Rayterton ERP for Manufacturing

Rayterton ERP for Manufacturing is a strategic, enterprise grade digital infrastructure designed for multi plant manufacturers and large industrial groups. The platform goes far beyond transactional ERP by embedding governance, operational intelligence, quality compliance, traceability, and profitability control into a single unified manufacturing ecosystem.

End to end plant lifecycle platform

Rayterton ERP for Manufacturing is an end to end plant lifecycle platform designed for manufacturers to plan and execute production with finite capacity discipline, control procurement and inventory with audit ready evidence, manage engineering change safely, and close finance with cost traceability from material to margin.

Implementation Philosophy and Experience

With **Rayterton** that specializes in customizing solutions to fit your needs 100%, you do not need to worry about disruption or change the system can follow your existing business processes and operations.

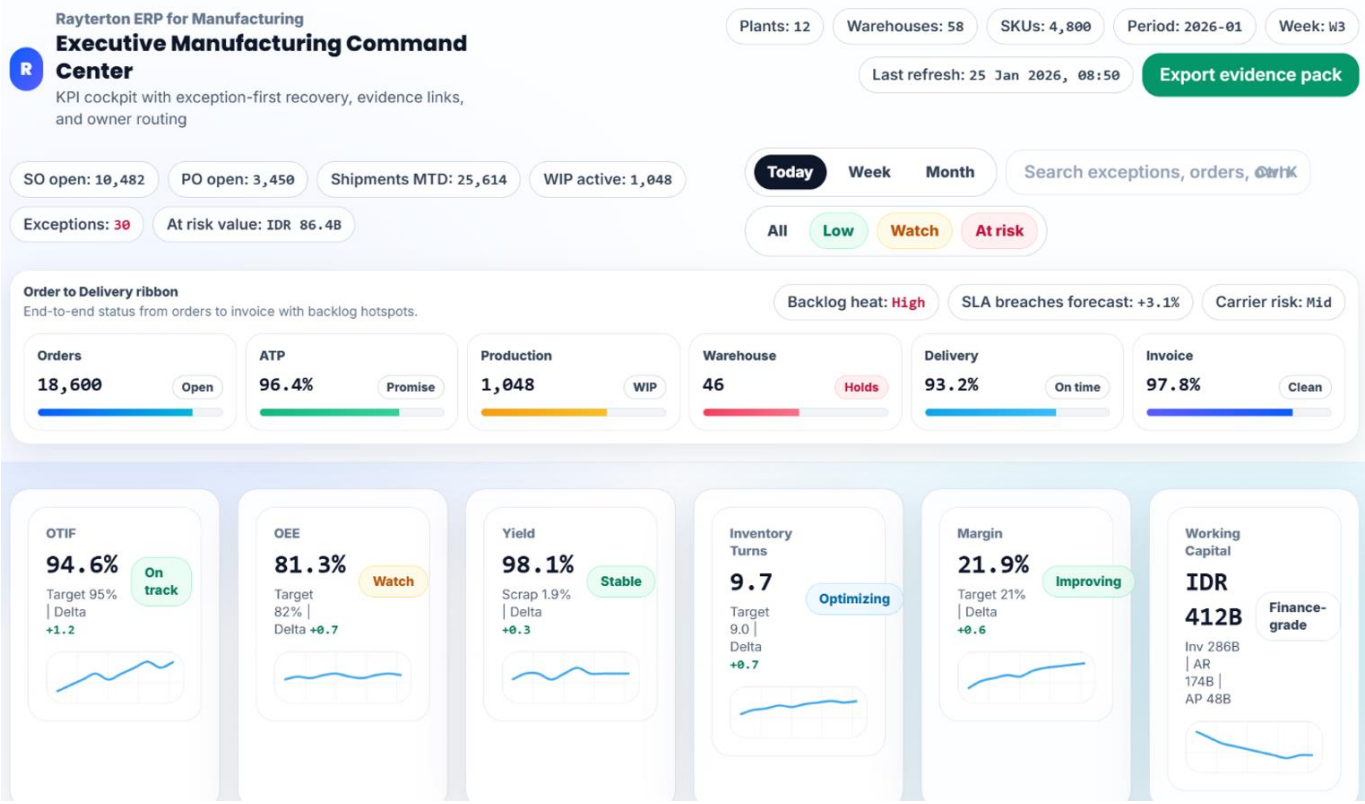
- *Phased rollouts, go live on specific modules with your own pace*
- *Existing processes respected and emphasized*
- *Change requests included in maintenance; no fear of missing out important business needs during initial implementation phase*

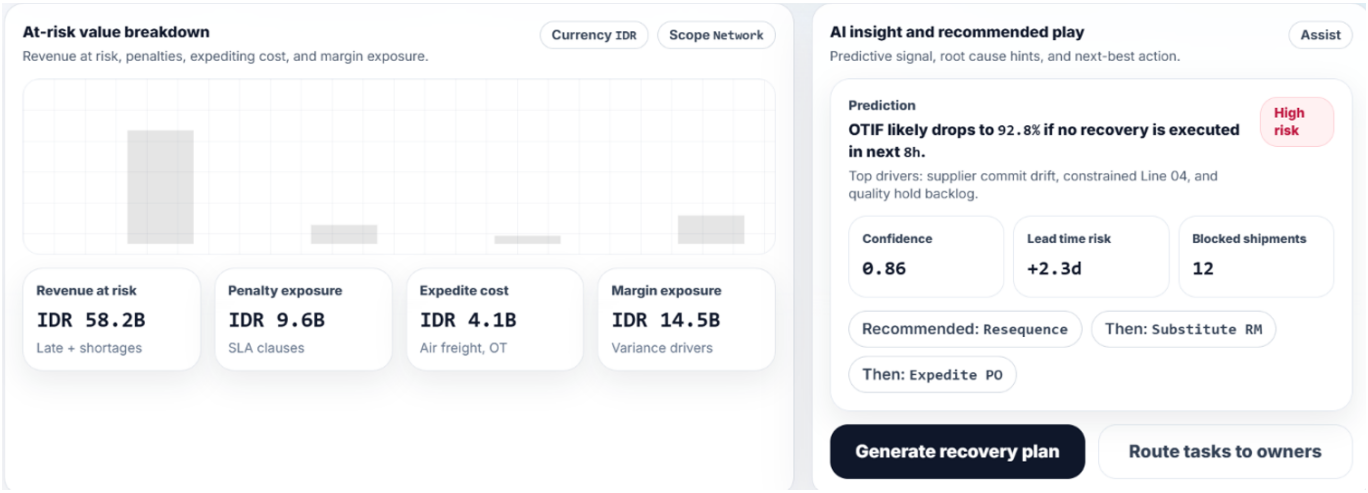
This is a short generalized sequence of implementation to get started with Rayterton ERP :

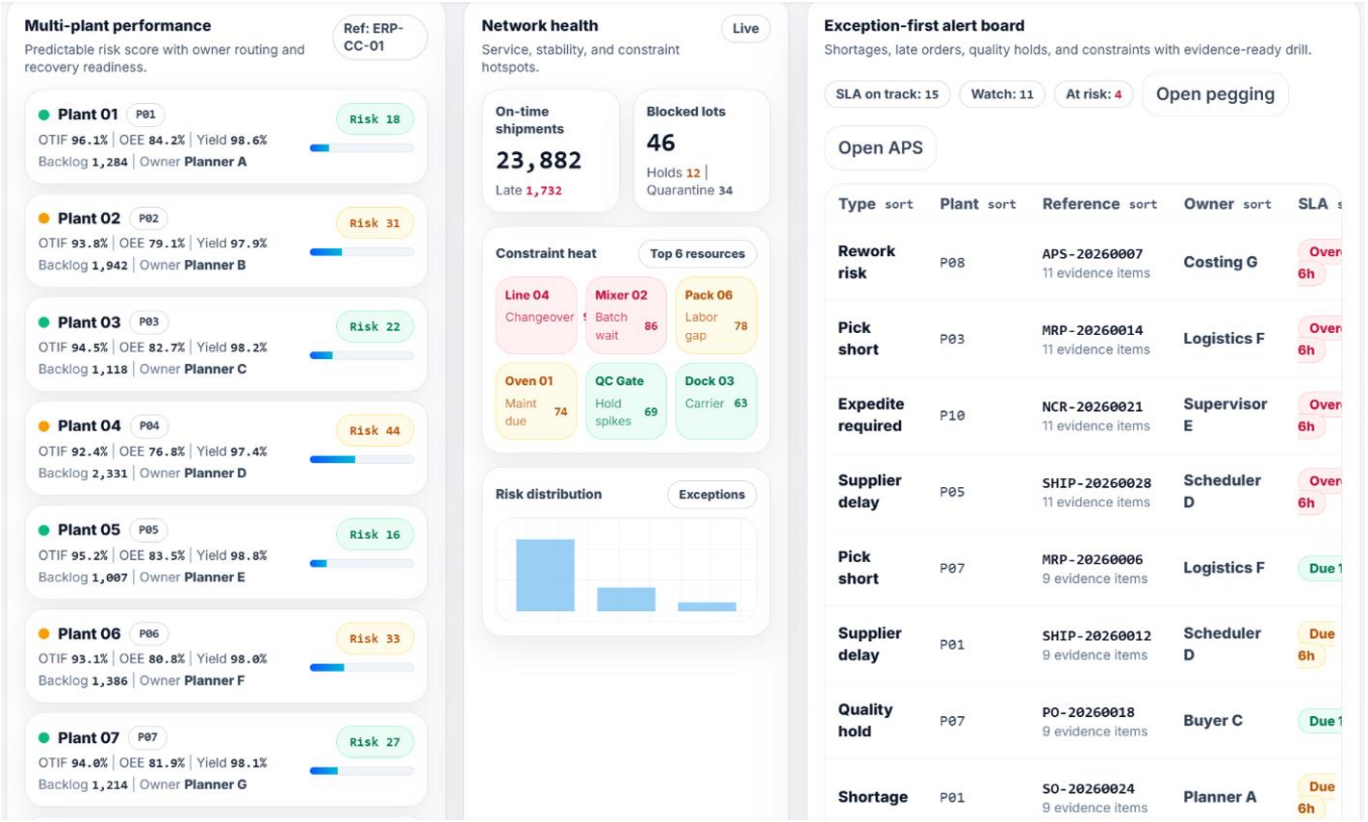
1. Setup Foundation and Master Data
2. Define BOM and Routings
3. Configure Planning Policies
4. Enable Procurement Controls
5. Establish Warehouse Execution
6. Release Production Orders
7. Run Finite Scheduling
8. Execute Quality and CAPA
9. Activate Traceability
10. Close Costing & Close Finance
11. Profitability Cockpit

Executive Manufacturing Command Center

Monitor everything in your manufacturing business from a centralized command center, complete with dashboards equipped with everything you need to monitor and make decisions. Give leadership a real time control view of service, capacity, quality, inventory, and margin exposure. Includes **Executive KPI Cockpit** (OTIF, OEE, yield, scrap, inventory turns, working capital, margin), **exception tiles** (late orders, material shortage, capacity overload, quality holds), and **drilldown to planning**, **execution**, **quality**, and **finance**. This module feeds prioritized exceptions into Order to Cash, MRP and Scheduling, Procurement, Production Execution, Quality, and Costing, and consolidates outcomes back into executive evidence packs.

