

# Rayterton Insurance Data Warehouse & BI Platform

Trusted, Fresh Insurance Intelligence. Establish a single source of truth for policy, claims, and billing records to move from fragmented data pipelines to actionable business insights.

**Everything managed in one place.**

## Executive Overview

---

Many insurance company face fragmented systems where policy, claims, and billing data are kept in separate places with inconsistent definitions. This fragmentation causes conflicting reports and slows decision making. **Rayterton Insurance Data Warehouse & BI Platform** brings those sources together into a single environment. This system ensures that every department works from the same numbers.

Automated pipelines and standardized business rules produce reliable, timely data for reporting and analysis. This consistency reduces manual reconciliation, speeds executive decisions, and makes it easier to apply analytics and machine learning across policy, claims, and financial domains.

## Business Benefits

---

- Centralized policy, claims, and billing data that ensures all teams work from the same numbers.
- Less manual work thanks to automated pipelines and standard data transformations.
- Higher data reliability with automated profiling, freshness checks, and exception handling.
- Empowered business users with self-service analytics and certified dashboards.
- Greater cost transparency and control through platform usage and resource reporting.

## Software Modules for Insurance Data Warehouse & BI

---

### **Data Ingestion & Connectivity**

Automated pipelines that connect your core insurance systems for real-time data flow.

### **Cloud Data Lake & Warehouse**

A scalable environment that stores raw landing data and curated domain models for insurance.

### **Semantic Layer & KPI Management**

A unified business logic layer that ensures consistent definitions for metrics like GWP and Loss Ratio.

### **Data Quality & SLA Engine**

Automated monitoring and profiling tools to ensure your data is accurate, complete, and fresh.

### **Self-Service Analytics & Dashboards**

Intuitive tools that allow business users to explore data and view certified departmental scorecards.

### **AI-Assisted Insights & Alerts**

Automated anomaly detection and business narratives that push insights to users before problems escalate.

### **Secure Data Sharing & APIs**

Controlled gateways for sharing governed data products with reinsurers, partners, and regulators.

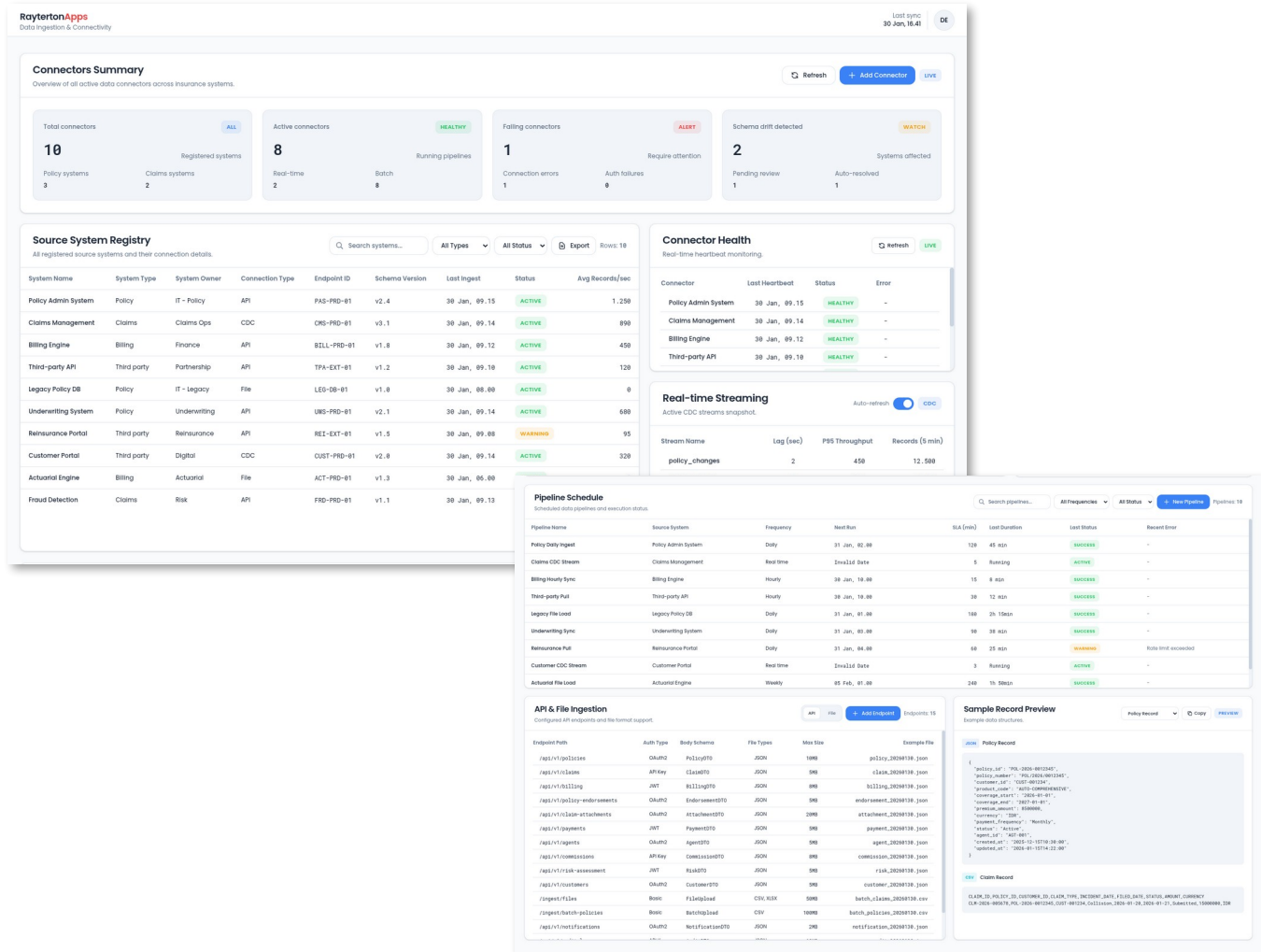
### **Operations & Cost Management**

Visibility into platform performance and cloud resource spending to prevent budget surprises.

