

Rayterton Early Warning System for Multifinance (EWS)

Detect credit risk before it impacts your portfolio. Rayterton provides a proactive risk intelligence platform that transforms behavioral data into explainable risk scores and automated intervention workflows to protect your margins and lower non-performing loans.

Actionable risk signals delivered in real time.

Executive Overview

Managing credit risk in a high-volume lending environment requires moving beyond reactive monitoring. Traditional delinquency reporting often identifies issues only after they have occurred, leaving limited room for effective recovery. **Rayterton Early Warning System for Multifinance** acts as a predictive layer that identifies subtle shifts in customer behavior long before the first payment is missed. By integrating diverse risk signals and automating remediation playbooks, the platform enables finance institutions to intervene early, reduce loan loss provisions, and maintain a healthier portfolio.

Business benefits

- Fewer bad loans through early warning on risky customers
- Faster recovery by automatically prioritizing high risk accounts
- Higher staff efficiency with automated case routing
- Lower losses by predicting which loans need restructuring
- Real time portfolio view for quicker management decisions
- Strong audit trail that supports regulatory compliance
- Focused resource use on high impact accounts
- Clear ROI tracking for each recovery strategy
- Scalable growth without weakening risk control

Software Modules for Rayterton Early Warning System for Multifinance

Predictive Risk Intelligence Core

A behavioral scoring engine that acts as the brain of the platform to predict risk lead times and generate explainable credit scores.

Unified Risk Signal Intelligence

A comprehensive data radar that aggregates signals from payments, collateral, device behavior, and partner ecosystems to eliminate blind spots.

Automated Alert and Action Orchestration

An operational bridge that converts high-risk scores into prioritized work queues and automated task assignments for the collections team.

Strategy and Recovery Automation

A remediation engine that connects identified risks to specific action playbooks and measures the return on investment of every intervention.

Case and Field Execution Platform

An integrated field tool that ensures all recovery activities are documented with verified evidence and are fully ready for regulatory audit.

Control, Compliance, and Model Oversight

An institutional protection layer that ensures all risk decisions and model changes are traceable, auditable, and aligned with corporate policy.