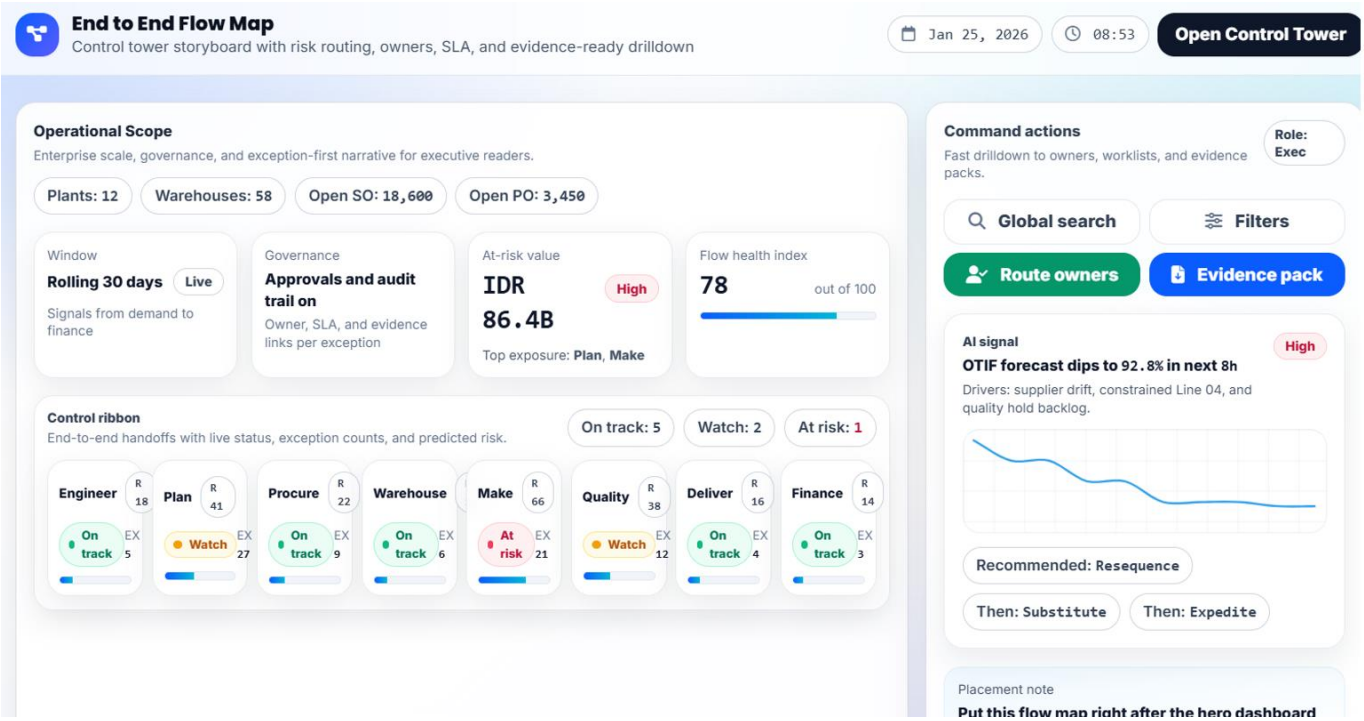


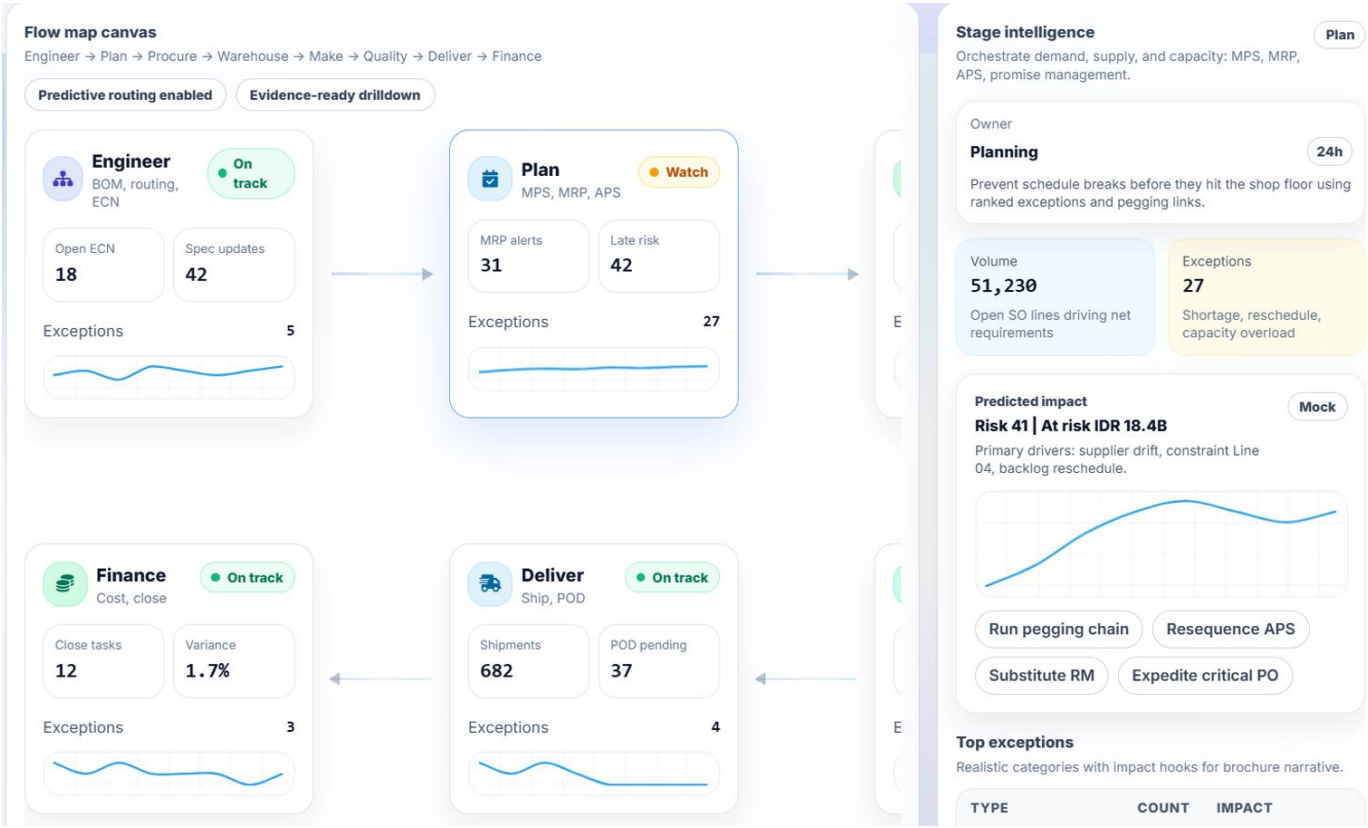

At-risk value breakdown
Revenue at risk, penalties, expediting cost, and margin exposure.
Currency IDR
Scope Network
Revenue at risk
IDR 58.2B
Late + shortages
Penalty exposure
IDR 9.6B
SLA clauses
Expedite cost
IDR 4.1B
Air freight, OT
Margin exposure
IDR 14.5B
Variance drivers
AI insight and recommended play
Predictive signal, root cause hints, and next-best action.
Assist
Prediction
OTIF likely drops to 92.8% if no recovery is executed in next 8h.
High risk
Top drivers: supplier commit drift, constrained Line 04, and quality hold backlog.
Confidence
0.86
Lead time risk
+2.3d
Blocked shipments
12
Recommended: Resequence
Then: Substitute RM
Then: Expedite PO
Generate recovery plan
Route tasks to owners


Multi-plant performance
Predictable risk score with owner routing and recovery readiness.
Ref: ERP-CC-01
Plant 01 P01
OTIF 96.1% | OEE 84.2% | Yield 98.6%
Backlog 1,284 | Owner Planner A
Risk 18
Plant 02 P02
OTIF 93.8% | OEE 79.1% | Yield 97.9%
Backlog 1,942 | Owner Planner B
Risk 31
Plant 03 P03
OTIF 94.5% | OEE 82.7% | Yield 98.2%
Backlog 1,118 | Owner Planner C
Risk 22
Plant 04 P04
OTIF 92.4% | OEE 76.8% | Yield 97.4%
Backlog 2,331 | Owner Planner D
Risk 44
Plant 05 P05
OTIF 95.2% | OEE 83.5% | Yield 98.8%
Backlog 1,007 | Owner Planner E
Risk 16
Plant 06 P06
OTIF 93.1% | OEE 80.8% | Yield 98.0%
Backlog 1,386 | Owner Planner F
Risk 33
Plant 07 P07
OTIF 94.0% | OEE 81.9% | Yield 98.1%
Backlog 1,214 | Owner Planner G
Risk 27
Network health
Service, stability, and constraint hotspots.
Live
On-time shipments
23,882
Late 1,732
Blocked lots
46
Holds 12 | Quarantine 34
Constraint heat
Top 6 resources
Line 04
Changeover
Mixer 02
Batch wait 86
Pack 06
Labor gap 78
Oven 01
Maint due 74
QC Gate
Hold spikes 69
Dock 03
Carrier 63
Risk distribution
Exceptions
Exception-first alert board
Shortages, late orders, quality holds, and constraints with evidence-ready drill.
SLA on track: 15
Watch: 11
At risk: 4
Open pegging
Open APS
Type sort
Plant sort
Reference sort
Owner sort
SLA
Rework risk
P08
APS-20260007
11 evidence items
Costing G
Over 6h
Pick short
P03
MRP-20260014
11 evidence items
Logistics F
Over 6h
Expedite required
P10
NCR-20260021
11 evidence items
Supervisor E
Over 6h
Supplier delay
P05
SHIP-20260028
11 evidence items
Scheduler D
Over 6h
Pick short
P07
MRP-20260006
9 evidence items
Logistics F
Due 1
Supplier delay
P01
SHIP-20260012
9 evidence items
Scheduler D
Due 6h
Quality hold
P07
PO-20260018
9 evidence items
Buyer C
Due 1
Shortage
P01
SO-20260024
9 evidence items
Planner A
Due 6h

End to End Order to Cash Control Tower

Visualize backlog risk by plant and week, protect customer service with exception based orchestration, and keep finance aligned with fulfillment reality. Includes **Order timeline control tower**, **backlog heatmap by plant and week**, **ATP signals connected to MRP and finite schedule**, **shipment and invoicing readiness**, and **service recovery workflow for late or partial deliveries**. This module pulls supply, capacity, and constraint signals from MRP and Finite Scheduling, triggers fulfillment through Warehouse Execution, and activates invoicing and margin trace into Costing and Profitability.





