Rayterton Industrial IoT Monitoring Suite

Turn machine signals into daily operational control with faster improvement cycles and audit-ready evidence across lines and plants. The suite connects edge data capture and a standardized production model with real-time visibility, downtime and loss insights, alert-driven actions, and enterprise integrations in a single operating flow.

All in one monitoring platform.

From Signals to Operational Execution

Plants often face challenges with raw tags and busy charts that don't drive actionable insights. **Rayterton** addresses these challenges by starting with the **KPI and Taxonomy Governance Studio**, which establishes shared KPI definitions, defines downtime taxonomy, and provides escalation templates for more structured operations.

Next, we move into **Industrial Connectivity and Edge Gateway**, which includes a Device and Signal Reliability Layer that ensures data stays consistent even when the network drops. This ensures that plant operations remain uninterrupted and reliable. After that, **Data Capture and Context Builder** converts signals into events tied to line, shift, SKU, and order. This process ensures that all systems in the suite run on the same definitions, providing uniformity across sites.

Our operating loop is designed to be repeatable across sites, covering key steps such as governance setup, device onboarding, tag mapping, data readiness, real-time monitoring, OEE and loss analysis, andon escalation, shift review, quality and energy analytics, and predictive analytics. The Integration Hub then connects seamlessly with systems like MES, CMMS or EAM, QMS, ERP, and BI, ensuring all data is integrated and actionable. Finally, change control loops back into governance to ensure improvements stay standardized and aligned across sites.

KPI and Downtime Governance

KPI and Taxonomy Governance Studio sets the rules once so every plant runs the same scoreboard. Site and line structure, KPI definitions library, downtime reason codes, thresholds, escalation policy templates, and versioning with change log are managed as controlled releases, so benchmarking across sites stays valid. Governance outputs stay traceable through a versioned KPI definition pack, downtime taxonomy catalog, and a recorded change log for audits.
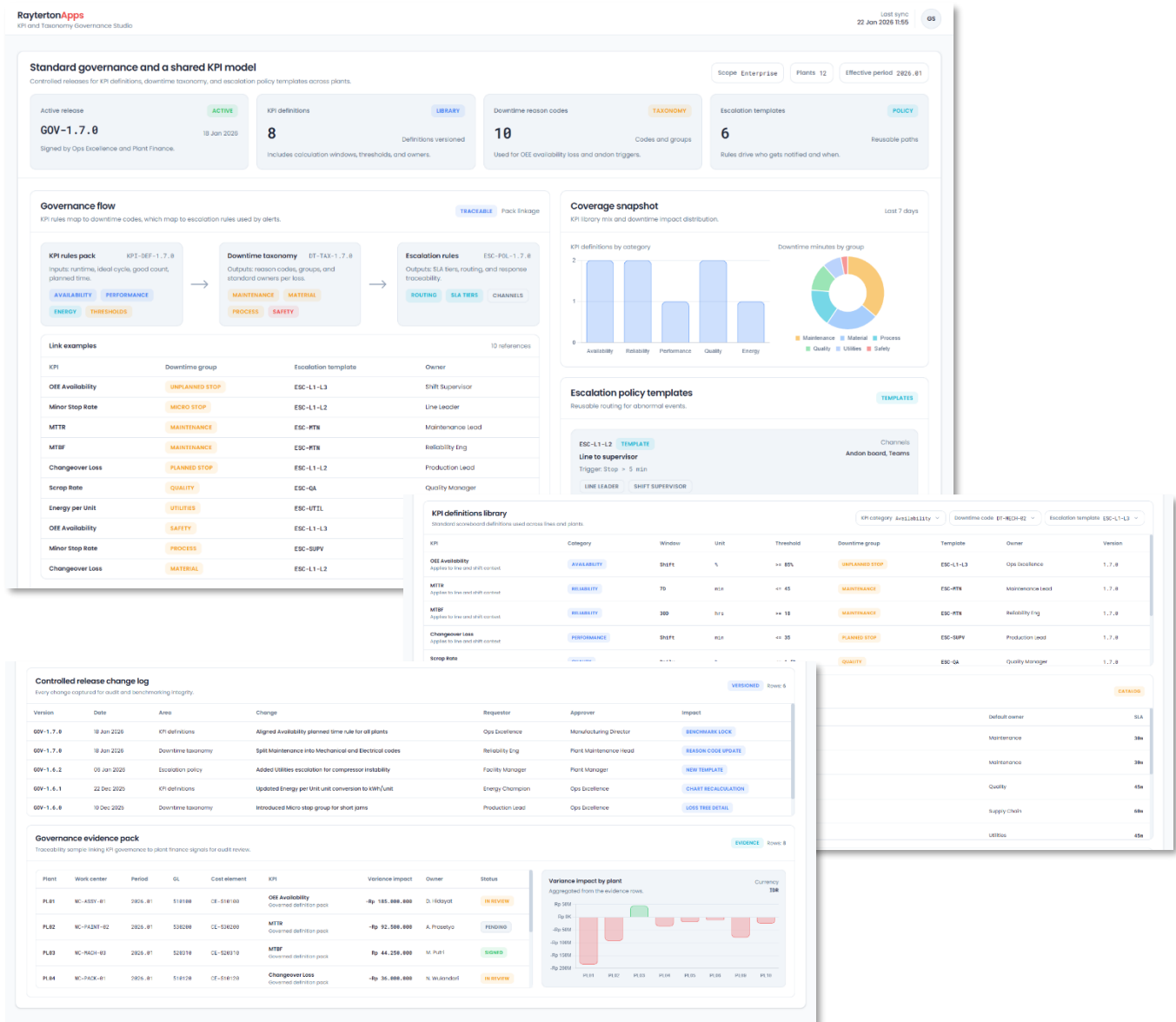
Industrial Connectivity and Edge Gateway