### **Regulatory & Executive Reporting**

Specialized modules for creating compliance packs and high-level management cockpits.

## Data Ingestion & Connectivity

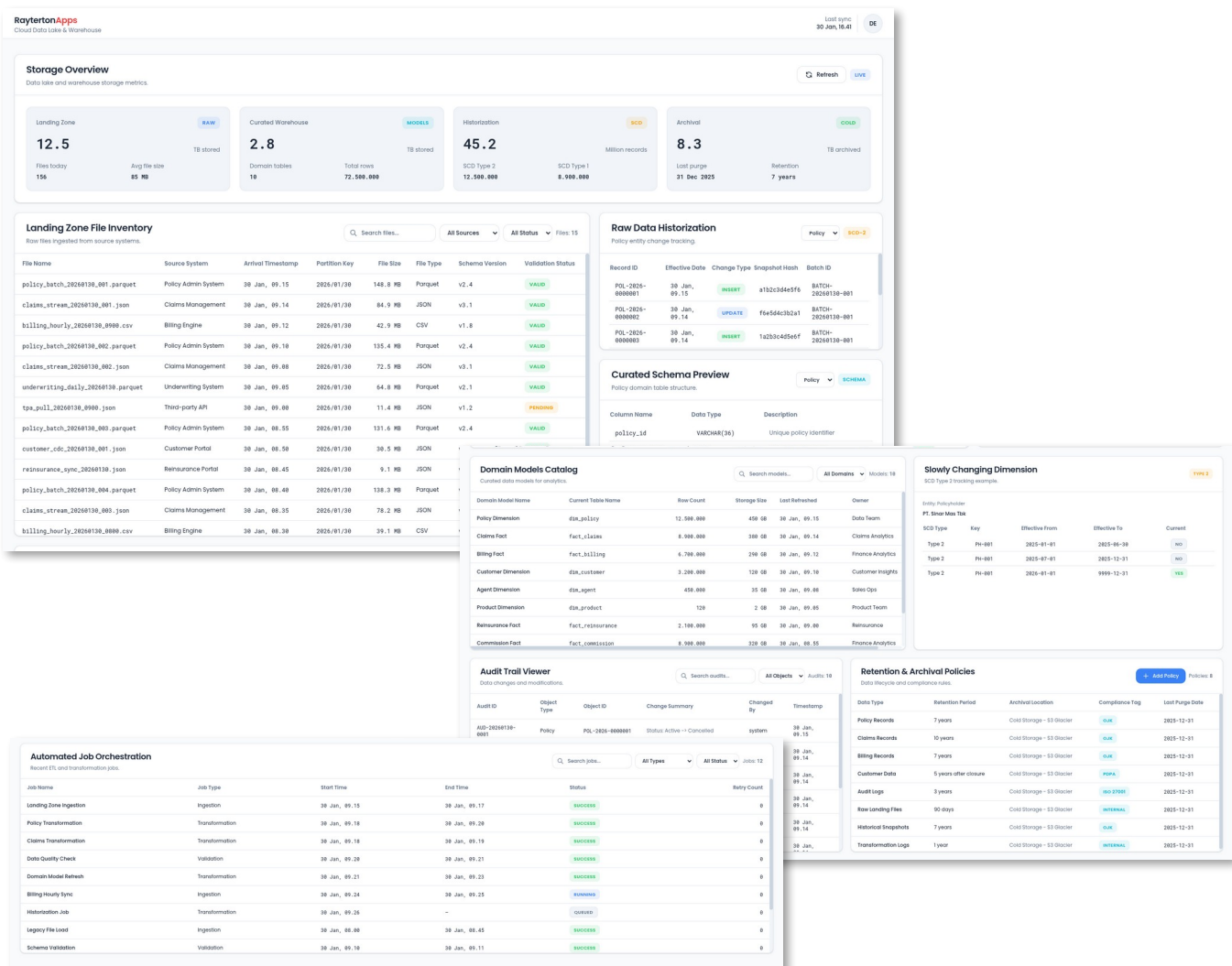


The platform facilitates rapid integration with your core insurance ecosystem. It handles high-volume data from Policy Administration Systems, claims management tools, and billing engines through both batch and real-time streams. This ensures that the foundation of your analytics is built on the most current operational data available.

### Features:

- Source System Registry
- Insurance System Connectors
- Real-time Streaming & CDC
- API & File Ingestion
- Automated Pipeline Scheduling

## Cloud Data Lake & Curated Warehouse



Raw data is stored securely in a landing zone before being transformed into standardized insurance models. The system manages historical versions and schema changes automatically. This allows you to maintain a full audit trail while providing the business with curated data models for policy, claims, and financial domains.