Exception heat view

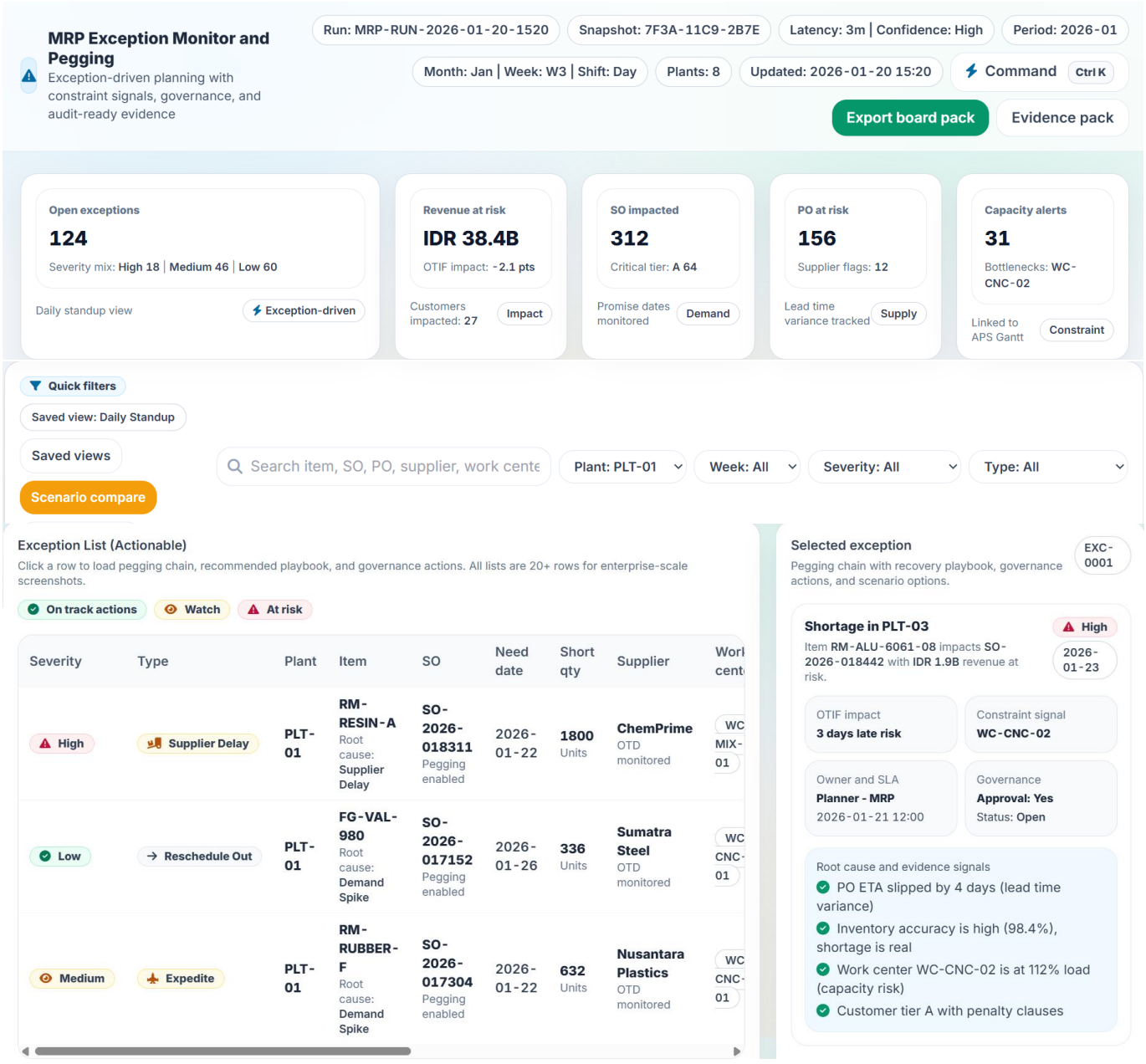
Compact, governance-friendly table for executive control narrative.

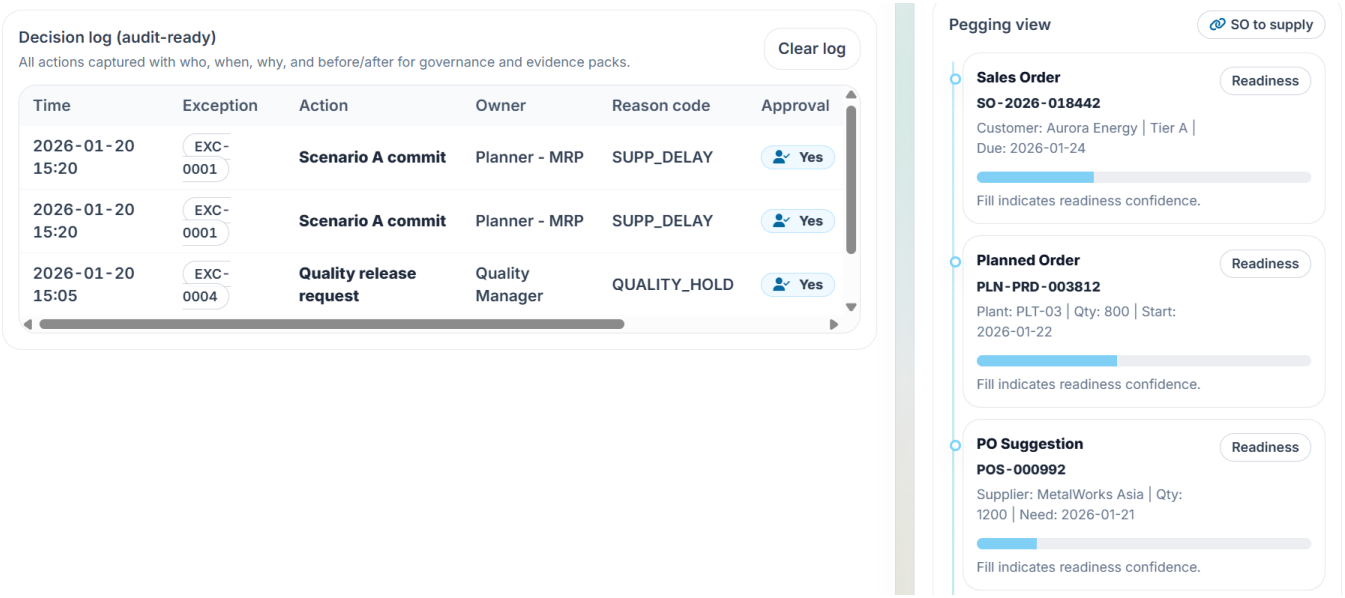
Updated: 08:53

STAGE	STATUS	EXCEPTIONS	PRIMARY DRIVER	OWNER	SLA
Engineer	On track	5	ECN approvals pending	**Engineering**	48h
Plan	Watch	27	Shortage and capacity constraints	**Planning**	24h
Procure	On track	9	Supplier confirmation gaps	**Procurement**	48h
Warehouse	On track	6	Bin discrepancy and cycle count variance	**Warehouse**	24h
Make	At risk	21	Work center bottleneck and downtime	**Operations**	8h
Quality	Watch	12	Incoming inspection holds	**Quality**	24h
Deliver	On track	4	Carrier scheduling	**Logistics**	48h
Finance	On track	3	3 way match exceptions	**Finance**	72h