Industrial Connectivity and Edge Gateway, paired with the Device and Signal Reliability Layer, focuses on stable ingestion instead of "best effort" streaming. Device inventory and health, gateway provisioning, protocol connectors like OPC UA, Modbus, MQTT, and REST, plus certificate and TLS setup keep OT and IT controls aligned. Buffer and store and forward policies protect continuity when connectivity is unstable, so the control tower and OEE calculations do not collapse from timestamp gaps.
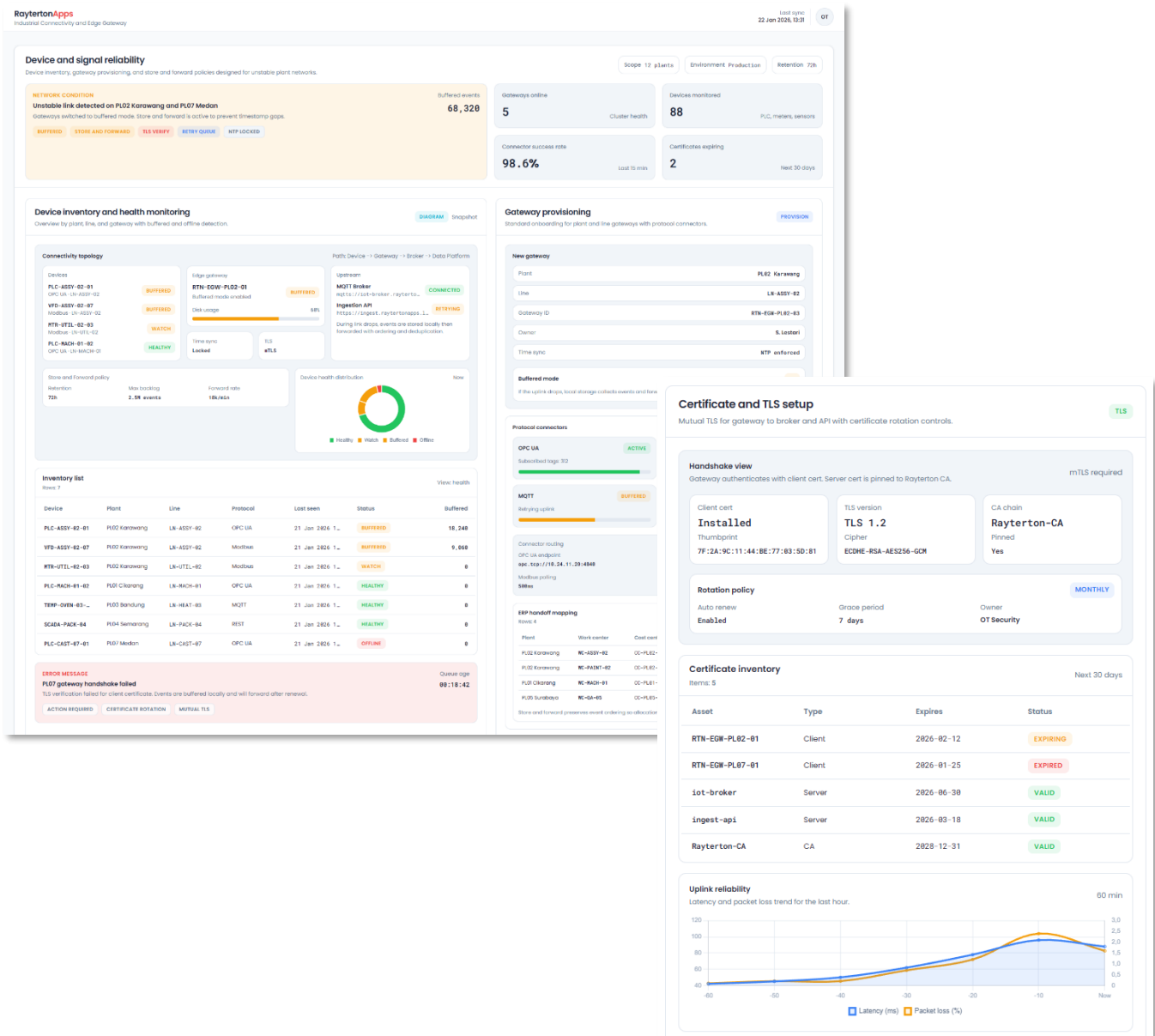
Production Context and Data Modeling

