bravest answer.
- **Remediate before advancing.** Front-end definition is far cheaper to add now than to discover missing in execution.

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