MRP Exception Monitor and Pegging

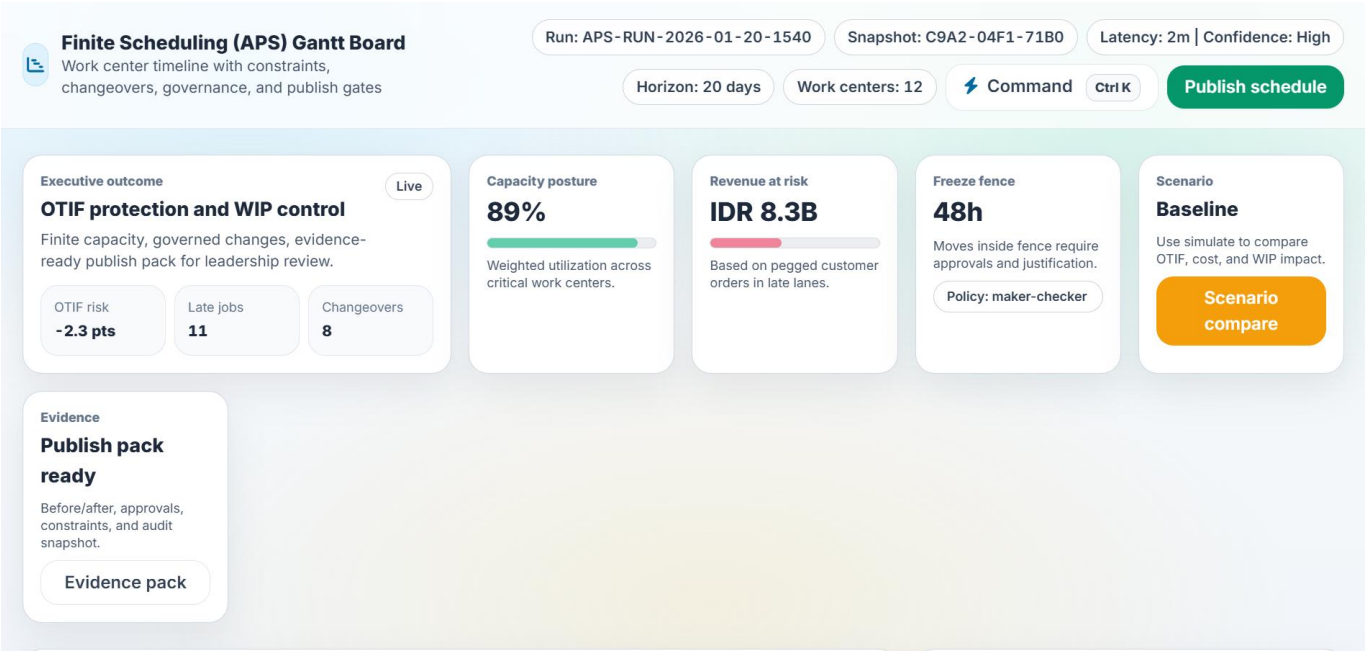
Turn planning from a batch report into an executive decision engine. Detect shortages, safety stock breaches, and late supplies, then resolve them with pegging visibility that shows exactly which sales orders, production orders, and customers are impacted. Includes **MRP exception inbox**, **pegging chain visibility**, **shortage resolution actions** (expedite, substitute, reschedule, split), and **governance controls** for actions that impact cost or schedule. This module feeds prioritized shortages into Procurement and Production Dispatch, updates promise dates for Order to Cash, and outputs audit payloads and board packs for governance review.

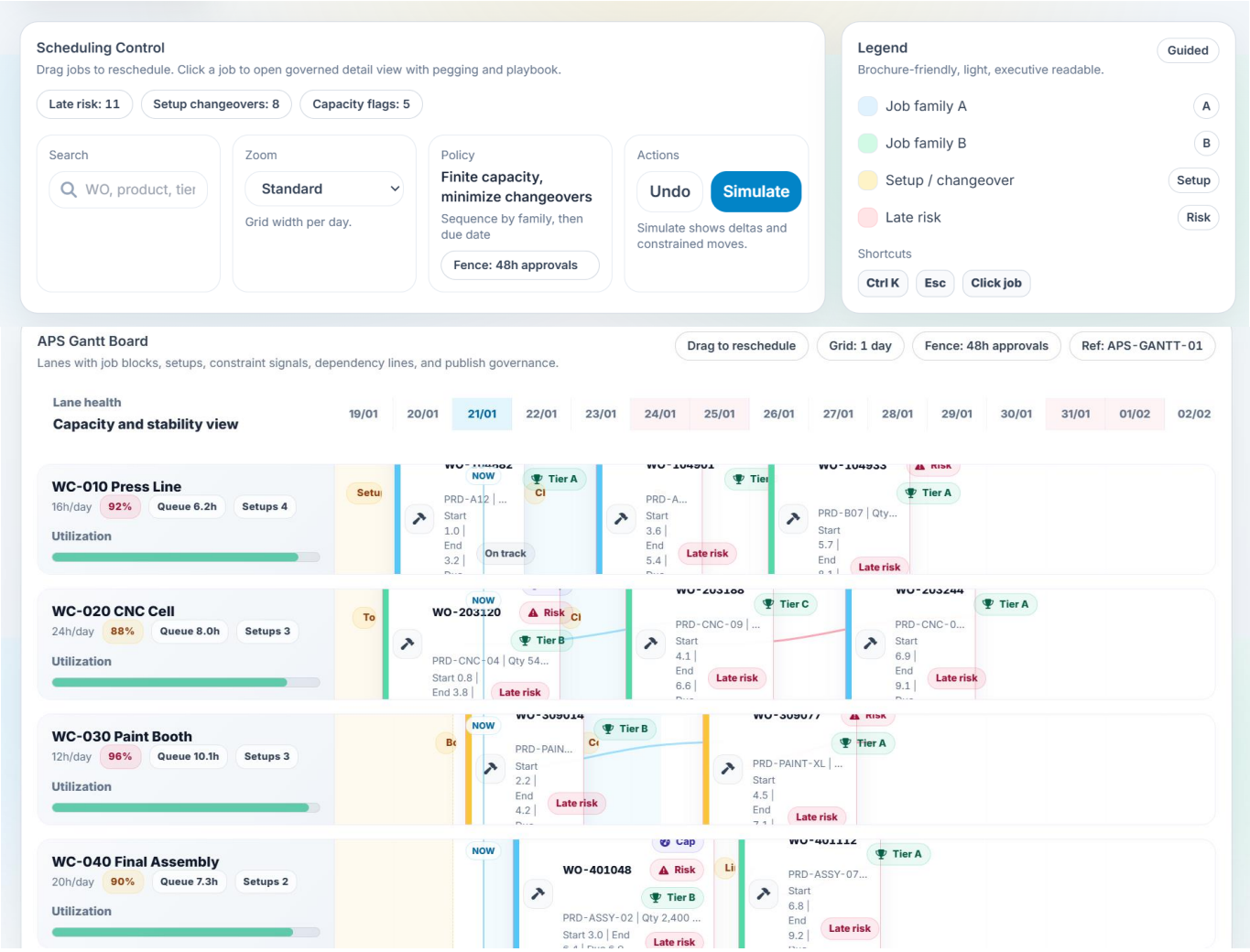




Finite Scheduling Control Board

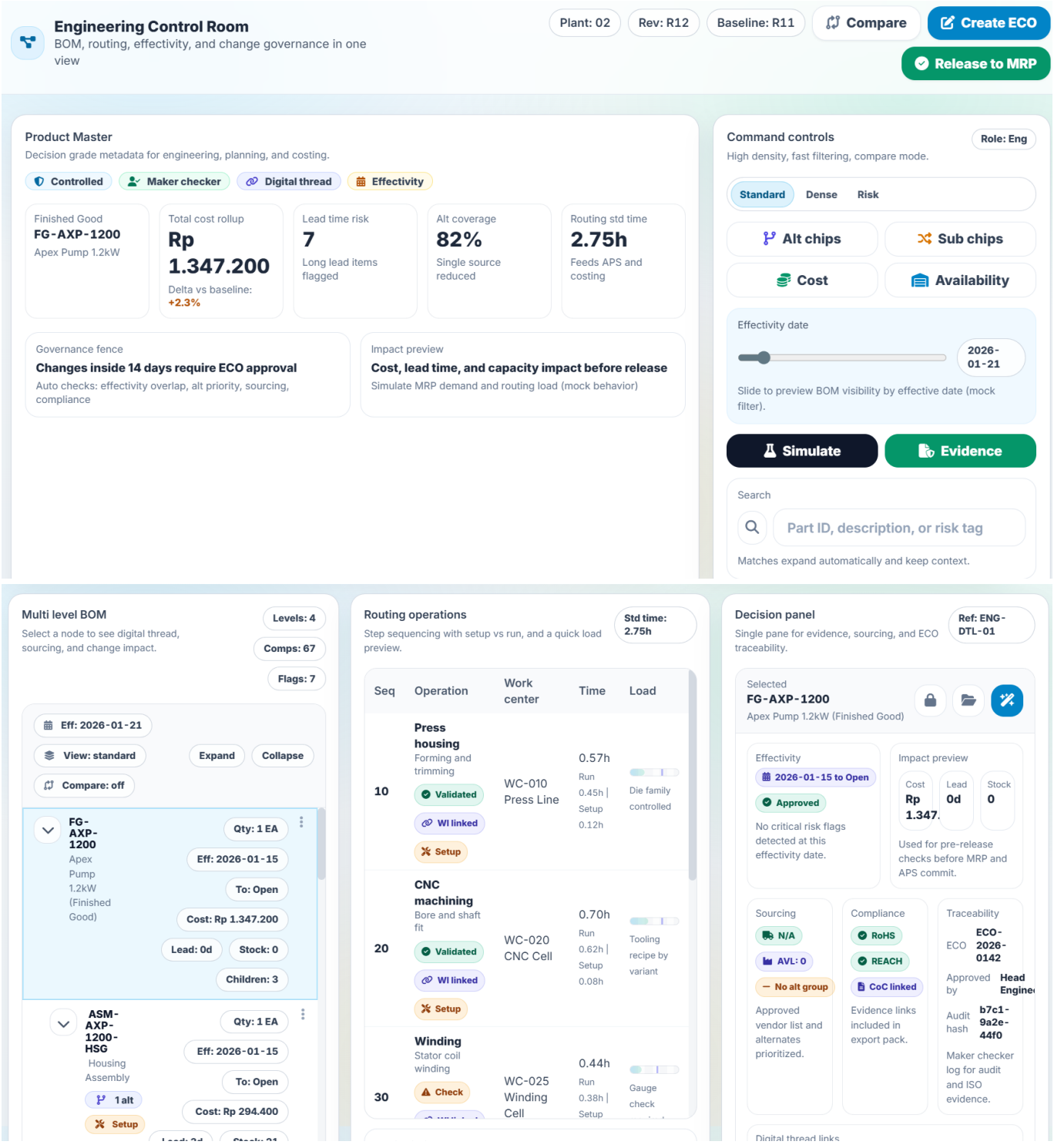
Schedule production with finite capacity, minimize changeovers, and protect critical windows with approval fences. Includes **Finite capacity scheduling board**, **changeover aware sequencing**, **dispatch windows and frozen fences**, **simulation with deltas**, and **controlled approvals for schedule moves with service impact**.