Data Capture and Context Builder and the production context mapping layer turn tags into a usable operating model. Tag catalog and mapping, signal normalization rules, production context mapping to job, order, SKU, and shift, operator input terminals, and event schema setup make downtime, cycle, quality, and energy events comparable across lines. Data Quality Validation and Readiness Gate, driven by completeness checks, latency and gap monitoring, and anomaly review, prevents go live on bad data and records approval so teams trust the numbers.

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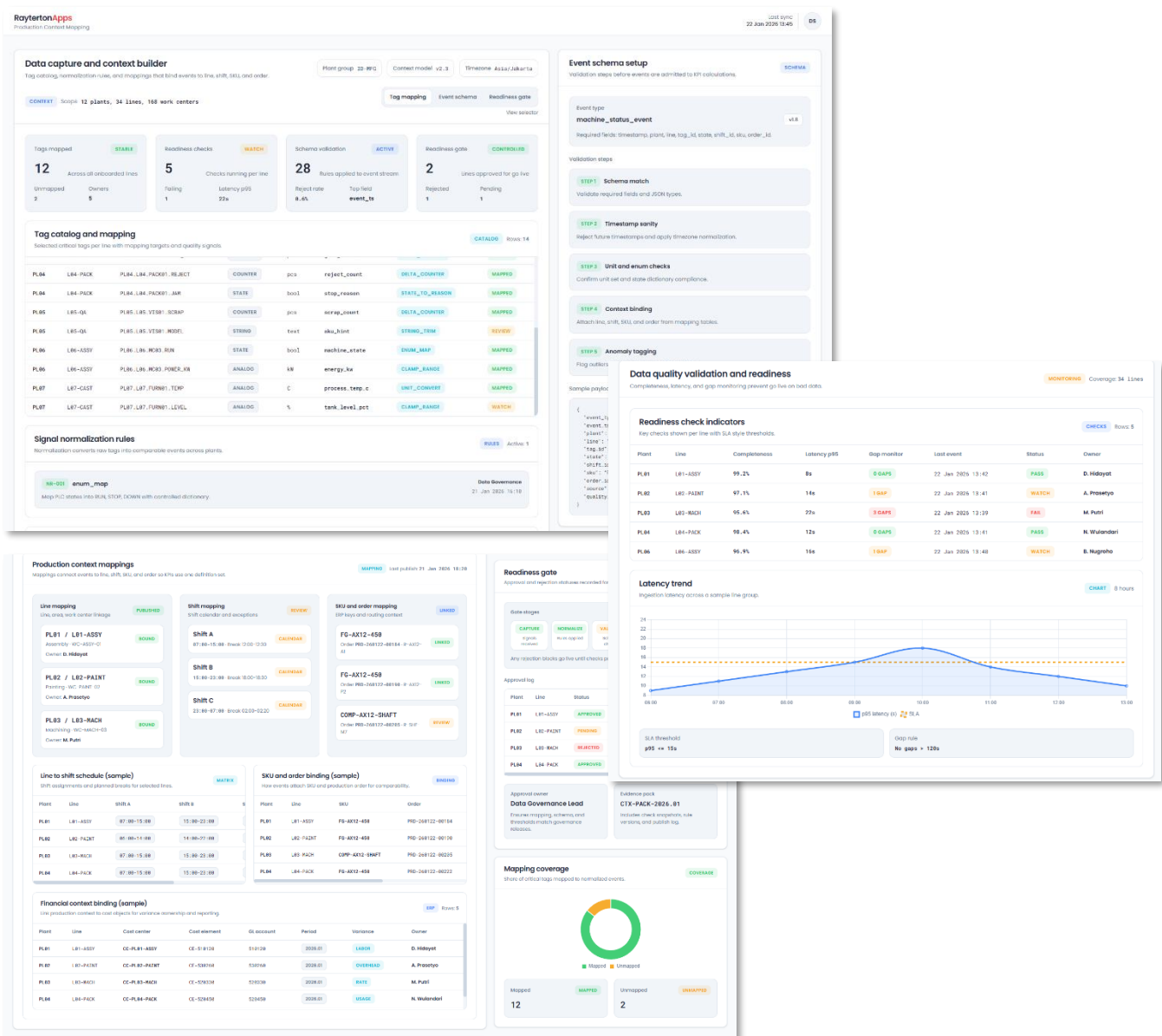
Real-Time Monitoring and Shift Management

