

Rayterton Insurance Product Configuration and Rating

A centralized product factory empowering Actuaries and Product Managers to design, price, and launch complex insurance products. It ensures 100% actuarial accuracy and automated regulatory compliance without reliance on IT coding.

About Rayterton Product Configuration and Rating

Rayterton Product Configuration and Rating is designed for insurance enterprises requiring speed-to-market and strict governance. It replaces fragmented spreadsheet calculations and hard-coded legacy logic.

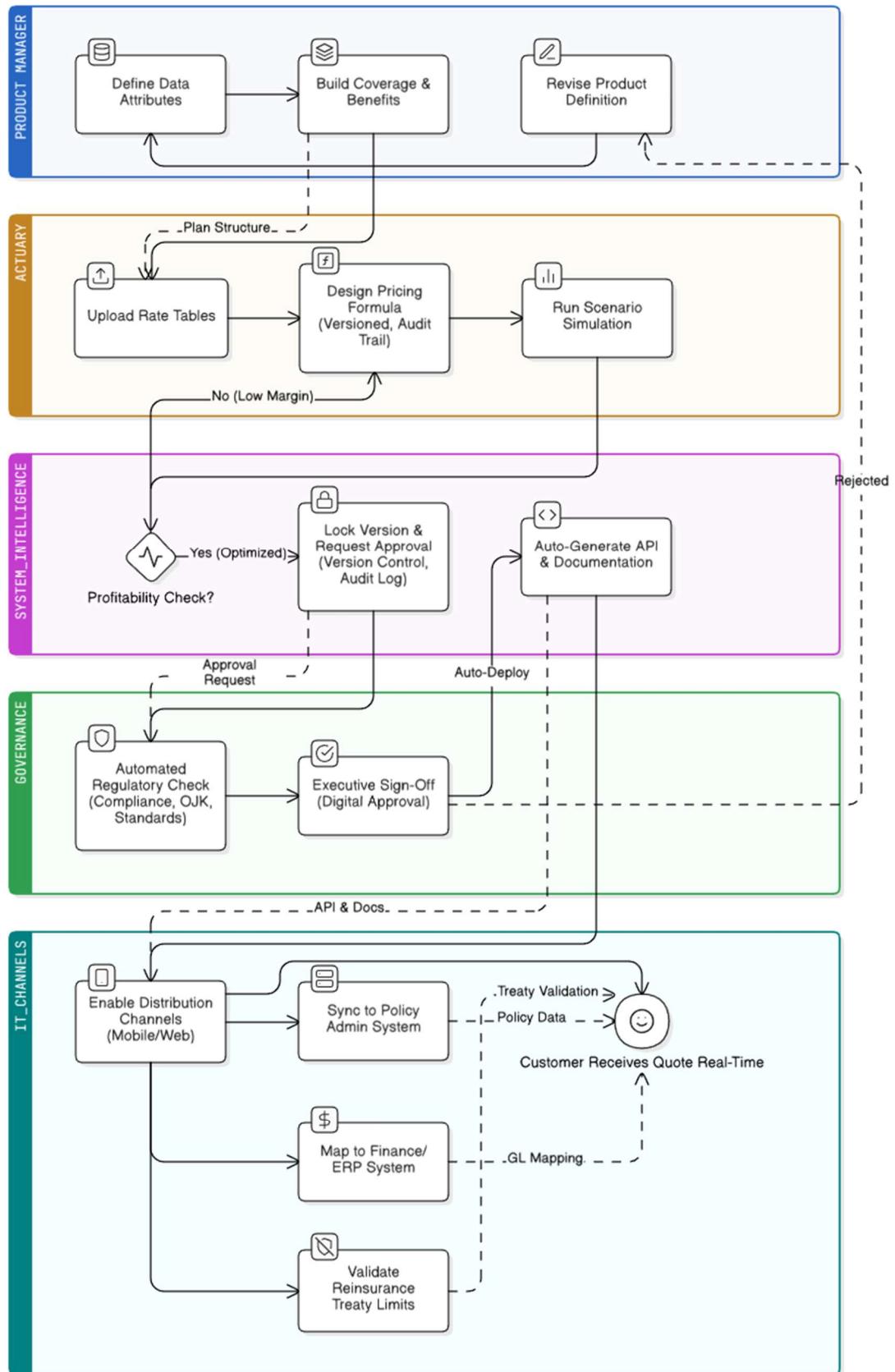
The system allows users to define product structures, manage dynamic pricing rules, and deploy APIs from a single platform. It eliminates compliance risks by validating tariff formulas against regulatory rules automatically.