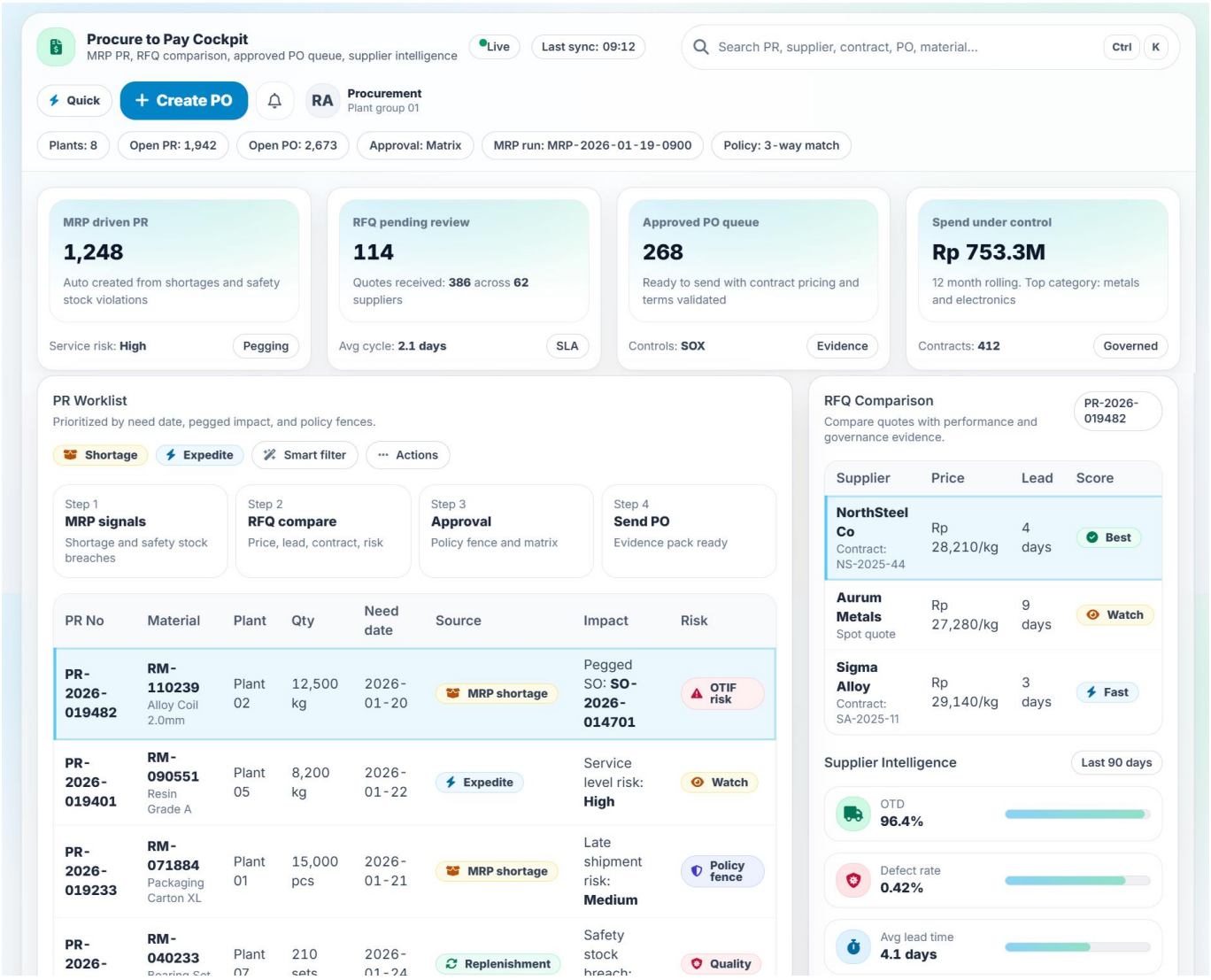
Engineering BOM and Change Control

Control BOM versions, routings, and effectivity dates with workflow discipline so production, procurement, and costing always use the correct revision. Prevent uncontrolled substitutions and reduce scrap caused by unmanaged change. Includes **Engineering BOM**, **routing versions**, **alternates and substitutions**, **effectivity windows**, **ECO workflow**, **impact analysis**, and **release control to production**. This module feeds released BOM and routing versions into MRP, Procurement, and Production Orders, and updates standard cost structures that flow into Costing, Variance, and Profitability.


Engineering Control Room
BOM, routing, effectivity, and change governance in one view
Plant: 02
Rev: R12
Baseline: R11
Compare
Create ECO
Release to MRP
Product Master
Decision grade metadata for engineering, planning, and costing.
Controlled
Maker checker
Digital thread
Effectivity
Finished Good
FG-AXP-1200
Apex Pump 1.2kW
Total cost rollup
Rp 1.347.200
Delta vs baseline: +2.3%
Lead time risk
7
Long lead items flagged
Alt coverage
82%
Single source reduced
Routing std time
2.75h
Feeds APS and costing
Governance fence
Changes inside 14 days require ECO approval
Auto checks: effectivity overlap, alt priority, sourcing, compliance
Impact preview
Cost, lead time, and capacity impact before release
Simulate MRP demand and routing load (mock behavior)
Command controls
Role: Eng
High density, fast filtering, compare mode.
Standard
Dense
Risk
Alt chips
Sub chips
Cost
Availability
Effectivity date
2026-01-21
Slide to preview BOM visibility by effective date (mock filter).
Simulate
Evidence
Search
Part ID, description, or risk tag
Matches expand automatically and keep context.
Multi level BOM
Select a node to see digital thread, sourcing, and change impact.
Levels: 4
Comps: 67
Flags: 7
Eff: 2026-01-21
View: standard
Expand
Collapse
Compare: off
FG-AXP-1200
Apex Pump 1.2kW (Finished Good)
Qty: 1 EA
Eff: 2026-01-15
To: Open
Cost: Rp 1.347.200
Lead: 0d
Stock: 0
Children: 3
ASM-AXP-1200-HSG
Housing Assembly
1 alt
Setup
Qty: 1 EA
Eff: 2026-01-15
To: Open
Cost: Rp 294.400
Routing operations
Step sequencing with setup vs run, and a quick load preview.
Std time: 2.75h
Seq
Operation
Work center
Time
Load
10
Press housing
Forming and trimming
Validated
WI linked
Setup
WC-010 Press Line
0.57h
Run 0.45h | Setup 0.12h
Die family controlled
20
CNC machining
Bore and shaft fit
Validated
WI linked
Setup
WC-020 CNC Cell
0.70h
Run 0.62h | Setup 0.08h
Tooling recipe by variant
30
Winding
Stator coil winding
Check
WC-025 Winding Cell
0.44h
Run 0.38h | Setup
Gauge check
Decision panel
Single pane for evidence, sourcing, and ECO traceability.
Ref: ENG-DTL-01
Selected
FG-AXP-1200
Apex Pump 1.2kW (Finished Good)
Effectivity
2026-01-15 to Open
Approved
No critical risk flags detected at this effectivity date.
Impact preview
Cost
Rp 1.347.
Lead
0d
Stock
0
Used for pre-release checks before MRP and APS commit.
Sourcing
N/A
AVL: 0
No alt group
Approved vendor list and alternates prioritized.
Compliance
RoHS
REACH
CoC linked
Evidence links included in export pack.
Traceability
ECO
ECO-2026-0142
Approved by
Head Engine
Audit hash
b7c1-9a2e-44f0
Maker checker log for audit and ISO evidence.
Digital thread links

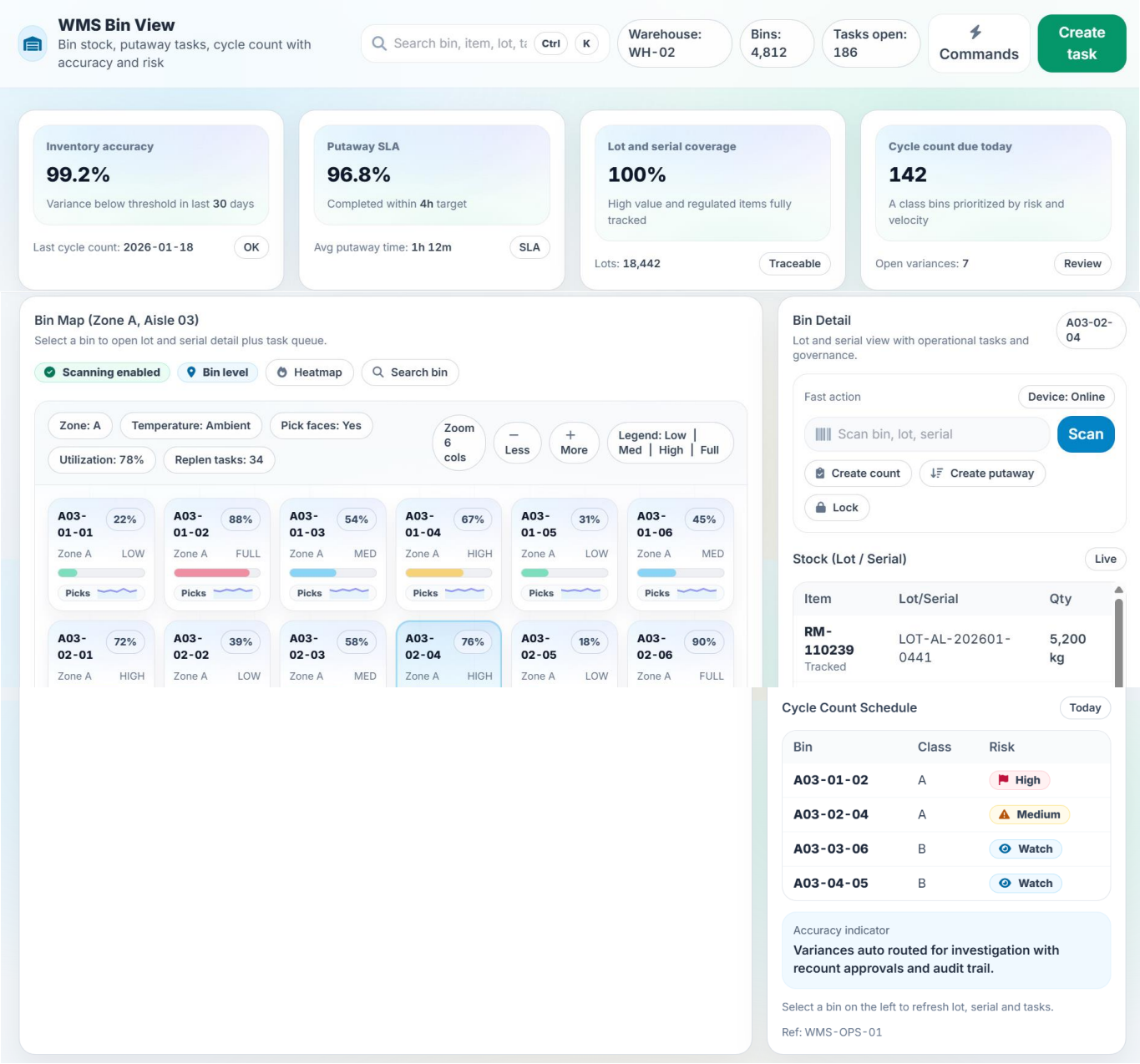
Procure to Pay Spend Control Tower

Convert MRP signals into purchase requests, compare RFQs with supplier performance context, enforce approvals with matrix governance, and complete 3 way match with evidence packs ready. Includes **MRP driven PR creation**, **RFQ comparison**, **approval fence and matrix**, **PO release**, **3 way match policy**, **supplier performance signals**, and **exception handling for shortages and expedite**. This module pulls demand from MRP and dispatch needs from Production, issues PO commitments that protect service, and feeds goods receipt and invoice matching into Inventory, Costing, and Finance controls.