Real-time Machine Visibility Control Tower and Digital Workboards for Shift Execution give supervisors a single operational view that is built for action. Live line overview, cell and line workboards, target versus actual views, and exception hotspots keep attention on what is breaking flow right now.
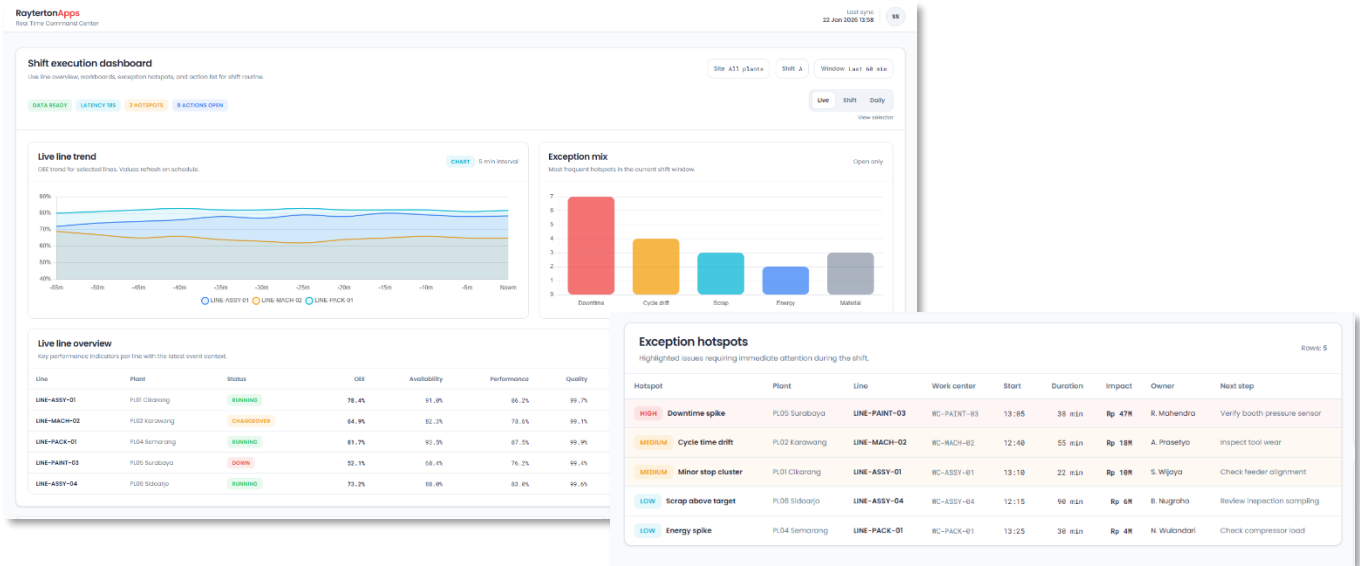

The output is a live status snapshot, an active exception list, and a digital action list that can be reviewed and closed during the shift routine.