The solution supports Life, General, and Health insurance lines with native support for local tax structures and reporting standards.

Platform coverage map

- **Product Studio** : attribute dictionary, coverage builder, benefit structures, policy rules, template inheritance.
- **Intelligent Rating Engine** : rate table management, no-code formula builder, multi-dimensional pricing, loading and discount logic.
- **Simulation and Profitability** : scenario testing, batch rating simulation, loss ratio projection, price comparison.
- **Automated Compliance** : regulatory checks, underwriting limits, version control, audit trail, governance workflow.
- **Omni-Channel Distribution** : API generator, channel management, partner configuration, integration hub.
- **Lifecycle Management** : workflow approvals, document generation templates, market rollout planning, change request management.

End-to-end Operating Story



Product Studio and Attribute Governance

Showing 1-8 of 24 products

This module establishes a flexible foundation for insurance products using reusable parameters. Users define input parameters such as age, location, and occupation within a standardized dictionary. Product Managers construct benefit packages and coverage limits by arranging these components. It supports the creation of new products through parent-child template inheritance.

Core capabilities:

- Attribute and Data Dictionary to define input parameters and list values.
- Coverage and Benefit Builder to structure benefit packages and coverage limits via a visual interface.
- Policy Structure and Rules to establish eligibility criteria and business validation logic.
- Template Inheritance to accelerate product creation by cloning and modifying existing product structures.

Intelligent Rating Engine

The rating engine handles complex actuarial logic and calculates premiums with high precision. Actuaries manage rate tables and formulas directly without requiring programmer intervention. The system executes calculations in real-time to ensure consistent pricing across all sales channels. It supports dynamic algorithms including base rates, risk factors, and administrative fees.

Core capabilities:

- Rate Table Management to manage base tariffs, loadings, and discounts with versioning support.
- No-Code Formula Builder to construct mathematical premium formulas using visual logic blocks.
- Time-Travel Rating to accurately rate past policies using historical tariff versions.
- Multi-Currency Support to handle foreign exchange rates and dual-currency policies.

Simulation and Impact Analysis

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Scenario: Scenario A: +5% Base Rate

Total Premium (Annual) **\$24.5M** ↑ +5.2% Loss Ratio **68.5%** ↓ -0.8% Profit Margin **31.5%** ↑ +0.8% Policy Count **12,458** No change

Current Production Rates

Average Premium \$1,967	Total GWP \$24.5M
Loss Ratio 68.5%	Expense Ratio 15.2%

Simulated Rates

Average Premium \$2,867 ↑ +5.1%	Total GWP \$25.8M ↑ +5.3%
Loss Ratio 67.7% ↓ -0.8%	Expense Ratio 14.8% ↓ -0.4%

Segment Policies Premium Loss Ratio

18-25 Years	2,458	\$4.8M	72.3%
26-35 Years			
36-45 Years			
46-55 Years			
56+ Years			

Segment Policies Premium Loss Ratio

18-25 Years	2,458	\$5.0M	71.5%
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Batch Rating Results

Test Run: Batch_20240127_001 • SafeDrive Pro 2026 v1.2

Total Processed **10,000** Policies rated

Success Rate **99.8%** 9,980 successful

Total Premium Volume **\$19.67M** Annualized

Avg Premium **\$1,967** Per policy/year

Simulation Duration: 2.3s Last Run: 2 min

All Status All Regions Search by Policy ID... Showing: 9,980 Success + 20 Warnings