### Features:

- Domain Model Templates
- Raw Data Historization
- Slowly Changing Dimension Management
- Retention & Archival Policies
- Automated Job Orchestration

## Semantic Layer & KPI Management

**Rayterton Apps**  
Semantic Layer & KPI Governance

Last sync: 30 Jan, 16:43 | DS

### KPI Definition Library

Centralized definitions for all certified metrics across the organization.

KPI ID	KPI Name	Short Definition	Canonical Formula	Granularity	Business Owner	Certified Version	Certification Date	Certification Status
KPI-001	Gross Written Premium	Total premium from new policies issued	$\text{SUM}(\text{premium\_amount}) \text{ WHERE policy\_status} = \text{'new'}$	Policy	Underwriting	v2.1	15 Jan 2026	CERTIFIED
KPI-002	Net Written Premium	GWP minus reinsurance ceded	$\text{GWP} - \text{reinsurance\_ceded\_amount}$	Policy	Finance	v2.8	10 Jan 2026	CERTIFIED
KPI-003	Loss Ratio	Incurred claims divided by earned premium	$(\text{incurred\_claims} / \text{earned\_premium}) * 100$	Portfolio	Actuarial	v3.2	20 Jan 2026	CERTIFIED
KPI-004	Combined Ratio	Loss ratio plus expense ratio	$\text{loss\_ratio} + \text{expense\_ratio}$	Portfolio	Finance	v1.8	18 Jan 2026	CERTIFIED
KPI-005	Claim Frequency	Number of claims per 1000 policies	$(\text{claim\_count} / \text{policy\_count}) * 1000$	Day	Claims	v1.5	12 Jan 2026	CERTIFIED
KPI-006	Average Claim Severity	Average claim amount per claim	$\text{SUM}(\text{claim\_amount}) / \text{COUNT}(\text{claim\_id})$	Day	Claims	v2.9	22 Jan 2026	CERTIFIED
KPI-007	Policy Renewal Rate	Percentage of policies renewed	$(\text{renewed\_policies} / \text{expiring\_policies}) * 100$	Portfolio	Sales	v1.3	25 Jan 2026	IN REVIEW
KPI-008	New Business Growth	Year over year new policy growth	$((\text{current\_year\_gwp} - \text{prior\_year\_gwp}) / \text{prior\_year\_gwp}) * 100$	Day	Sales	v1.2	08 Jan 2026	CERTIFIED
KPI-009	Expense Ratio	Operating expenses divided by earned premium	$(\text{operating\_expenses} / \text{earned\_premium}) * 100$	Portfolio	Finance	v2.1	14 Jan 2026	CERTIFIED

### Metric Certification Workflow

Track certification requests and approval stages.

KPI ID	Requested By	Current Step	Reviewer Names	Effective Date
KPI-007	Budi Santoso	REVIEW	Siti Rahayu, Ahmad Wijaya	01 Feb 2026
KPI-010	Devi Lestari	DRAFT	Pending assignment	15 Feb 2026
KPI-011	Rudi Hartono	REVIEW	Budi Santoso, Siti Rahayu	01 Feb 2026
KPI-013	Moya Sari	CERTIFIED	Completed	
KPI-014	Anni Pratama	DRAFT	Pending assignment	
KPI-015	Rina Wati	REVIEW	Devi Lestari, Rudi Hartono	

### Controlled Release Log

Recent version changes and approvals.

Metric	Version	Effective Date
Gross Written Premium	v2.1	15 Jan 2026
Loss Ratio	v3.2	20 Jan 2026

### Logical Business Views

Business terms mapped to physical data structures.

Business Term	Logical View Name	Underlying Tables	Key Joins	Notes on Transformations
Active Policy	vw_active_policies	dim_policy, fact_policy	policy_id	Filters for in-force status only
Claim with Payment	vw_claim_payments	dim_claim, fact_payment	claim_id	Left join to include unpaid claims
Premium Revenue	vw_premium_revenue	fact_premium, dim_date	date_key	Aggregates by month and product line
Customer Profile	vw_customer_360	dim_customer, dim_policy, dim_claim	customer_id	Denormalized customer view with policy and claim history
Agent Performance	vw_agent_metrics	dim_agent, fact_commission	agent_id	Includes YTD commission and policy count
Underwriting Risk	vw_underwriting_risk	dim_policy, dim_risk_score	policy_id	Combines policy data with risk assessment scores
Reinsurance Coverage	vw_reinsurance_treaty	dim_reinsurance, fact_reinsurance	treaty_id	Calculates ceded and net amounts

### Time Intelligence Rules

Temporal calculation standards.

Rule Name	Rule Description	Default Time Zone	Supported Periods
Month to Date	Uses calendar month from 1st to current day	Asia/Jakarta	Daily, Monthly
Quarter to Date	Uses calendar quarter from first day to current day	Asia/Jakarta	Daily, Quarterly
Year to Date	Uses calendar year from January 1st to current day	Asia/Jakarta	Daily, Monthly, Quarterly, Yearly
Rolling 12 Months	12 month window ending current month	Asia/Jakarta	Monthly
Prior Year Same Period	Same period as previous year for comparison	Asia/Jakarta	Daily, Monthly, Quarterly, Yearly

### Access Control Matrix

Granular permissions for metrics, dashboards, and views.