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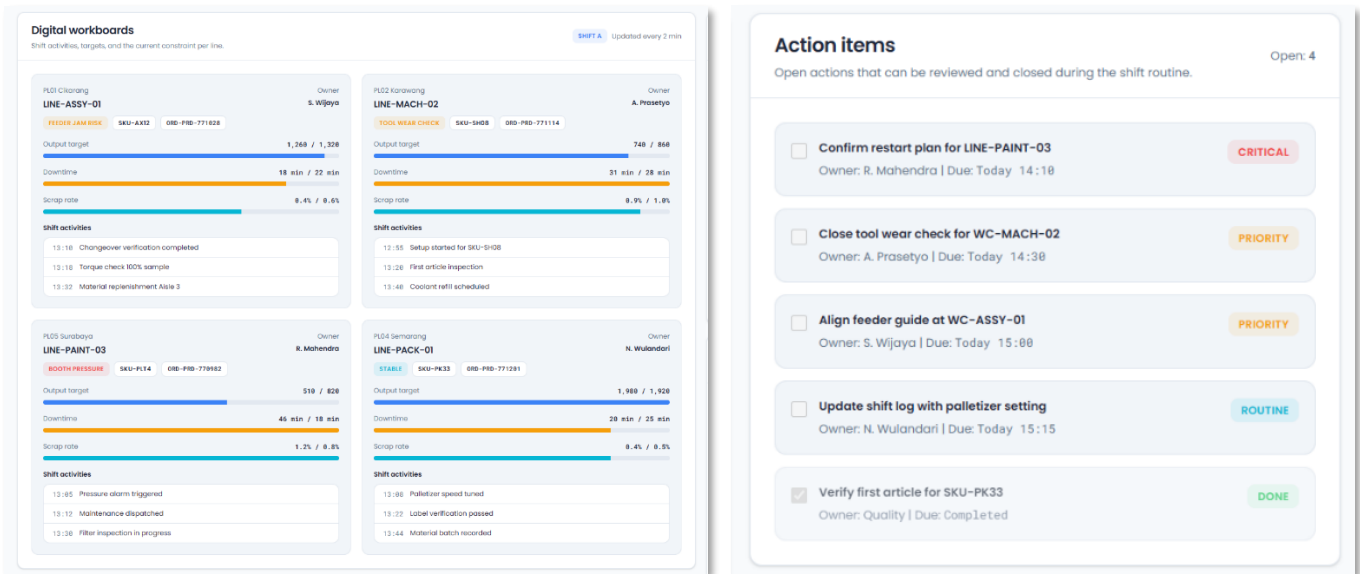
OEE, Loss, and Downtime Analysis

OEE, Loss, and Downtime Management plus the reliability metrics layer keeps the loss model consistent across sites. OEE dashboards by line and shift, loss tree and pareto, downtime event review, reason code assignment, changeover tracking, and MTBF and MTTR views let teams prioritize the biggest losses without arguing definitions. Shift review and daily performance routines add shift summary, exception review packs, daily KPI scorecards, and an open actions register, so improvement work is tied back to measured impact.