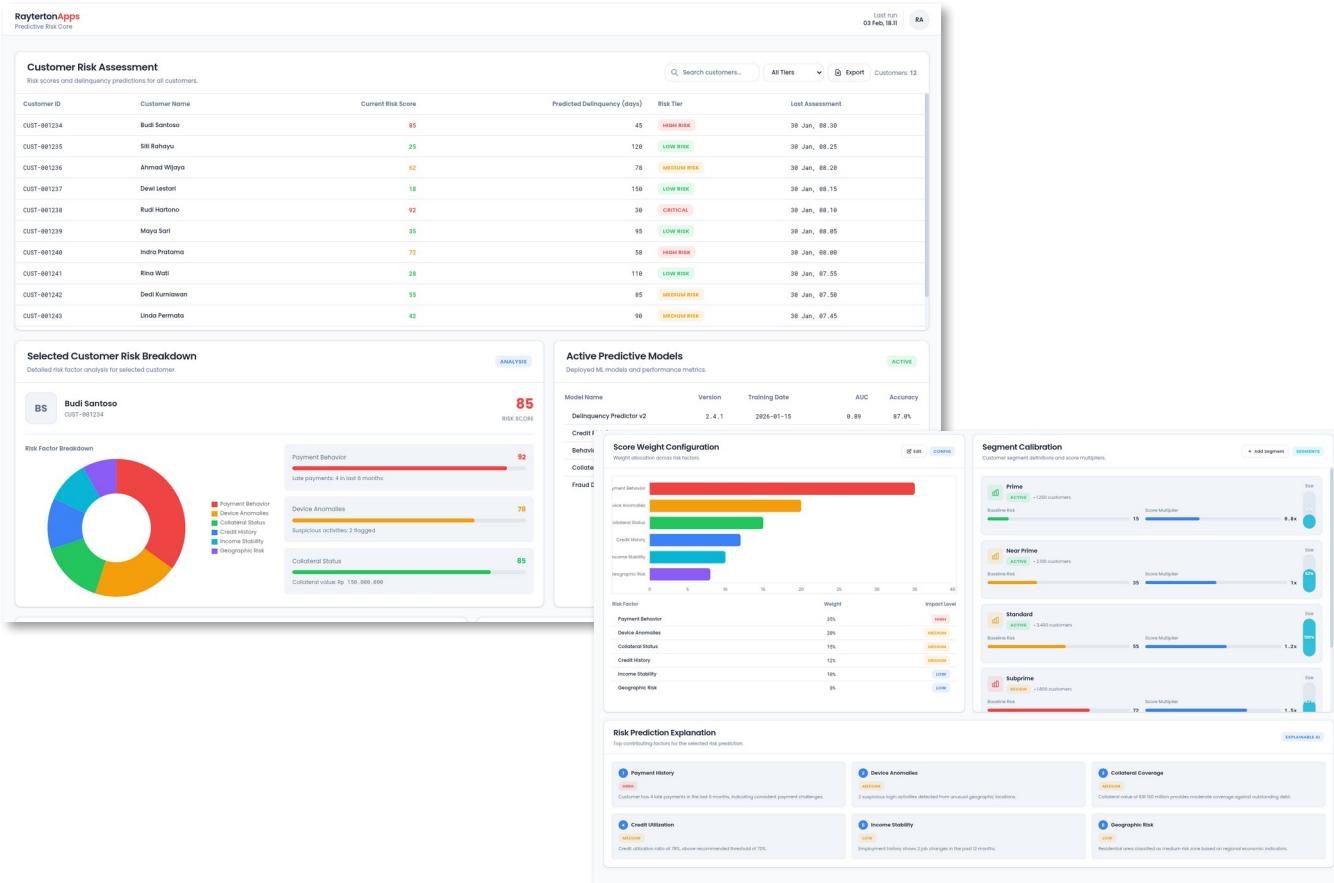
Portfolio Command Center and Executive Analytics

A strategic dashboard for management to monitor the financial impact of the early warning system and measure overall portfolio health.

Enterprise Integration Layer

A scalable foundation that connects the risk system to core lending platforms, data warehouses, and collection systems without operational friction.

Predictive Risk Intelligence Core



The predictive core is the central engine of the platform. It moves beyond simple rule-based monitoring by identifying complex patterns that indicate future delinquency. This module generates risk scores that are not only accurate but also explainable, providing credit officers with the exact reasons behind a specific prediction. This transparency ensures that early interventions are based on solid data and can be defended during internal or external audits.

Features:

- Predictive Scoring Engine
- Rule Engine Designer
- ML Model Manager
- Score Weight Configuration
- Risk Explainability Viewer
- Segment Calibration Panel

Unified Risk Signal Intelligence

Signal Overview

Real-time risk signal processing metrics.

| Total signals processed | 15.000 | Risk events | |
|-------------------------|--------|-----------------|-----|
| High priority | 750 | Medium priority | 400 |

Active data sources: 8 (Connected: 3 Real-time, 7 Batch)

High-risk customers: 156 (New this week: 23, Escalated: 8)

Data quality score: 96.8% (Overall rating: 92.458, Valid records: 92.458, Cleansed records: 3.888)

Unified Customer Timeline

Chronological customer events and risk indicators.