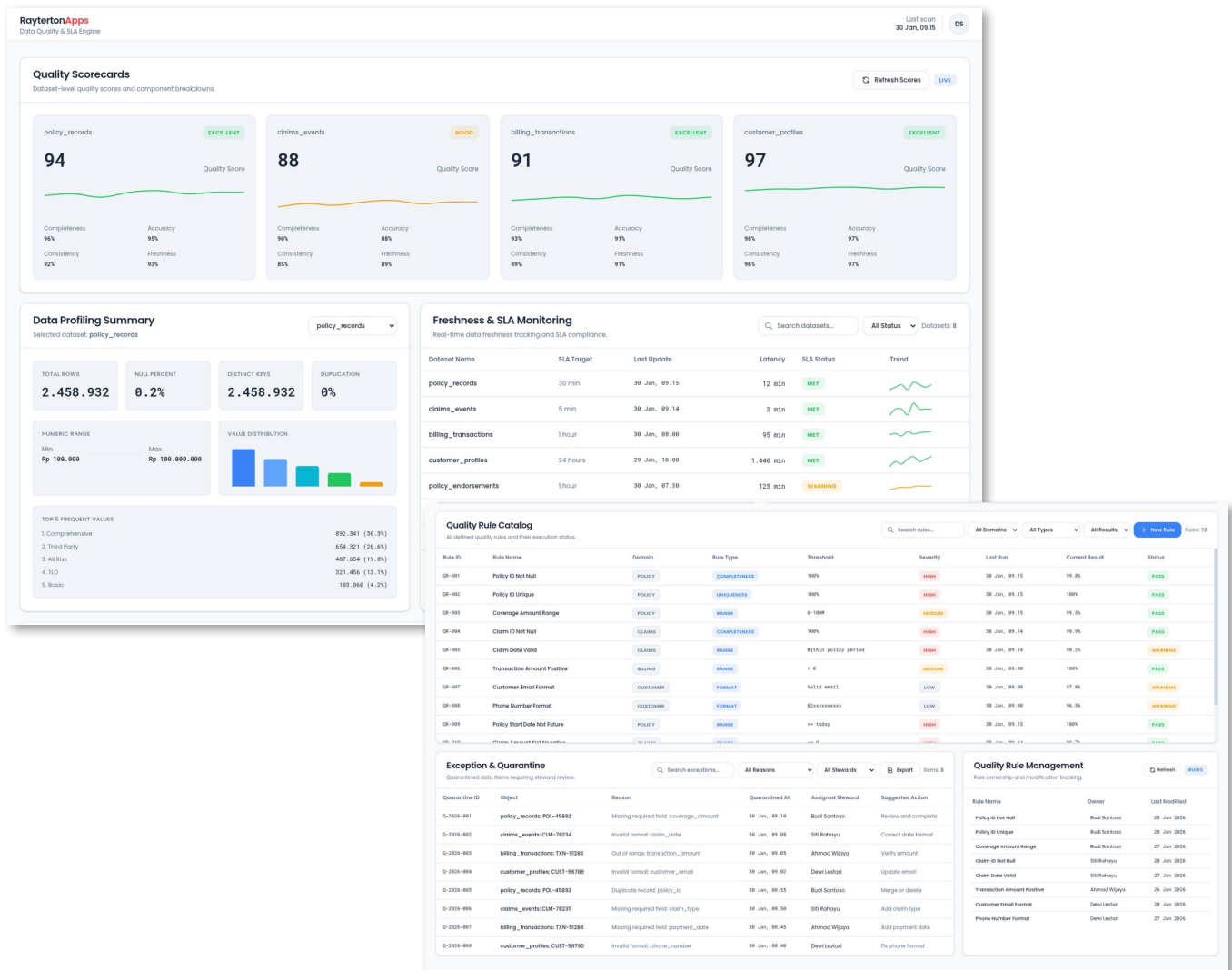
Metric / Dashboard / View	Allowed Roles	Row Level Filters	Column Masking
Gross Written Premium	Underwriting Manager, Finance Director, Executive	Product Line, Region	None
Loss Ratio Dashboard	Claims Manager, Actuarial Team, Risk Director	Product Line, Branch	None
Customer 360 View	Sales Team, Customer Service	Assigned Agent	Phone, Email
Sensitive Claims Data	Claims Director, Compliance Officer	Branch	Customer Name, ID Number
Executive Cockpit	CEO, CFO, CRO	None	None
Agent Commission Report	Sales Manager, Agent	Agent ID	None
Reinsurance Details	Reinsurance Manager, Finance Director	Treaty Type	None
Regulatory Report Pack	Compliance Officer, Finance Director	None	None

One of the biggest challenges in insurance is defining KPIs consistently across the organization. This module acts as a logical translator that maps technical data to business terms. It ensures that a metric like Earned Premium is calculated exactly the same way regardless of which dashboard or report is being viewed.