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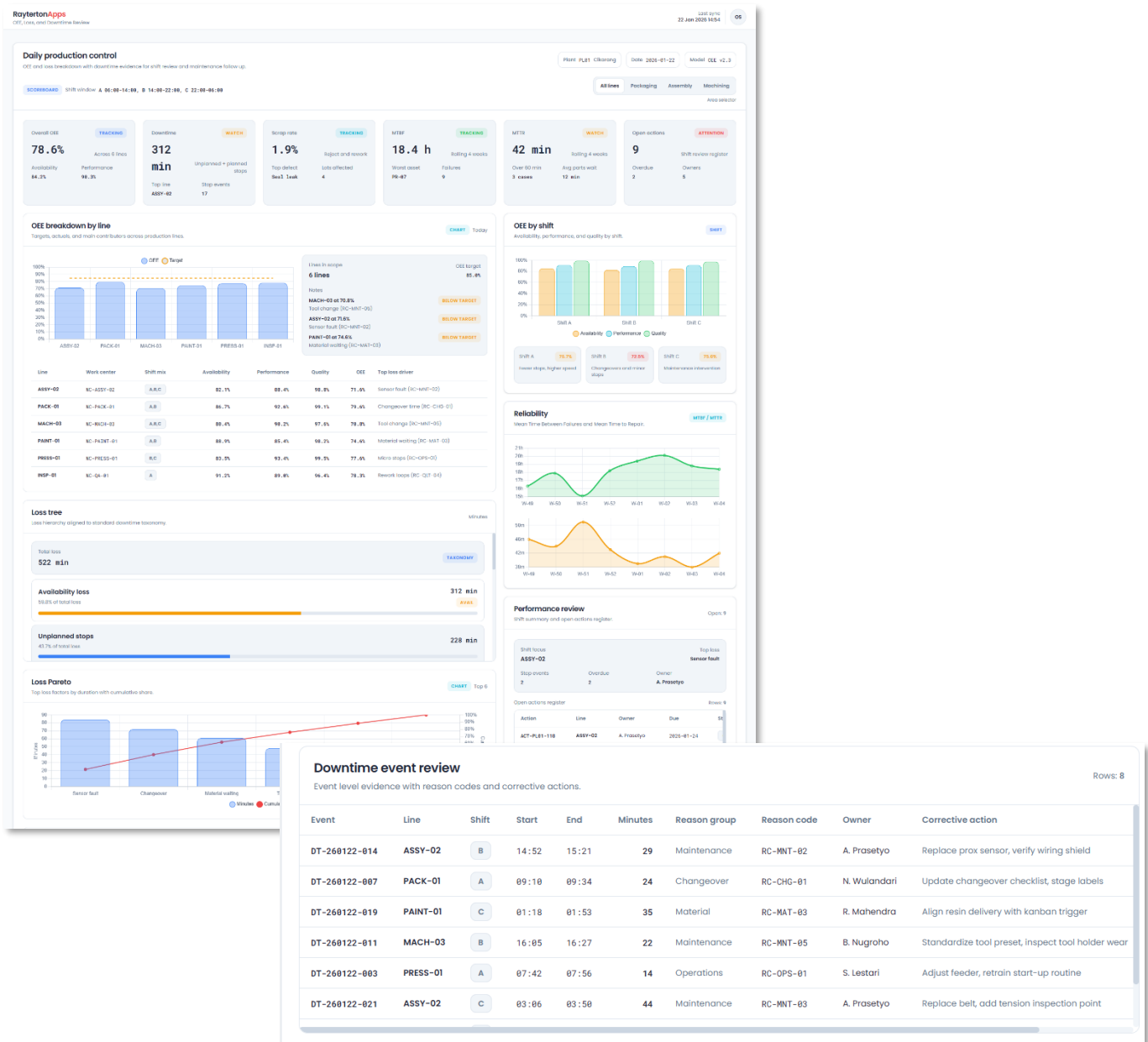
Alerts and Escalation Workflows