Policy ID	Status	Region	Age Band	Car Type	Base Rate	Loading	Final Premium	Message
#9921	Warning	Northeast	90+	Sedan	---	---	---	Rate undefined for Age > 90
#0001	Success	Northeast	18-25	Sedan	\$450.00	15.50%	\$519.75	---
#0002	Success	Northeast	18-25	SUV	\$520.00	18.00%	\$613.60	---
#0003	Success	Northeast	26-35	Sedan	\$380.00	12.00%	\$425.60	---
#0004	Success	Southeast	18-25	Truck	\$460.00	15.00%	\$529.00	---
#0005	Success	Southeast	26-35	SUV	\$420.00	13.50%	\$476.78	---
#0006	Success	Midwest	36-45	Sedan	\$340.00	18.00%	\$374.00	---
#0007	Success	Midwest	46-55	Truck	\$370.00	11.50%	\$412.55	---
#0008	Success	West	18-25	Sedan	\$400.00	13.00%	\$452.00	---
#0009	Success	West	26-35	SUV	\$440.00	14.50%	\$503.80	---
#0010	Success	Northeast	56+	Sedan	\$320.00	9.00%	\$348.80	---
#0011	Success	Southeast	36-45	Truck	\$390.00	12.50%	\$438.75	---
#0012	Success	Midwest	26-35	Sedan	\$360.00	11.00%	\$399.60	---
#0013	Success	West	46-55	SUV	\$380.00	13.00%	\$429.40	---
#0014	Success	Northeast	18-25	Sports	\$580.00	20.00%	\$696.00	---
#0015	Success	Southeast	36-45	Sedan	\$340.00	10.50%	\$375.70	---

Showing 1-15 of 10,000 rows Previous 1 2 3 ... 667 Next Rows per page: 15

This area enables data-driven pricing decisions before market launch. Actuaries simulate tariff changes using historical data to predict profit margins and loss ratios. The system visualizes the financial impact of price adjustments instantly. It allows users to compare current prices against proposed prices to prevent revenue leakage.

Core capabilities:

- Scenario Testing to simulate price changes against sample data sets.
- Batch Rating Simulation to process large volumes of test data for mass validation.
- Split-Screen Impact Simulator to visually compare profit margins and premiums between versions.
- Profitability Anomaly Detection to identify and warn users of potential negative margins.

Automated Compliance and Governance

Regulatory guardrails are embedded directly into the pricing and product logic. The system automatically validates configurations against defined limits and regulatory rules. Strict version control ensures that every change is tracked and reversible. It maintains a forensic audit trail detailing who changed specific values and when.

Core capabilities:

- Compliance and Regulatory Check to validate tariffs against regulator limits and rulesets.
- Version Control and Repository to manage product snapshots including Draft, Active, and Archived states.
- Workflow and Approval Matrix to manage the review chain from Actuaries to Compliance Officers.
- Audit Trail Log to provide a chronological record of all system changes for forensic analysis.

Audit Trail Log

Complete history of all system changes

Timestamp	User	Action	Details
10:42 AM	Budi Santoso	Update	updated Base_Rate_Jakarta Modified rate factor for Jakarta region in SafeDrive Pro 2026 product - Old Value: 1.05 + New Value: 1.10
10:35 AM	Sarah Chen	Create	created New_Rate_Table_v2 Created new rate table version for testing scenario B + Created: New_Rate_Table_v2 + Rows: 1,247 + Status: Draft
10:28 AM	Mike Johnson	Update	Adjusted loading percentage for Segment - Old Value: 15.50% + New Value: 16.00%
10:15 AM	Emma Wilson	Deploy	Deployed product version 1.2 to production + Environment: Production + Version: 1.2 + Status: Success + Duration: 2.3s