### Features:

- KPI Definition Library
- Metric Certification Workflow
- Logical Business Views
- Time Intelligence Rules
- Granular Access Control

## Data Quality & SLA Engine

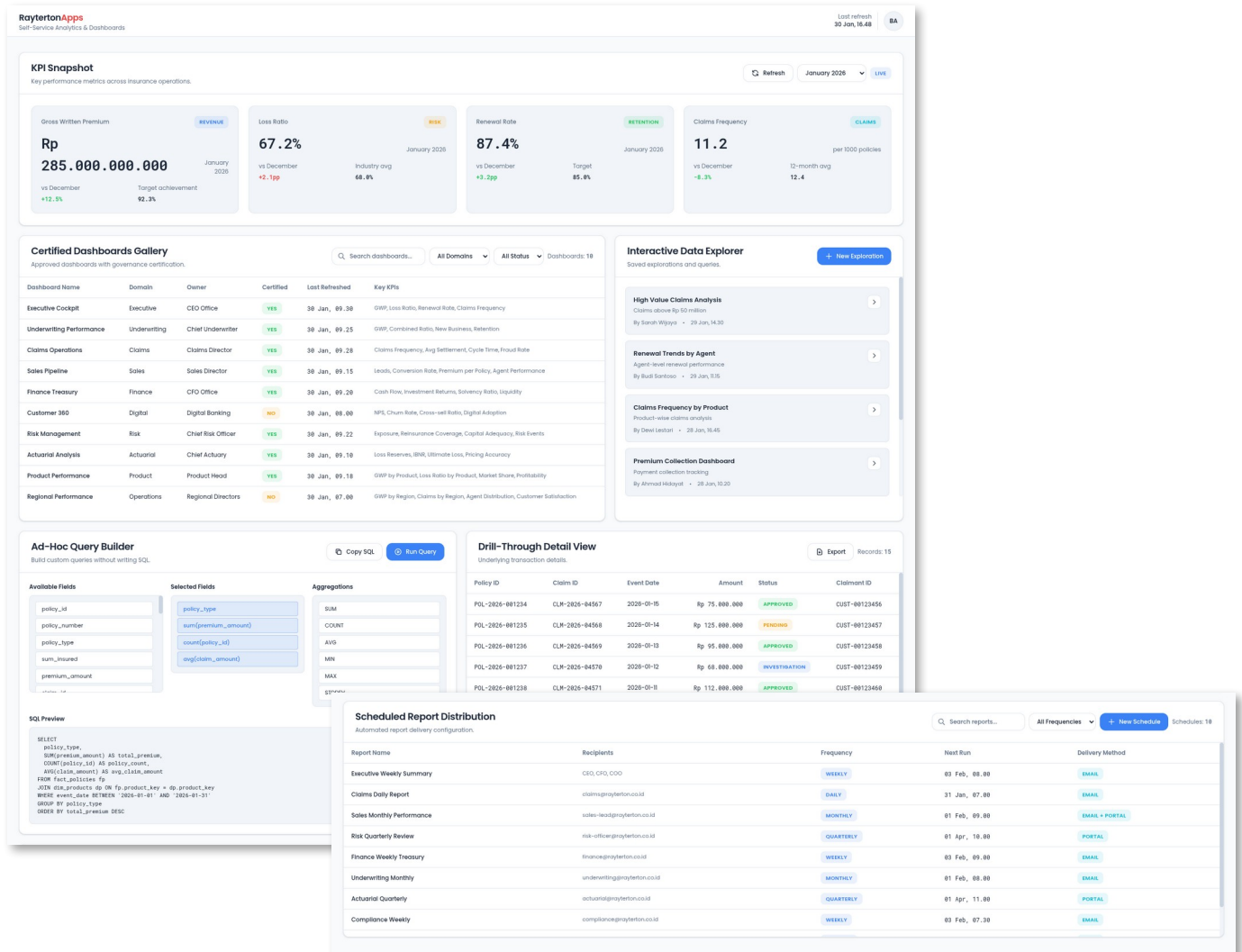


To build trust in analytics, data must be verified before it reaches the executive level. The platform runs automated profiling and quality rules to detect anomalies or missing values. If data does not meet your defined freshness or accuracy standards, the system alerts the data stewards immediately.

### Features:

- Data Profiling Tools
- Quality Rule Management
- Freshness & SLA Monitoring
- Exception & Quarantine Workflows
- Quality Scorecards

