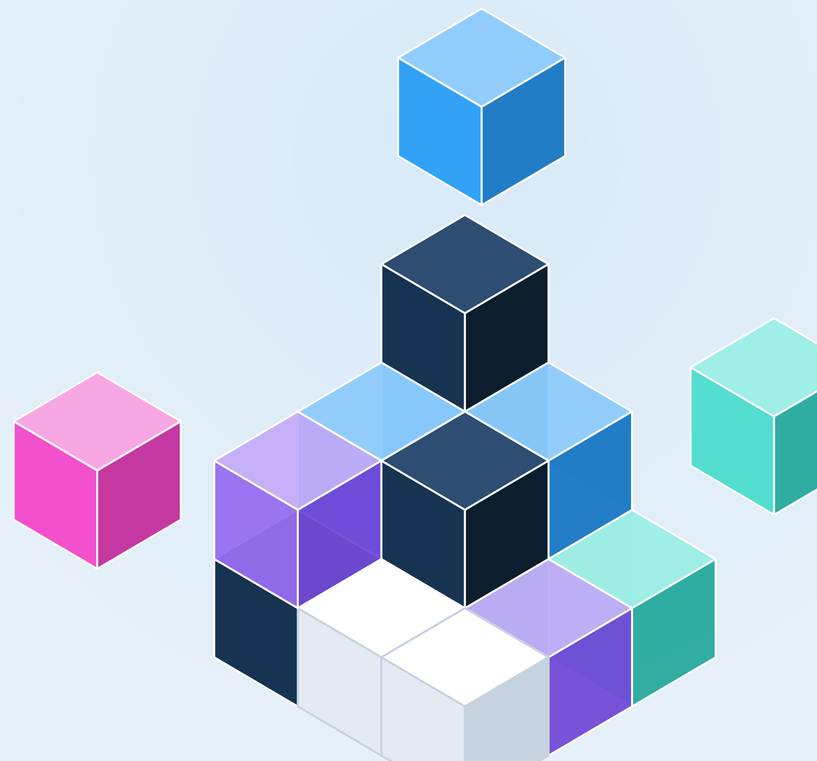
PRODUCTION & MANUFACTURING

Manufacturing Stage-Gate Process



A stage-gate process moves a new product or process to industrial launch in stages, with a formal go, hold or stop decision at each gate based on defined readiness criteria.

01 THE CORE MODEL

GATED ROADMAP · DECIDE BEFORE YOU SPEND

01 Concept
Market need, first cost and capacity estimate.

G1

02 Feasibility
Process concept, make-or-buy, investment case.

G2

03 Development
Tooling, line design, supplier parts.

G3

04 Validation
Pilot runs, process capability, part approval.

G4

05 Industrial launch
Ramp-up to rate, handover to operations.

Stage
A block of work that produces the evidence the next decision needs.

Gate
A go, stop, hold or recycle decision against defined criteria.

Readiness criteria
Measurable checks: capability, capacity, supply, documentation.

02 GATES THAT WORK

A gate is a business decision, not a status meeting.

STATUS MEETING — REAL DECISION

WEAK GATES

- Every project passes every gate
- Criteria vague or changed late
- Issues pushed into the launch phase

STRONG GATES

+ Clear criteria known from the start
+ Stop and hold decisions are normal
+ Launch risks found while still cheap

03 WORKED EXAMPLE

NEW GEAR MOTOR VARIANT · GATE 4 BEFORE INDUSTRIAL LAUNCH

CRITERION — Process capability
Cpk on key features

→

EVIDENCE — Pilot run data
two shifts, real operators

→

GAP — One feature short
fixture rework needed

→

DECISION — Hold 3 weeks
then review again

04 MANAGEMENT TAKEAWAYS

01 Set criteria before the stage
Teams should know exactly what evidence each gate needs.

02 Include operations early
Plant and supply chain sign off at every gate, not just the last.

03 Make stopping a project normal
Ending weak projects early frees capacity for the strong ones.

05 COMMON MISTAKE

LIMITATION

Gates without teeth
When gates never stop or delay anything, problems surface during ramp-up, where they cost most.