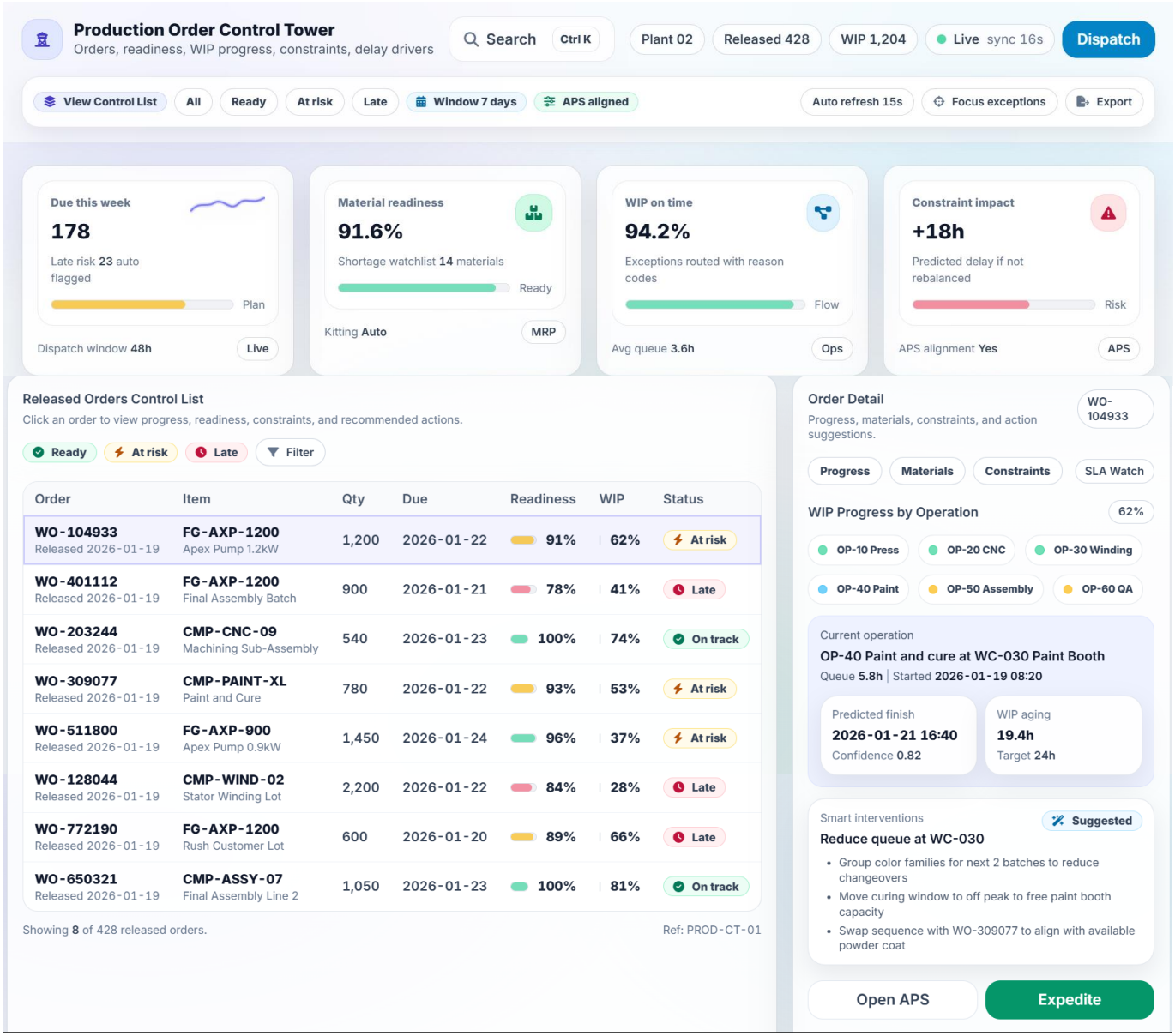
Warehouse Bin and Wave Execution

Execute warehouse operations with bin level control and wave discipline. Improve picking speed, reduce mispicks, and protect production kits and customer shipments with barcode workflows and real time task visibility. Includes **Bin master and slotting**, **wave planning**, **pick pack ship**, **kitting for production**, **cycle count and variance control**, and **exception handling for shortages and damages**. This module pulls demand from Order to Cash and Production Dispatch, confirms material readiness back to Production Execution, and posts inventory movements into Costing, Traceability, and Finance.



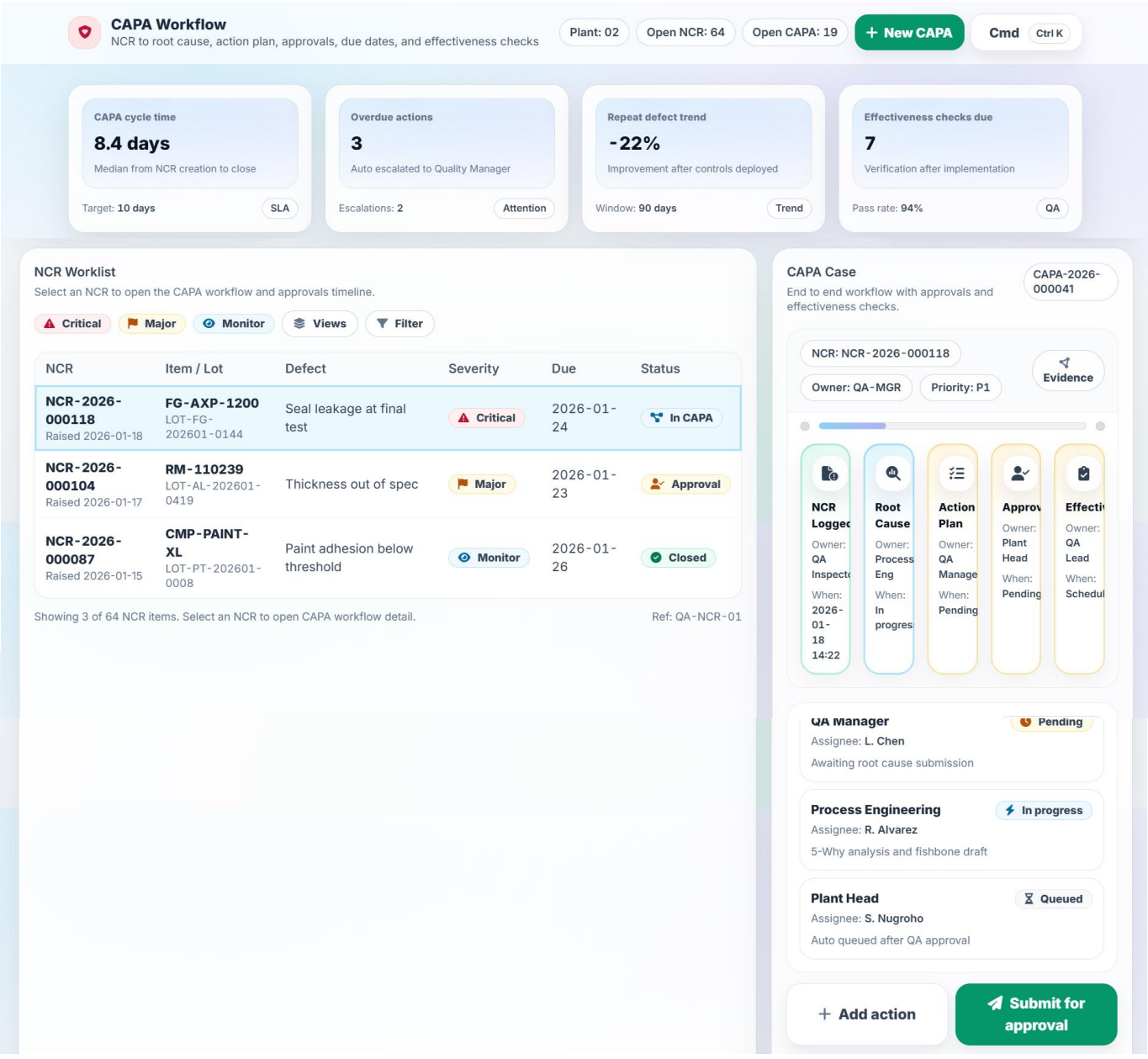
Production Order Control Tower

Run the shopfloor with one operational cockpit. Track dispatch readiness, material kitting, progress against plan, and constraint risks in one view. Resolve issues early with controlled actions that protect service and cost. Includes **Production order control tower**, **dispatch window control**, **material readiness and shortage watchlist**, **progress against plan**, **labor and machine checkpoint signals**, and **exception driven actions**. This module consumes the finite schedule and releases work to execution, sends consumption and completion signals into Costing, and triggers quality checks and traceability capture at each step.