## Self-Service Analytics & Dashboard



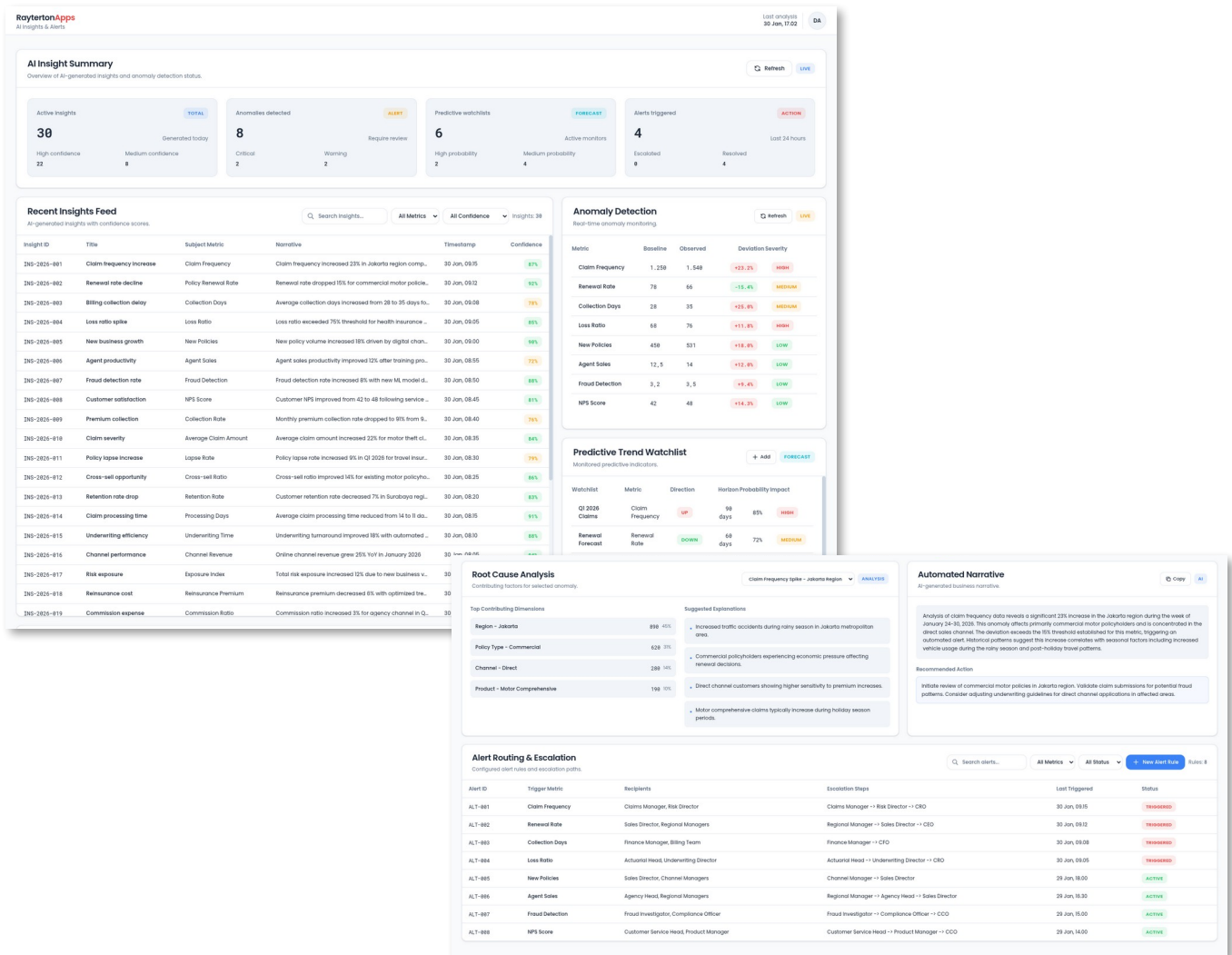
Business users can access a library of certified dashboards or explore data independently without a deep technical background. The platform provides intuitive tools for drilling down into specific policy segments or claims cohorts. This empowers departments to generate their own insights while remaining within a governed environment.

### Features:

- Departmental Scorecards
- Ad-Hoc Query Builder
- Drill-Through Detail Views
- Scheduled Report Distribution
- Interactive Data Explorer



## AI-Assisted Insights & Alerts



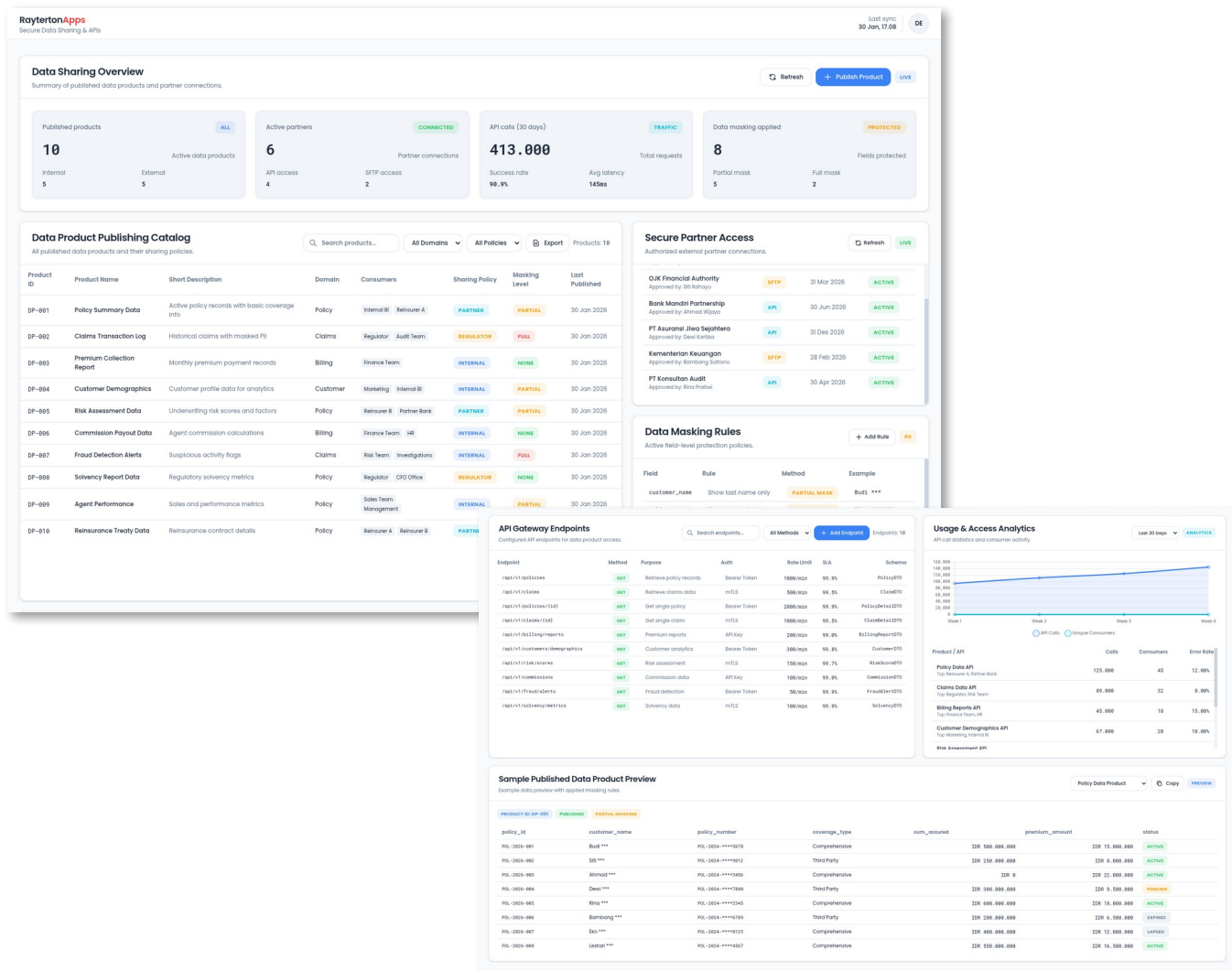
The platform uses machine learning to move from descriptive to proactive analytics. It automatically monitors key metrics for unusual trends such as sudden spikes in claim frequency or drops in renewal rates. Instead of waiting for a monthly report, users receive automated narratives that explain the root cause of these shifts.