Regulatory Guardrails

OJK Compliance Check • SafeDrive Pro 2026 v1.2

Compliance Status: PASSED with Warnings

Total Checks: 15 | Passed: 13 | Warnings: 2 | Failed: 0

Rule Name	Reference	Category	Status	Details	Actions
Min Rate Check	OJK SDJK 01	Pricing	Pass	All rates meet minimum threshold of \$300	
Max Discount Cap	OJK SDJK 02	Discount	Warning	Segment D exceeds cap by 2%	Fix
Tax Calculation	OJK TAX 01	Tax	Pass	Tax rates applied correctly (11% VAT)	
Age Band Validation	OJK AOE 01	Eligibility	Warning	3 policies with age > 90 detected	Fix
Loading Factor Cap	OJK LOAD 01	Pricing	Pass	Loading factors within 25% cap	
Deductible Range	OJK DEP 01	Deductible	Pass	Deductibles within \$100-\$2,000 range	
Benefit Limits	OJK BEN 01	Coverage	Pass	Benefit limits within regulatory maximums	
Premium Disclosure	OJK DISC 01	Disclosure	Pass	All required disclosures present	
Regional Rate Consistency	OJK REG 01	Pricing	Pass	Regional variations within 15% tolerance	
Policy Term Validation	OJK TERM 01	Contract	Pass	Policy terms within 1-5 years range	

Integration and Distribution

Products are available for sale immediately after approval through automated API generation. The system generates REST/JSON API specifications without additional backend coding. It manages which products are available on specific channels such as mobile apps, web portals, or aggregators. This ensures a single source of truth for pricing across the entire distribution ecosystem.

Core capabilities:

- API Gateway and Payload Mapper to automatically generate endpoints for live products.
- Distribution Channel Configuration to control product availability per channel.
- Auto-Generated API Documentation to provide technical specifications for integration partners.
- Partner Configuration to manage access rights and product subsets for external distributors.

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Channel Configuration Matrix
Configure product availability across sales channels

Reset to Default Save Changes

All Products All Channels Search products... Showing: 12 products

Product Name	⊕ Web Direct	□ Mobile App	■ Agency Portal	⟨⟩ 3rd Party API
SafeDrive Pro 2026 v1.2 • Vehicle	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
HomeShield Elite v2.0 • Property	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Commercial Fleet Plus v1.5 • Vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
BizGuard Liability v3.1 • Liability	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HealthFirst Premium v1.8 • Health	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Renters Basic v1.0 • Property	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Motorcycle Guard v2.2 • Vehicle	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fleet Logistics Pro v1.3 • Vehicle	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TravelSafe Essential v1.5 • Travel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Critical Care Plus v2.1 • Health	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Commercial Property Basic v1.0 • Property	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PetCare Complete v1.2 • Pet	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Legend: ● Active ● Draft ● Review