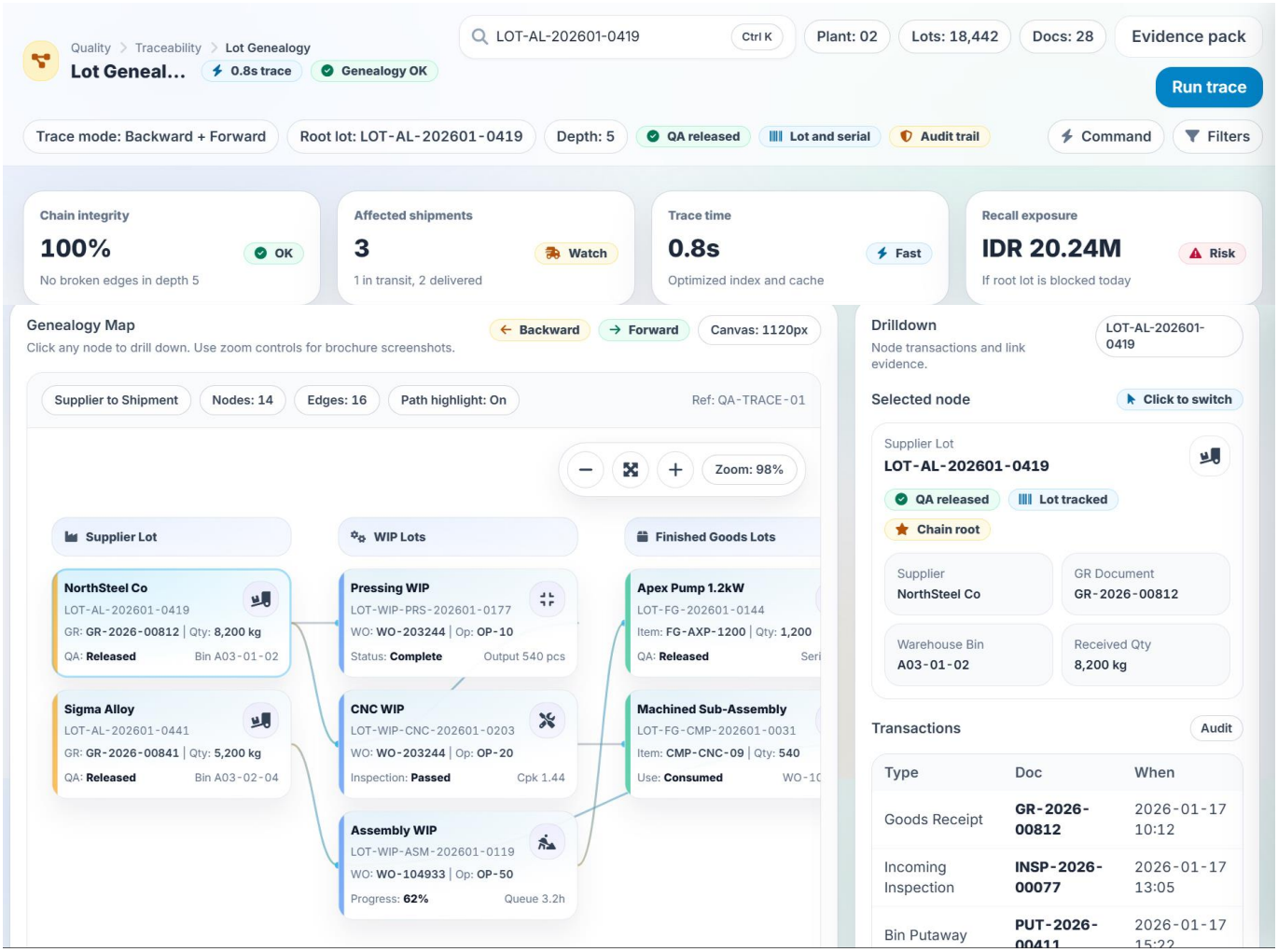
Quality CAPA and Nonconformance Hub

Control quality with closed loop discipline. Capture NCRs, enforce containment, drive root cause and corrective actions, and verify effectiveness before closure. Keep quality decisions traceable and ready for audits. Includes **NCR inbox**, **containment actions**, **CAPA workflow with approvals**, **defect analytics**, **supplier and process linkage**, and **effectiveness checks**. This module blocks or releases inventory for Warehouse and Production, updates supplier performance for Procurement, and writes auditable quality evidence that links to Lot Genealogy and compliance reporting.



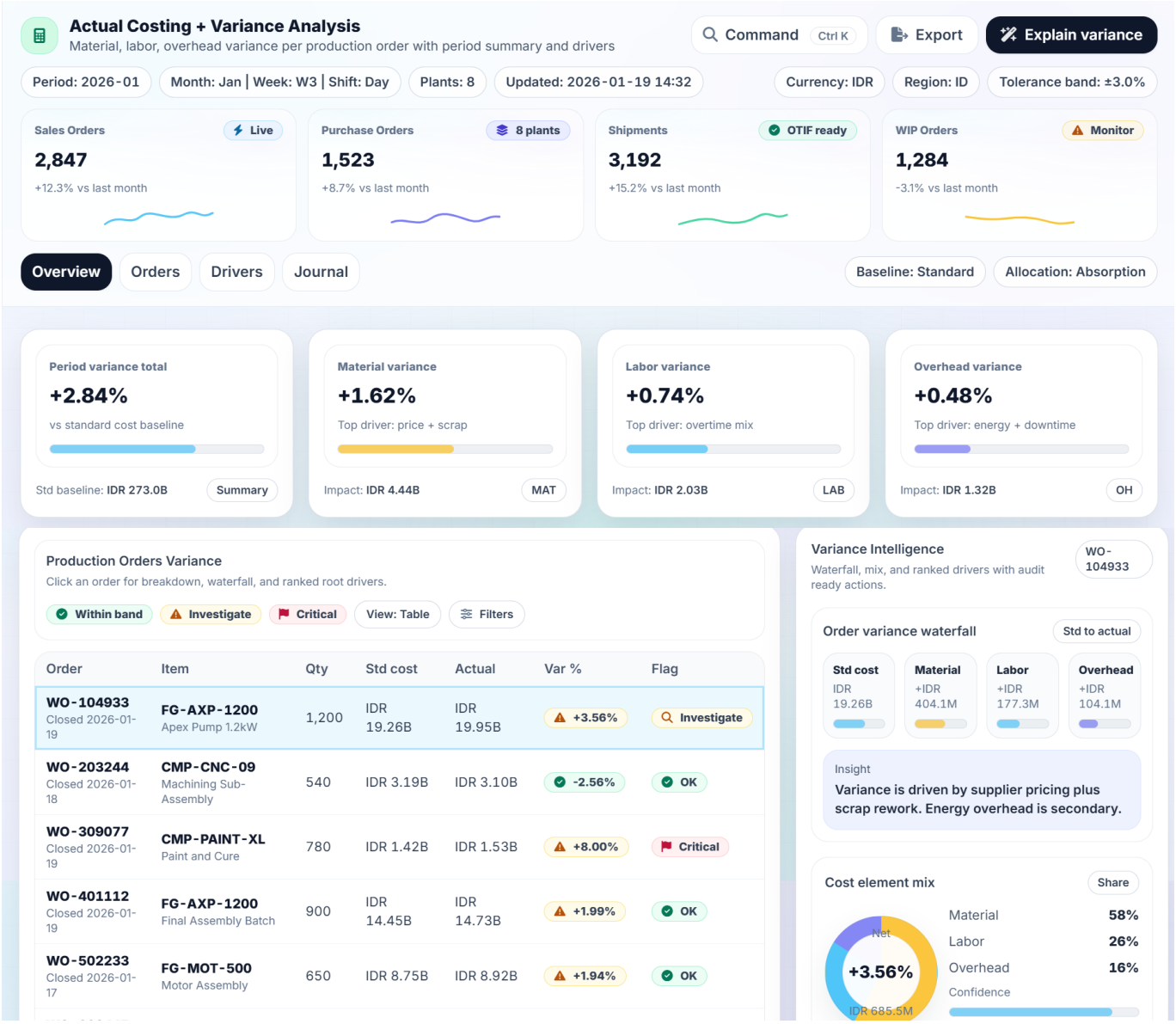
Lot Genealogy and Traceability Tree

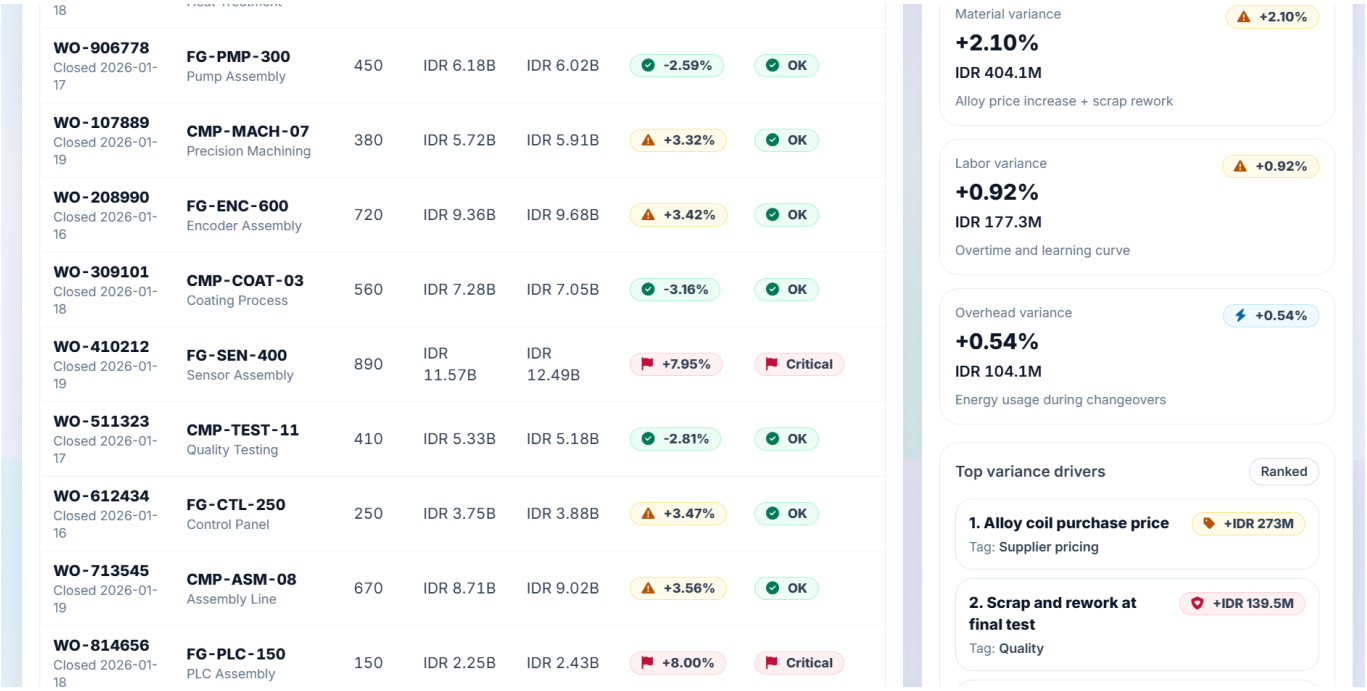
Trace every lot from supplier to finished goods to customer shipment. Execute recalls with confidence by identifying scope in minutes, not days. Build compliance grade genealogy for regulated industries and export readiness. Includes **Lot and batch genealogy tree**, **upstream and downstream trace**, **recall scope builder**, **quality holds and dispositions**, and **evidence export for auditors and customers**. This module pulls lot events from Procurement, Warehouse, Production, and Quality, and feeds cost and margin attribution into Actual Costing and Profitability.