| Timestamp | Customer ID | Customer Name | Event Type | Description | Risk Level | Source |
|---------------|-------------|------------------|-------------------|---|------------|-----------------|
| 03 Feb, 14:32 | CUST-001234 | Budi Santoso | Payment | On-time installment payment received | LOW | Payment Gateway |
| 03 Feb, 14:28 | CUST-005678 | Siti Rahayu | Missed Payment | Overdue payment by 7 days | MEDIUM | Core Banking |
| 03 Feb, 14:25 | CUST-002345 | Ahmad Wiljaya | Device Location | Customer device detected outside usual area | LOW | Telecom |
| 03 Feb, 14:21 | CUST-008991 | Dewi Lesteri | Collateral Update | Collateral value decreased by 10% | HIGH | Core Banking |
| 03 Feb, 14:18 | CUST-003456 | Rudi Hartono | Payment | Partial payment received | LOW | Payment Gateway |
| 03 Feb, 14:15 | CUST-006789 | Maya Sari | Account Change | Contact information update | LOW | Core Banking |
| 03 Feb, 14:12 | CUST-004567 | Fajar Nugraha | Missed Payment | Overdue payment by 1 day | LOW | Core Banking |
| 03 Feb, 14:09 | CUST-007890 | Unda Permatasari | Device Location | Device location change | LOW | Device Location |
| 03 Feb, 14:05 | CUST-001234 | Budi Santoso | Payment | Early payment received | LOW | Payment Gateway |
| 03 Feb, 14:02 | CUST-009912 | Hendra Gunawan | Collateral Update | Collateral inspection due | LOW | Core Banking |
| 03 Feb, 13:58 | CUST-005678 | Siti Rahayu | Missed Payment | Second consecutive missed payment | LOW | Core Banking |
| 03 Feb, 13:54 | CUST-002345 | Ahmad Wiljaya | Account Change | Employment status update | LOW | Core Banking |

Connected Data Sources

Catalog of all integrated data systems.

| Source Name | Data Type | Last Ingestion | Validation Status | Records/Sec |
|------------------------|-----------------|----------------|-------------------|-------------|
| Core Banking System | Core Banking | 03 Feb, 14:30 | VALID | 850 |
| Credit Bureau API | Credit Bureau | 03 Feb, 14:28 | VALID | 320 |
| Payment Gateway | Payment Gateway | 03 Feb, 14:32 | VALID | 1,200 |
| Telecom Provider | Telecom | 03 Feb, 14:25 | VALID | 450 |
| Social Media API | Social Media | 03 Feb, 14:15 | CLEANSED | 180 |
| Field Operations DB | Core Banking | 03 Feb, 14:00 | VALID | 95 |
| Fraud Detection Engine | Core Banking | 03 Feb, 14:31 | VALID | 680 |
| Collateral Management | Core Banking | 03 Feb, 14:29 | VALID | 210 |
| Customer Portal | Core Banking | 03 Feb, 14:32 | VALID | 340 |

Signal Library

Available signal categories and usage patterns.

| Signal Category | Signal Description | Usage Frequency | Active Status | Last Updated |
|------------------|--------------------------------------|-----------------|---------------|---------------|
| Payment Behavior | Missed payment frequency and amount | 12,500 | ACTIVE | 01 Feb, 10:00 |
| Payment Behavior | Early payment pattern analysis | 8,000 | ACTIVE | 01 Feb, 10:00 |
| Account Activity | Frequent contact information changes | 5,000 | ACTIVE | 02 Feb, 14:00 |
| Account Activity | Unusual transaction patterns | 7,000 | ACTIVE | 02 Feb, 14:00 |
| External Data | Credit score changes | 11,200 | ACTIVE | 01 Feb, 10:00 |
| External Data | Employment status verification | 3,400 | ACTIVE | 03 Feb, 08:00 |
| Device Signals | Device location anomalies | 9,200 | ACTIVE | 02 Feb, 14:00 |
| Device Signals | Device offline duration | 6,700 | ACTIVE | 02 Feb, 14:00 |
| Collateral | Collateral value depreciation | 4,500 | ACTIVE | 01 Feb, 10:00 |

Data Quality Summary

Current reporting period quality metrics.

| Category | Count |
|----------|-------|
| VALID | 92,4K |
| REJECTED | 742 |
| CLEANSED | 3.8K |

Batch Ingestion Schedule

Data jobs and execution status.

