

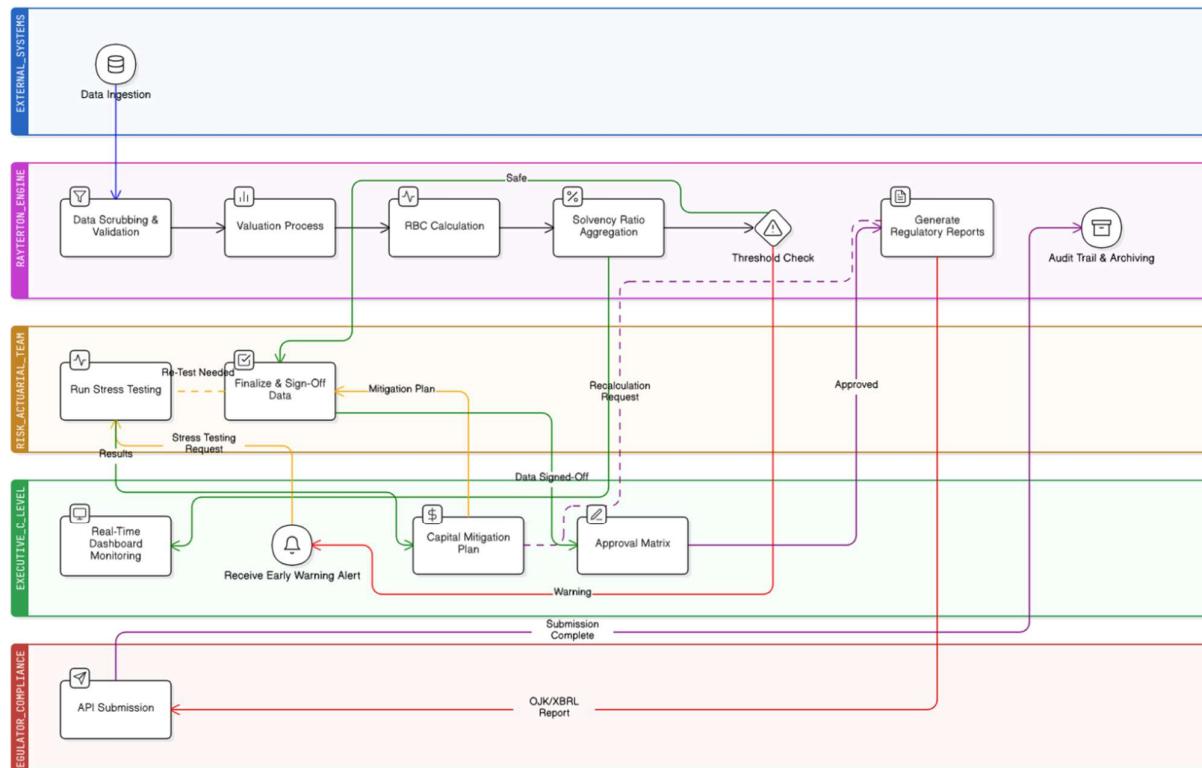
Rayterton Insurance Risk-Based Capital and Solvency Monitoring

A comprehensive financial intelligence system that automates solvency monitoring, optimizes capital allocation, and ensures real-time regulatory compliance for forward-thinking insurers.

Executive Summary

Rayterton RBC converts fragmented financial data into a single source of truth. The system provides real-time visibility into solvency ratios and capital health. It replaces reactive reporting with proactive management through automated data integration and predictive analytics.

End-to-end operating story



Unified Data Foundation and Integrity

Accurate solvency reporting requires clean data. This module connects directly with ERP and Core Insurance systems to eliminate manual input errors.

- **Data Integration Hub** : Establishes seamless connections with internal finance systems and external market data feeds. It synchronizes policy and claim data automatically.
- **Data Quality Management** : The built-in Scrubbing Engine cleanses raw data instantly. Validation Matrix rules apply strict logic to assets and liabilities to ensure integrity before calculation.
- **Adjustment Console** : Users can manage manual journal entries and review reconciliation logs within a controlled environment.

Rayterton Apps
Risk-Based Capital and Solvency Monitoring

RBC Engine ALM Stress Test Compliance **Data Integration** Dashboard

Unified Data Foundation & Integrity
Monitor data flow from ERP and Core Systems into Risk Engine

Integration Hub Status

System	Status	Last Sync	Notes
ERP System (Oracle Financials)	Connected	2 mins ago	✓ All systems operational
Core Insurance System (Policy & Claims Engine)	Connected	1 min ago	✓ Real-time streaming active
Market Data Feeds (Bloomberg API)	Warning	45 secs ago	⚠ High latency detected

Data Quality Scorecard

Dimension	Score	Status
Overall Data Health	98.5%	Excellent
Completeness	99%	
Accuracy	97%	
Timeliness	100%	