Actual Costing and Variance Analysis

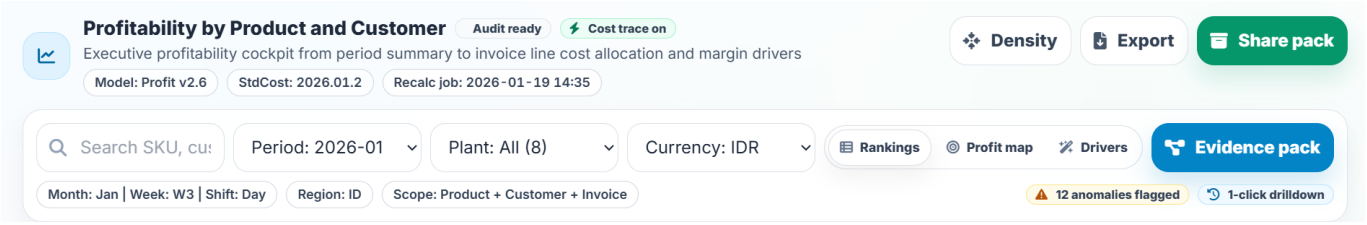
Close the loop between operations and finance with real actual costing. Reconcile material, labor, overhead, and variances by order and by product. Turn variance from a monthly surprise into a controlled operational action list. Includes **Actual cost rollup by work order**, **variance drivers** (usage, rate, yield, overhead), **reconciliation views**, and **governance ready postings aligned to finance close**. This module consumes transactions from Production and Warehouse, validates standards from Engineering, and outputs financial postings and variance evidence into Finance and Profitability.





Profitability by Product and Customer

Move from cost reporting to profit decisions. Analyze profitability from period summary down to invoice line cost allocation and margin drivers. Keep “cost trace on” so leaders can defend margin actions with evidence, not assumptions. Includes **Profitability cockpit**, **product and customer margin ranking**, **cost allocation trace to material and operations**, **mix and price waterfall, and action list for margin leakage**. This module pulls actual cost evidence from Costing, revenue and terms from Order to Cash, and supplier and quality signals from Procurement and Quality to explain margin with operational drivers.



Sales Orders	Invoices	Shipments	WIP Orders
10,482	**7,916**	**8,734**	**4,186**
Open **1,204** | Past due **118**	Posted **7,842** | Disputed **38**	On-time **94.2%** | Claims **0.8%**	Active **2,907** | On hold **141**

Gross margin	Net margin after freight and claims	Top SKU at scale	Bottom SKU risk
31.8%	**25.1%**	**42.1%**	**-4.6%**
Contribution: **IDR 126.6B**	Net contribution: **IDR 100.1B**	**FG-AXP-1200** drives margin mix	Loss driver: expedite + scrap concentration
Target: **30%** GM	Freight: **IDR 14.9B** NET	Revenue: **IDR 98.8B** SKU	SKU: **CMP-PAINT-XL** RISK

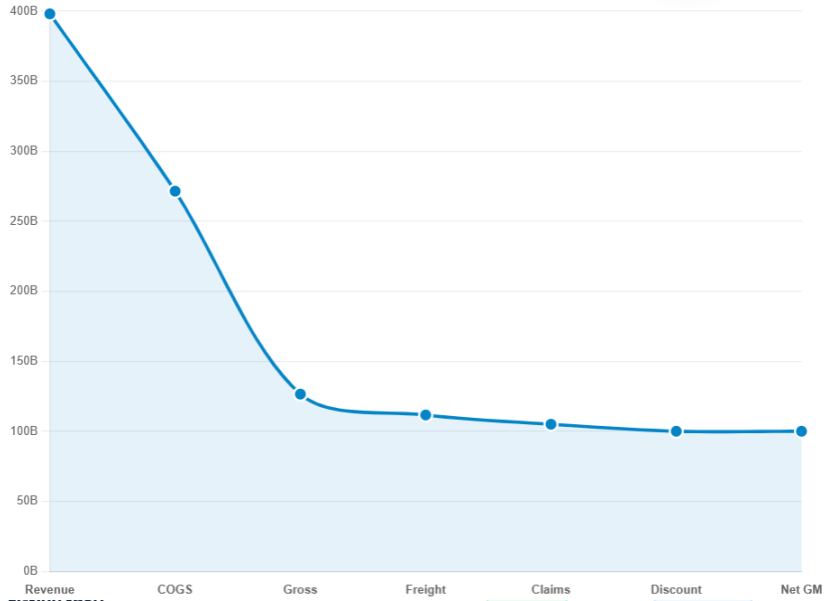
Margin Flow and Profitability Lens

Period lens from revenue to net margin, then ranked product and customer drill paths to invoice evidence.

Product plus customer | Currency: IDR

Hover points for period checkpoints. Values shown in billions.

MTD | YTD | QTD



Invoice ref: **INV-2026-001905**	IDR 52.5B	↑ 38.6%	→ Evidence
FG-AXP-900 Invoice ref: **INV-2026-001877**	IDR 46.7B	↑ 36.2%	→ Evidence
CMP-CNC-09 Invoice ref: **INV-2026-001822**	IDR 24.6B	↑ 34.4%	→ Evidence
FG-AXP-800 Invoice ref: **INV-2026-001795**	IDR 21.9B	↑ 33.8%	→ Evidence
FG-VAL-750 Invoice ref: **INV-2026-001783**	IDR 19.8B	↑ 32.9%	→ Evidence
CMP-CNC-07 Invoice ref: **INV-2026-001771**	IDR 17.5B	↑ 31.5%	→ Evidence
FG-AXP-700 Invoice ref: **INV-2026-001759**	IDR 15.4B	↑ 30.8%	→ Evidence
FG-VAL-650 Invoice ref: **INV-2026-001747**	IDR 14.1B	↑ 29.6%	→ Evidence
CMP-CNC-05 Invoice ref: **INV-2026-001735**	IDR 12.3B	↑ 28.9%	→ Evidence

Invoice Evidence

Margin proof down to invoice line, allocation, and trace status.

INV-2026-001944

Customer
Aurora Energy
Date: **2026-01-19** | Terms: **Net 30** | Status: **Posted**

Invoice | AR risk: Low | Dispute: None

Revenue	Cost	GM%
IDR 13.6B	**IDR 8.0B**	**41.5%**

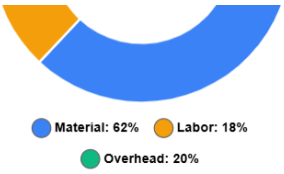
Summary note
Margin driven by pricing discipline and stable freight lanes.

Invoice Lines

Cost trace: Enabled

SKU	Qty	Revenue	Cost	GM%
FG-AXP-1200 Allocation and trace available	400	IDR 9.10B	IDR 5.20B	↑ 42.9%
CMP-PACK-STD Allocation and trace available	400	IDR 0.68B	IDR 0.49B	↑ 28.1%

FG-



Material	62%
Labor	18%
Overhead	20%

Allocation shown per selected line. In production, each component links to cost trace evidence.

Evidence notes
Material includes lot trace, labor includes routing time, overhead includes machine center rates. Line SKU: FG-AXP-1200.

Glossary

ATP (Available to Promise)
A method to calculate product cost based on real, recorded expenses (materials, labor, and overhead), so the cost reflects what actually happened in production.

BOM (Bill of Materials)
A complete list of all parts, components, and materials needed to build a product. Similar to a recipe for making a product.

CAPA (Corrective and Preventive Action)
A quality process to fix problems (corrective) and prevent them from happening again (preventive).

ECO (Engineering Change Order)
A planning system that calculates what materials are needed and when, based on demand, BOM, and production schedules.

MRP (Material Requirements Planning)
A planning system that calculates what materials are needed and when, based on demand, BOM, and production schedules.

NCR (Nonconformance Report)
A report created when a product or process does not meet required specifications.

OEE (Overall Equipment Effectiveness)
A performance metric that combines machine availability, speed, and quality into one score.

O2C (Order to Cash)
The full business process from receiving a customer order to collecting payment.

OTIF (On Time In Full)
A customer service measure showing whether orders are delivered on time and in the correct quantity.

Ready to Transform Your Manufacturing Operations at the Enterprise Level

Share your plant footprint, product complexity, planning constraints, procurement governance, quality standards, traceability requirements, and finance close pain points. Rayterton will configure a governance first ERP blueprint tailored to your operating model, then deliver a control tower demo with realistic volumes, audit ready evidence packs, and end to end traceability from demand to margin so leadership can validate outcomes before rollout.

Contact Us :

+62 812 9615 0369 **marketing@rayterton.com**

About Rayterton

Established in 2003, Rayterton delivers comprehensive Best Fit Software Solutions, server and hardware products, and technology services to a wide range of industries and organizations. Our core expertise lies in Business Process Improvement (BPI), IT Infrastructure, and IT Management.

At Rayterton, we are committed to empowering our clients by enhancing their business operations through tailored IT and management solutions. We combine innovation, experience, and client collaboration to ensure long-term success and digital transformation.

Our Competitive Strengths

100% Risk Free	**Best fit to client requirements**	**Easy to customize**	**Software ownership**	**No Change Request (CR) fees during maintenance**

For more information, visit rayterton.com