### Features:

- Anomaly Detection
- Automated Business Narratives
- Predictive Trend Watchlists
- Root Cause Suggestions
- Alert Routing & Escalation



## Secure Data Sharing & APIs

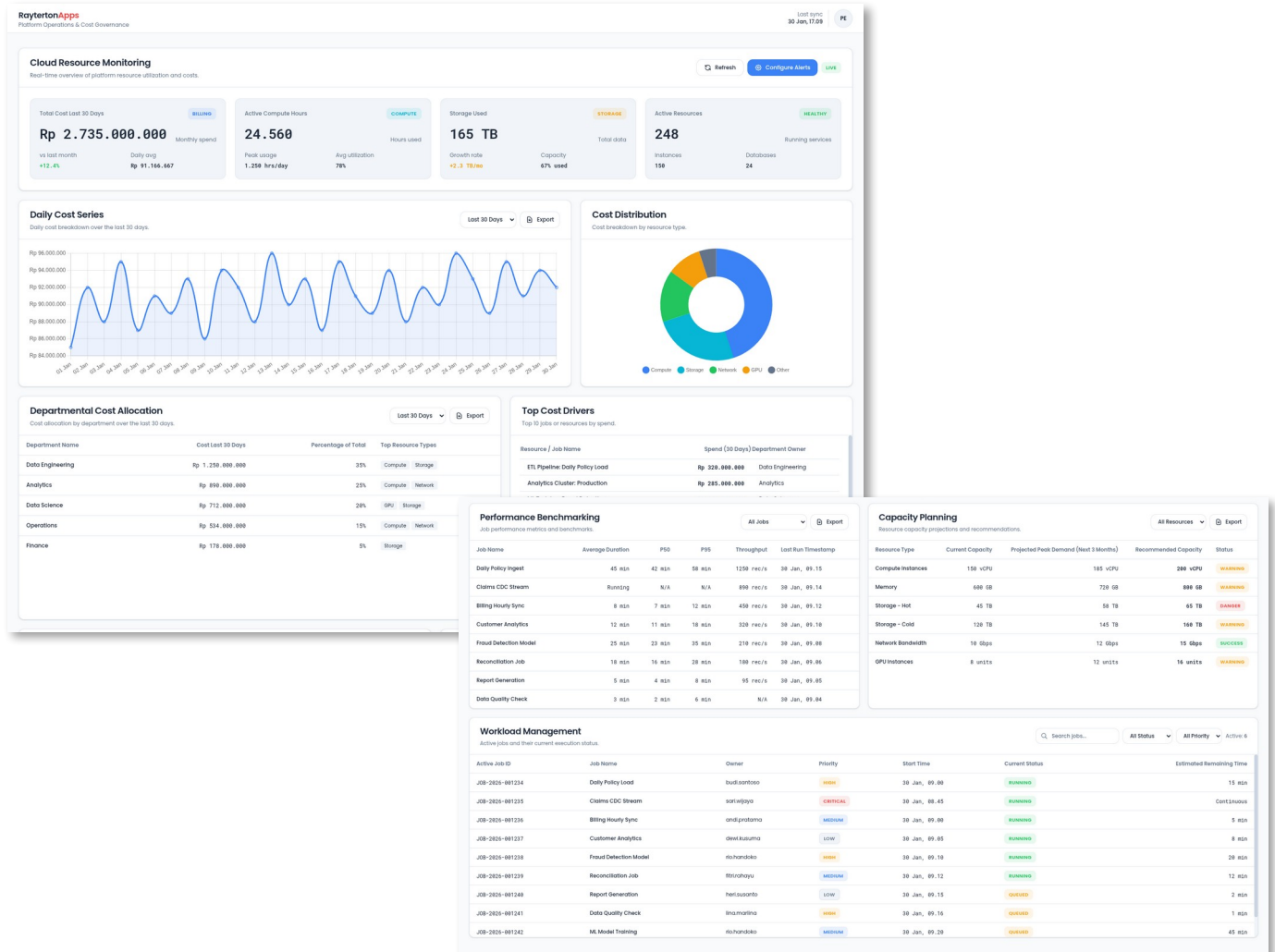


Insurance is a collaborative industry that requires sharing data with reinsurers and external partners. This module provides a secure gateway to publish specific data products or APIs without exposing your entire warehouse. You can apply data masking and tokenization to protect sensitive information while meeting business requirements.