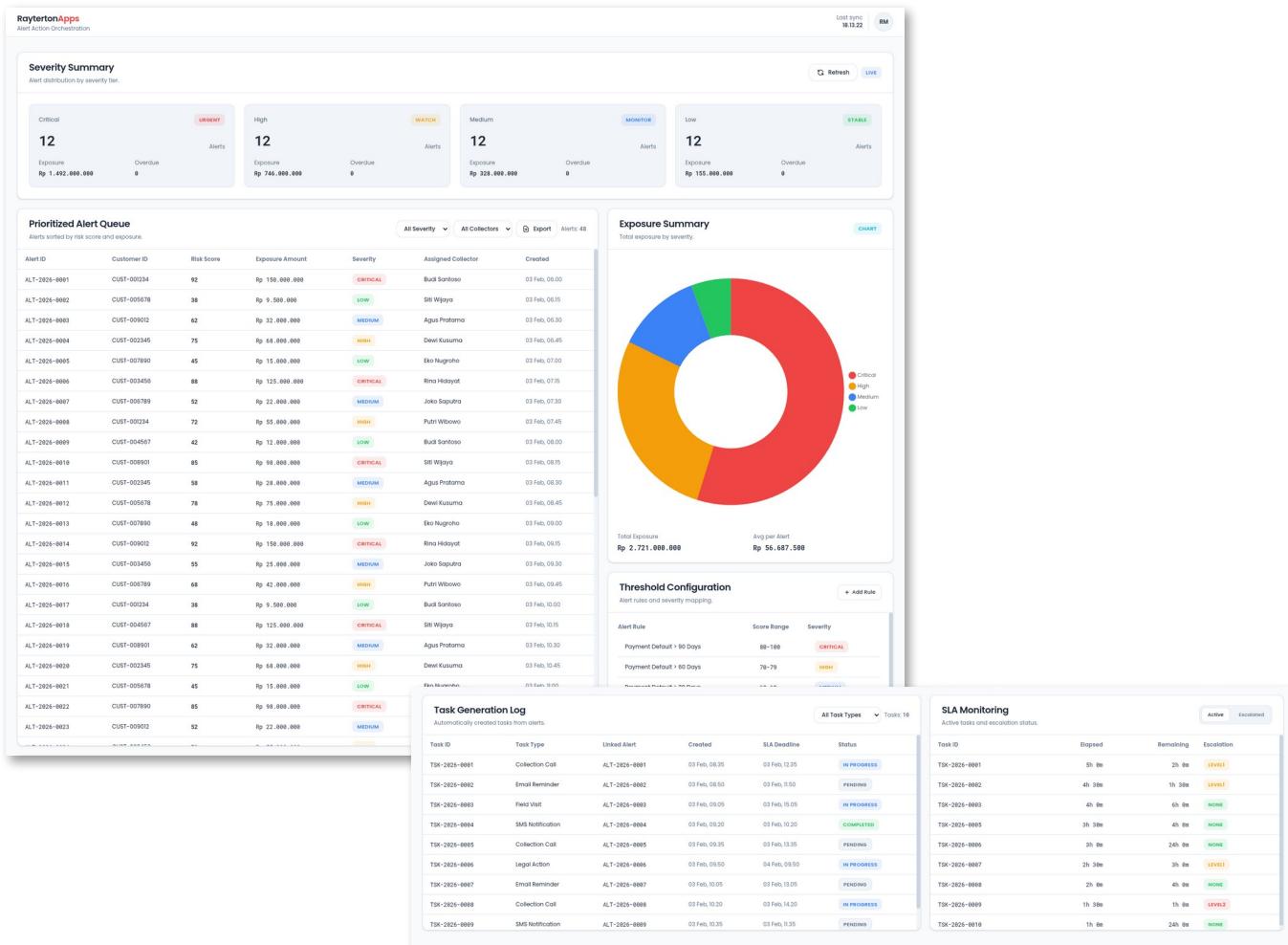
| Job Name | Frequency | Last Run | Records Status |
|-----------------------|-----------|---------------|----------------|
| Daily Payment Sync | Daily | 03 Feb, 02:00 | 15,420 SUCCESS |
| Credit Bureau Pull | Daily | 03 Feb, 03:00 | 8,400 SUCCESS |
| Telecom Location Feed | Hourly | 03 Feb, 14:00 | 1,250 SUCCESS |
| Social Media Ingest | Daily | 03 Feb, 01:00 | 3,400 WARNING |
| Collateral Validation | Weekly | 01 Feb, 04:00 | 2,100 SUCCESS |
| Fraud Detection Scan | Hourly | 03 Feb, 14:00 | 5,600 SUCCESS |
| Customer Data Refresh | Daily | 03 Feb, 05:00 | 12,300 SUCCESS |
| External Data Pull | Daily | 03 Feb, 06:00 | 4,500 FAILED |
| Payment History Load | Daily | 03 Feb, 02:30 | 18,700 SUCCESS |
| Device Activity Sync | Hourly | 03 Feb, 14:00 | 3,200 SUCCESS |