Andon, Alerts, and Escalation Workflows with Response Traceability and Action Governance turn abnormality into accountable response. Alert rule builder, notification and escalation paths, an alert inbox with acknowledgement, a response traceability log, and connected actions make it clear who owns a problem and when escalation must trigger. For maintenance-driven cases, the workflow can hand off into CMMS or EAM work orders, while still keeping the evidence trail tied to the original event.
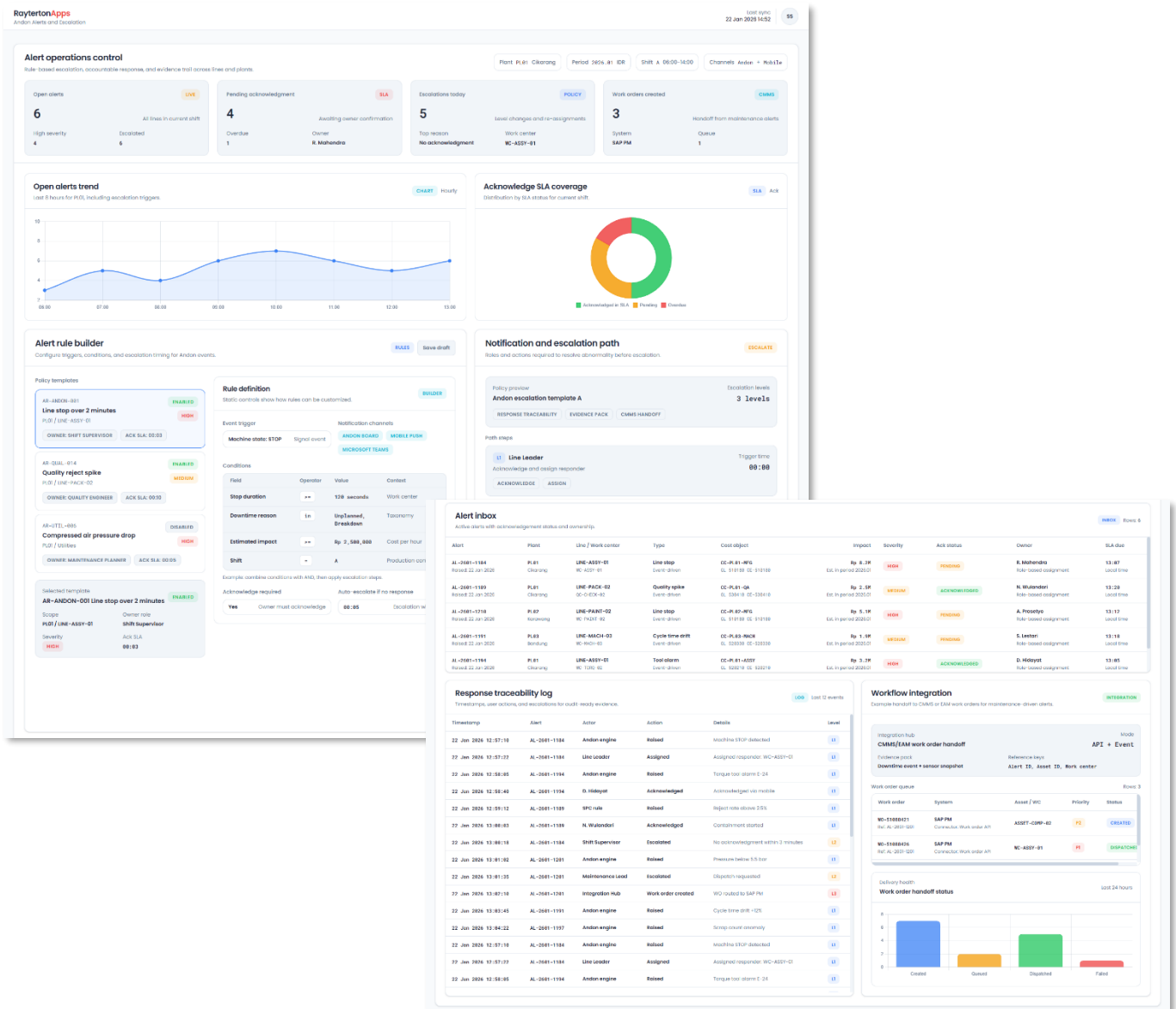
Quality, Energy, and Enterprise Integrations