### Features:

- Data Product Publishing
- Secure Partner Access
- API Gateway Management
- Data Masking & Tokenization
- Usage & Access Analytics

## Platform Operations & Cost Management

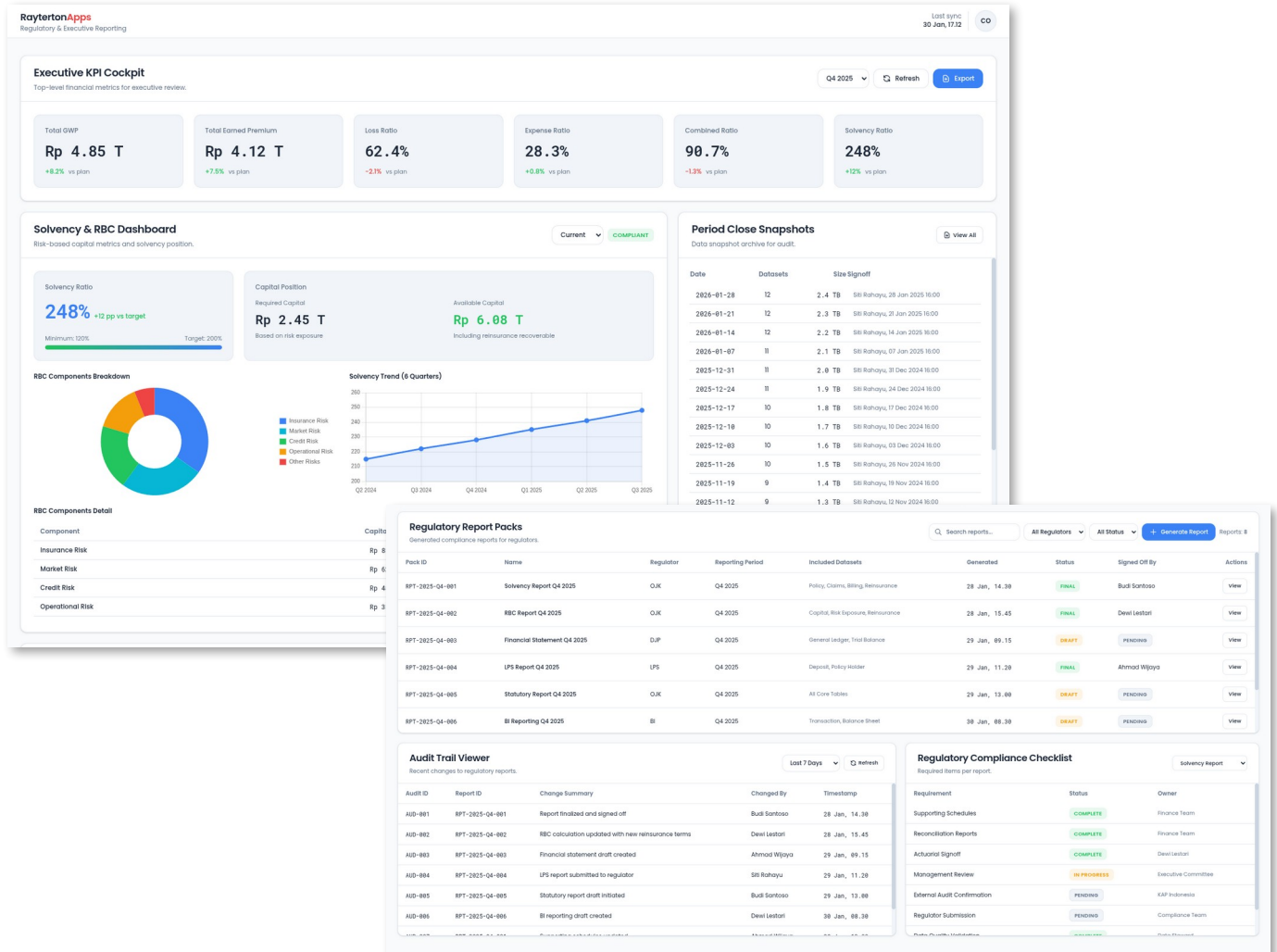


Managing a cloud data platform requires strict oversight of resources and costs. This module provides transparency into how your infrastructure is being used and which departments are driving costs. It helps you optimize performance and plan for future capacity without unexpected budget surprises.

### Features:

- Cloud Resource Monitoring
- Departmental Cost Allocation
- Performance Benchmarking
- Capacity Planning Tools
- Workload Management

## Regulatory & Executive Reporting



The platform streamlines the creation of complex reports for regulators and top management. With one click, you can generate solvency reports, risk-based capital dashboards, and executive cockpits. These reports use the same governed data models to ensure they are consistent with your internal operational figures.

### Features:

- Regulatory Report Packs
- Solvency & RBC Dashboards
- Executive KPI Cockpit
- Period Close Snapshots
- Audit Trail Viewer

**Ready to Drive Value from Your Insurance Data**

Share your list of KPIs and primary data sources. Rayterton will standardize your data governance and deliver a pilot project to demonstrate real business value within the first week of implementation.

**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](https://rayterton.com)**