To gain a complete view of risk, the system looks far beyond basic payment history. This module aggregates data from a wide variety of sources, including collateral status, device location feeds, and digital ecosystem partners. By consolidating these diverse signals into a single customer timeline, the platform provides a 360-degree view of risk exposure. This broad radar ensures that management can see threats appearing from any direction, preventing the blind spots common in traditional monitoring systems.

Features:

- Data Connector Management
- Real-time Event Stream Monitor
- Signal Library Configuration
- Data Validation and Cleansing
- Unified Customer Risk Timeline
- Batch Data Ingestion Scheduler

Automated Alert and Action Orchestration



Data intelligence only adds value when it leads to action. This module prioritizes risk scores and converts them into tangible operational tasks for the collections and risk teams. By ranking alerts based on severity and exposure, the system reduces alert fatigue and ensures that staff are always focused on the most critical cases. It enforces discipline by automating the escalation of tasks if they are not addressed within defined service level agreements.

Features:

- Alert Threshold Manager
- Severity Band Configuration
- Ranked Queue Engine
- Automated Task Generation
- SLA and Escalation Rules
- Exposure Control Automation

Strategy and Recovery Automation

The screenshot displays the Rayterton Apps Early Warning System (EWS) interface, which is a comprehensive platform for multifinance recovery. The interface is divided into several key sections:

- Recovery Uplift Dashboard:** Shows overall performance metrics and recovery impact. Key figures include Total recovered value (IDR 28,450,000,000), Uplift percentage (23.5%), and Cost per intervention (IDR 12,500).
- Strategy Library:** A list of 12 available recovery strategies, each with a success rate, average recovery time, and usage count. Strategies include Early Warning SMS, Escalation Call, Restructuring Offer, Payment Reminder, Legal Notice, WhatsApp Outreach, Field Visit, Email Reminder, Deferment Offer, Collection Agency, Auto Debit Setup, and SMS vs WhatsApp.
- Playbook Detail:** Details the intervention steps for a selected strategy, such as 'Send SMS notification' and 'WhatsApp message'.
- Treatment History:** Tracks the intervention timeline for a specific customer (CUST-2024-089234) with an outstanding balance of IDR 15,000,000.
- Segment Treatment Matrix:** Maps customer segments to assigned strategies based on risk profiles (e.g., High Risk, Medium Risk, Low Risk).

Once a risk is identified, the system determines the best remediation strategy based on the specific risk profile. This module connects every alert to a pre-defined playbook, ranging from automated outreach to restructured payment plans. It allows risk managers to test different strategies through A/B testing and measures the effectiveness of each action. This ensures that the recovery process is constantly optimized and that resources are allocated where they generate the highest impact.