Quality Signals, SPC, and Traceability Readiness adds SPC charts and rules, quality event capture, in process checkpoints, and evidence packs so drift is detected early and audit proof is assembled as part of the workflow. Energy, Sustainability, and Cost per Unit Analytics tracks energy monitoring by line and shift, energy per unit KPIs, baselines and targets, and correlation views such as energy versus downtime, so energy becomes an operational lever instead of a monthly bill review.
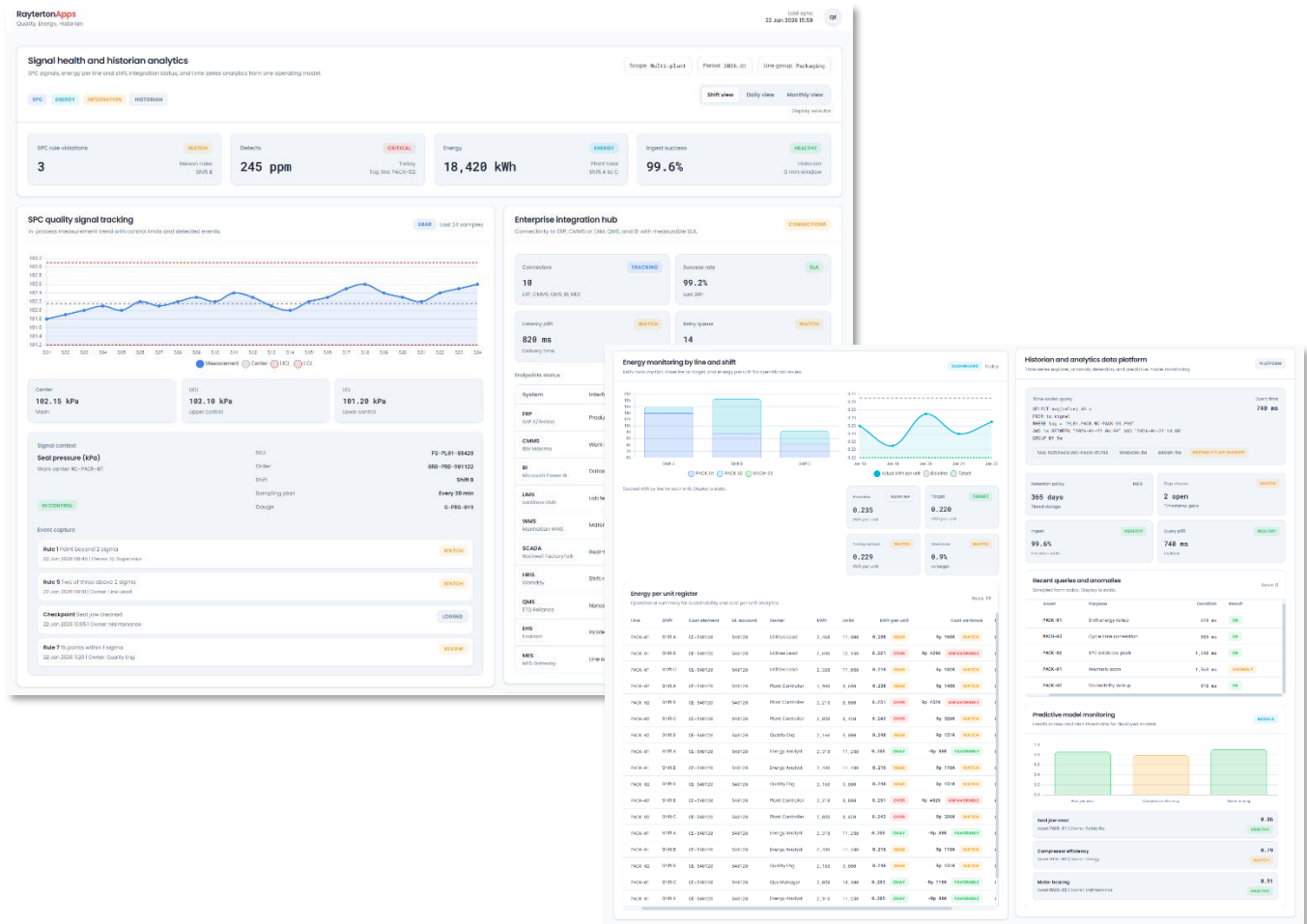
Historian and Analytics Data Platform provides retention and storage policy, time series query and explorer, pattern discovery, anomaly detection, and predictive model monitoring so recurring issues become searchable patterns, not tribal knowledge. Integration Hub for MES, CMMS or EAM, QMS, ERP, and BI closes the loop with an API catalog and endpoints, webhook subscriptions and events, integration monitoring for success rate, latency, and error rate, plus logs, audit, and retry queue with reprocess so data delivery has measurable SLA.

Ready to Standardize IoT Monitoring at the Enterprise Level

Share your KPIs and integrations. Rayterton will standardize governance, connect your data, and deliver real-time, audit-ready operational visibility across the enterprise.

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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

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