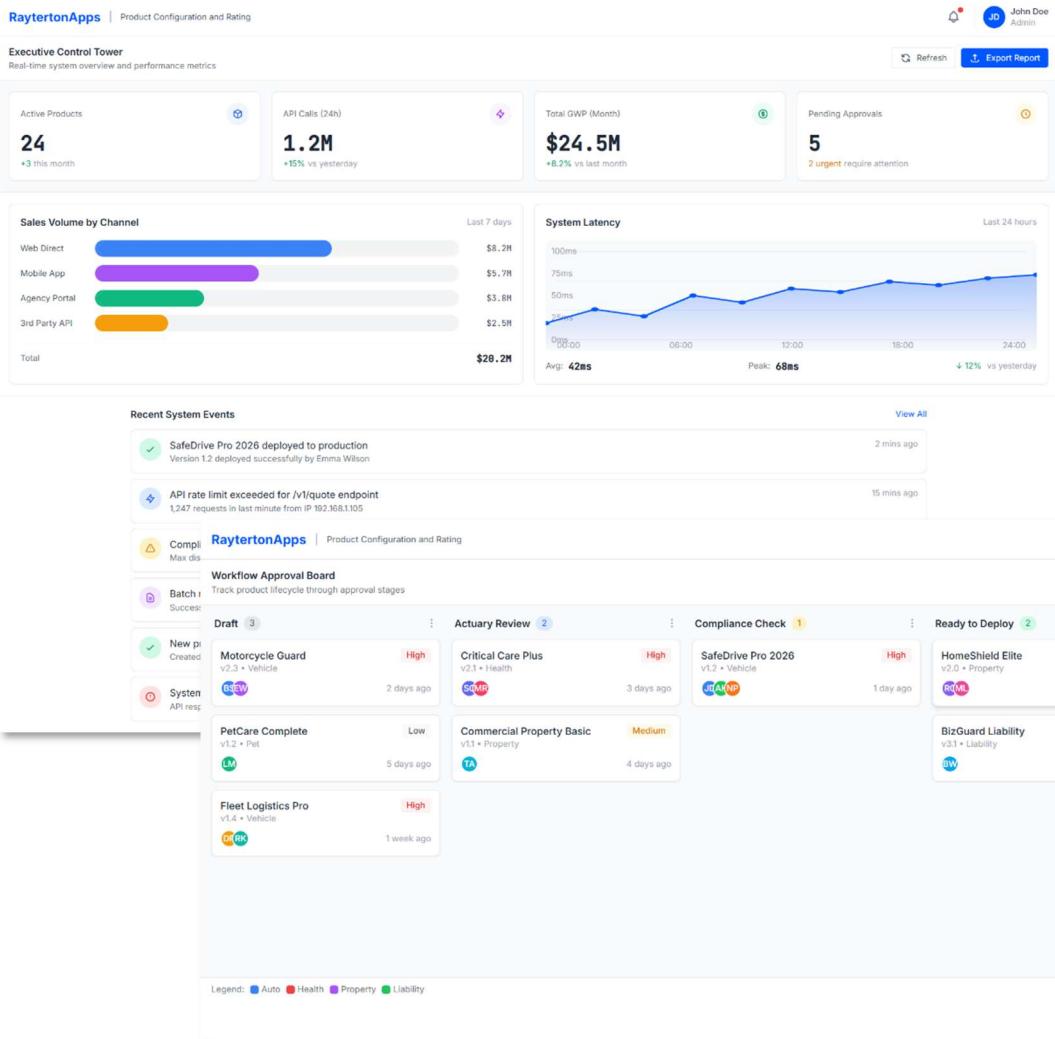
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Local Readiness and Reporting

The system allows configuration specific to Indonesian operational requirements. It supports local tax structures including VAT and income tax handling. Users can configure logic for stamp duty fees automatically. The platform facilitates data tagging required for specific regulatory reporting statistics.

Core capabilities:

- OJK Reporting Support to tag data for regulatory statistical reporting.
- Tax Configuration to handle tiered taxes and fiscal regulations.
- Materai Handling to automate stamp duty cost logic.
- Bahasa Indonesia Interface to support local operational staff.



Glossary of terms

- **API** = Application Programming Interface. Automated endpoints generated by the system to allow external applications to retrieve product data and calculate premiums.
- **Loss Ratio** = A key metric in insurance representing the ratio of claims paid to premiums earned. Used in the Simulation module to project profitability.
- **OJK** = Otoritas Jasa Keuangan. The financial services authority in Indonesia. The system includes checks to ensure compliance with OJK regulations.
- **Time-Travel Rating** = The ability of the engine to calculate premiums based on the exact rules and rates active at a specific point in the past.
- **RBAC** = Role-Based Access Control. Security feature that restricts system access based on user roles, such as separating Actuaries from Compliance Officers.
- **JSON** = JavaScript Object Notation. The standard data format used by the system's APIs to exchange information with frontend applications.

Validate Your Product Launch Strategy

Share your product attribute dictionaries, coverage structures, actuarial rate tables, and pricing formulas. We will configure a centralized product factory blueprint aligned to your specific profitability targets and market segments. We then deliver a full-cycle simulation featuring real-time premium calculation, split-screen impact analysis, automated regulatory validation, and instant API generation. This enables leadership to validate pricing precision, speed-to-market capabilities, and audit readiness before full deployment.

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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**

For more information, visit rayterton.com