Features:

- Strategy Library Manager
- Outreach Automation Designer
- Segment Treatment Rules
- A/B Test Configuration
- Treatment History Tracking
- Recovery Uplift Dashboard

Case and Field Execution Platform

The field execution platform provides a direct link between the central risk system and activities on the ground. It allows field collectors to document every visit, capture evidence, and record promises to pay in a secure and verifiable manner. All activities are timestamped and location-verified, providing the organization with a robust audit trail. This transparency protects the institution from compliance risks and ensures that field efforts are aligned with central recovery strategies.

Features:

- Case Management Dashboard
- Field Visit Logger
- Evidence Capture Vault
- Promise-to-Pay Tracker
- Settlement and Restructure Workflow
- Legal and Repo Escalation Panel

Control, Compliance, and Model Oversight

The screenshot displays the Rayterton Apps Early Warning System (EWS) interface, which is a comprehensive platform for governance, compliance, and model oversight. The interface is organized into several key sections:

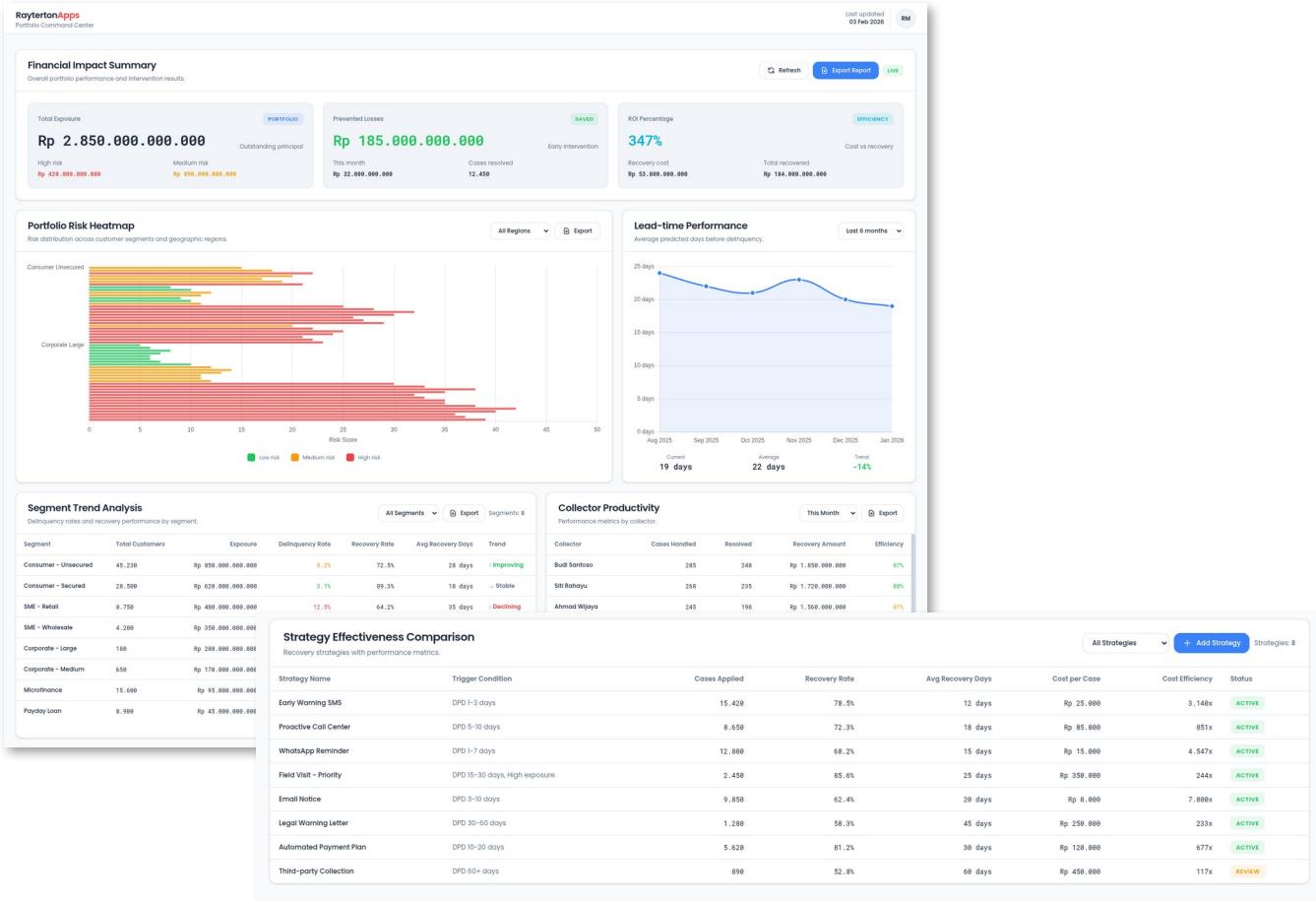
- Governance Overview:** Shows key metrics for model governance and compliance monitoring. It includes a summary of active models (12), a compliance rate of 94.7%, pending approvals (12), and override requests (18).
- Model Performance Dashboard:** Provides stability index, occupancy metrics, and drift indicators for all production models. It lists various models like Credit Scoring Model V3, Fraud Detection Engine, and Default Prediction v2, along with their performance metrics and drift status.
- Drift Monitoring Report:** Compares training data vs current portfolio composition across different features. It includes a bar chart showing the difference between training and current data for features like Income Level, Debt-to-Income Ratio, Credit Score, and Loan Amount.
- Override Audit Log:** Tracks manual overrides with user ID, timestamp, original decision, and override reason. It shows a list of overrides for users like Budi Santoso, Sri Rahayu, Ahmad Wijaya, and Dwi Lestari.
- Policy Compliance Table:** Lists pending and completed governance approvals with approver details. It includes a table for various requests like Model Deployment, Policy Execution, and Model Retraining.
- Governance Report Preview:** Offers a summary of compliance statistics and audit summaries. It includes a pie chart showing compliance by category and a table of recent audit summaries.

This module ensures that the early warning system remains a trusted part of the institutional framework. It monitors the performance of predictive models and tracks every override or policy exception. By providing a centralized view of compliance and model health, the system maintains high standards of data integrity and regulatory alignment. This ensures that risk decisions are consistent over time and that the models remain stable as the portfolio grows.

Features:

- Model Performance Dashboard
- Drift and Stability Monitoring
- Override Audit Viewer
- Policy Compliance Tracker
- Approval Workflow Manager
- Control Report Generator

Portfolio Command Center and Executive Analytics

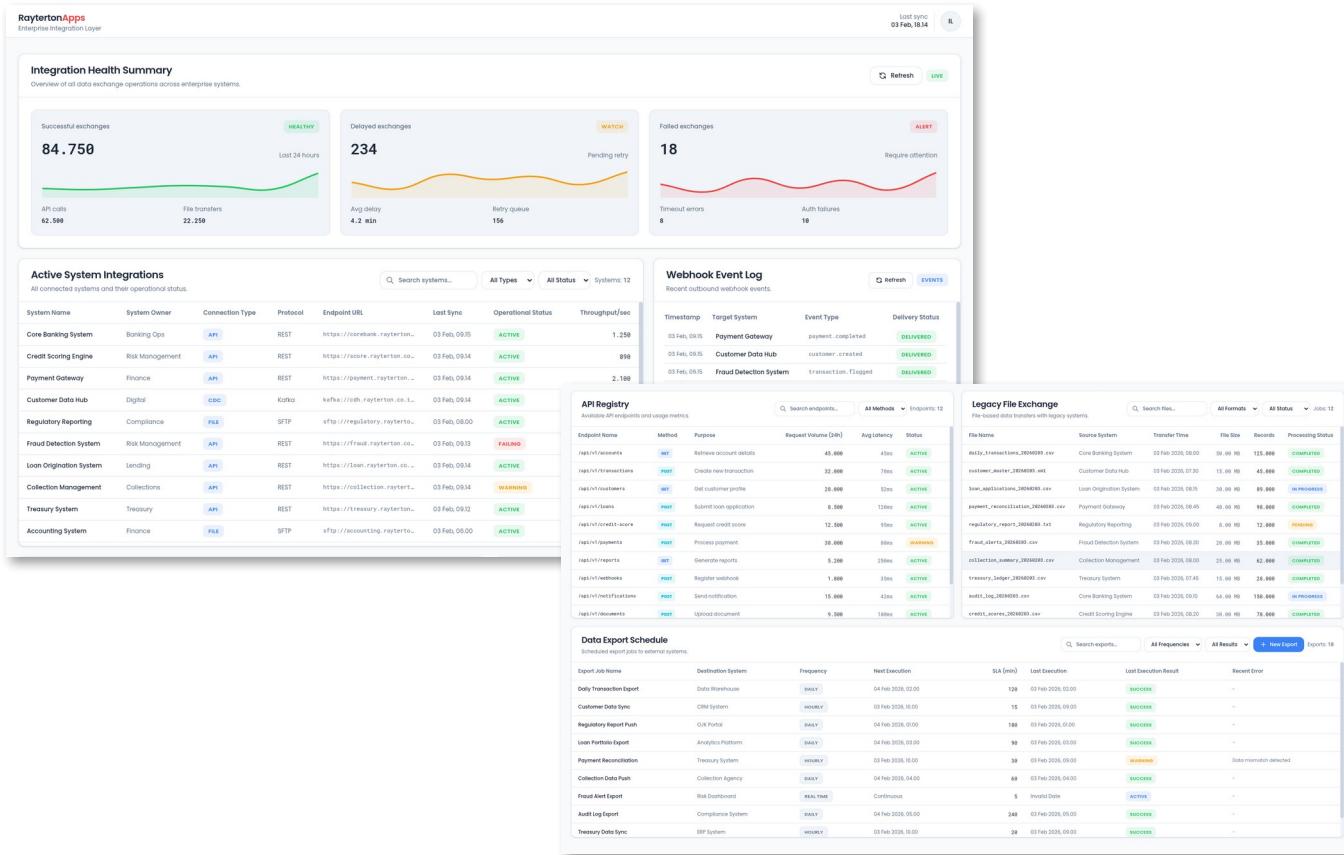


The command center provides management with high-level visibility into the effectiveness of the early warning system. Executives can monitor the return on investment of early interventions and see how lead-time predictions are impacting the bottom line. The dashboard tracks departmental productivity and segment-level trends, providing the strategic insights needed to adjust risk policies and capital allocation in real time.

Features:

- Portfolio Heatmap Dashboard
- Lead Time Performance View
- ROI and Financial Impact Tracker
- Segment Trend Explorer
- Collector Productivity Analytics
- Strategy Effectiveness Panel

Enterprise Integration Layer



The integration layer ensures that the early warning system is not a data silo. It facilitates seamless communication between the risk engine and core systems such as the Loan Management System and the corporate data warehouse. This fabric supports both modern API connectivity and legacy file exchanges, allowing for fast implementation with minimal disruption to existing operations. It provides a reliable foundation that can scale as the enterprise data ecosystem evolves.

Features:

- API Gateway Console
- Event Webhook Manager
- Legacy File Exchange
- Data Export Scheduler
- SSO and Access Federation
- Integration Health Monitor

Ready to Proactively Manage Your Credit Risk

Discuss your portfolio risk priorities and data integration needs with our team. Rayterton will standardize your risk intelligence and deliver real-time visibility across your credit exposure and recovery performance.

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