Legend: ● Target Met ● Within Range ● Needs Attention

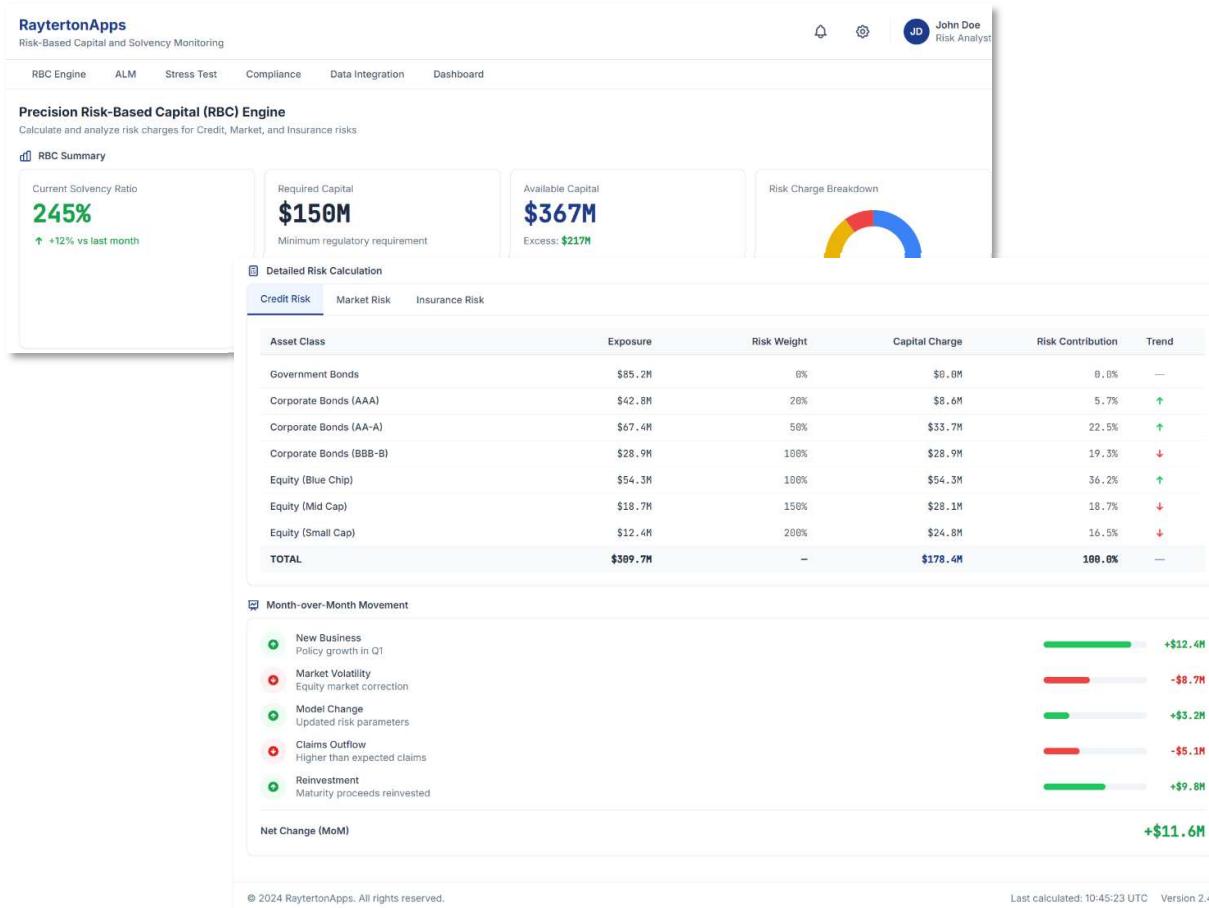
Exception & Validation Console Total: 24 errors [Export](#)

Timestamp	Source System	Data Type	Error Details	Severity	Action
2024-01-29 10:45:23	Oracle Financials	Asset Valuation	Missing Counterparty ID for bond position #12345	High	Fix
2024-01-29 10:42:15	Core Insurance	Policy Data	Invalid policy tenure value: negative number	High	Fix
2024-01-29 10:38:47	Bloomberg API	Market Price	Delayed price data for equity ticker AAPL	Low	Fix
2024-01-29 10:35:02	Oracle Financials	Liability Data	Currency code mismatch: USD vs EUR	Low	Fix
2024-01-29 10:31:18	Core Insurance	Claim Records	Duplicate claim ID detected: CLM-2024-7892	High	Fix
2024-01-29 10:28:55	Bloomberg API	Yield Curve	Missing data point for 10-year treasury	Low	Fix
2024-01-29 10:25:33	Oracle Financials	Cash Flow	Negative cash balance warning: Account #8821	Low	Fix
2024-01-29 10:22:09	Core Insurance	Reinsurance	Invalid treaty code: RE-2024-X99	High	Fix

Showing 1-8 of 24 records Previous [1](#) [2](#) [3](#) Next

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Precision Risk-Based Capital Engine



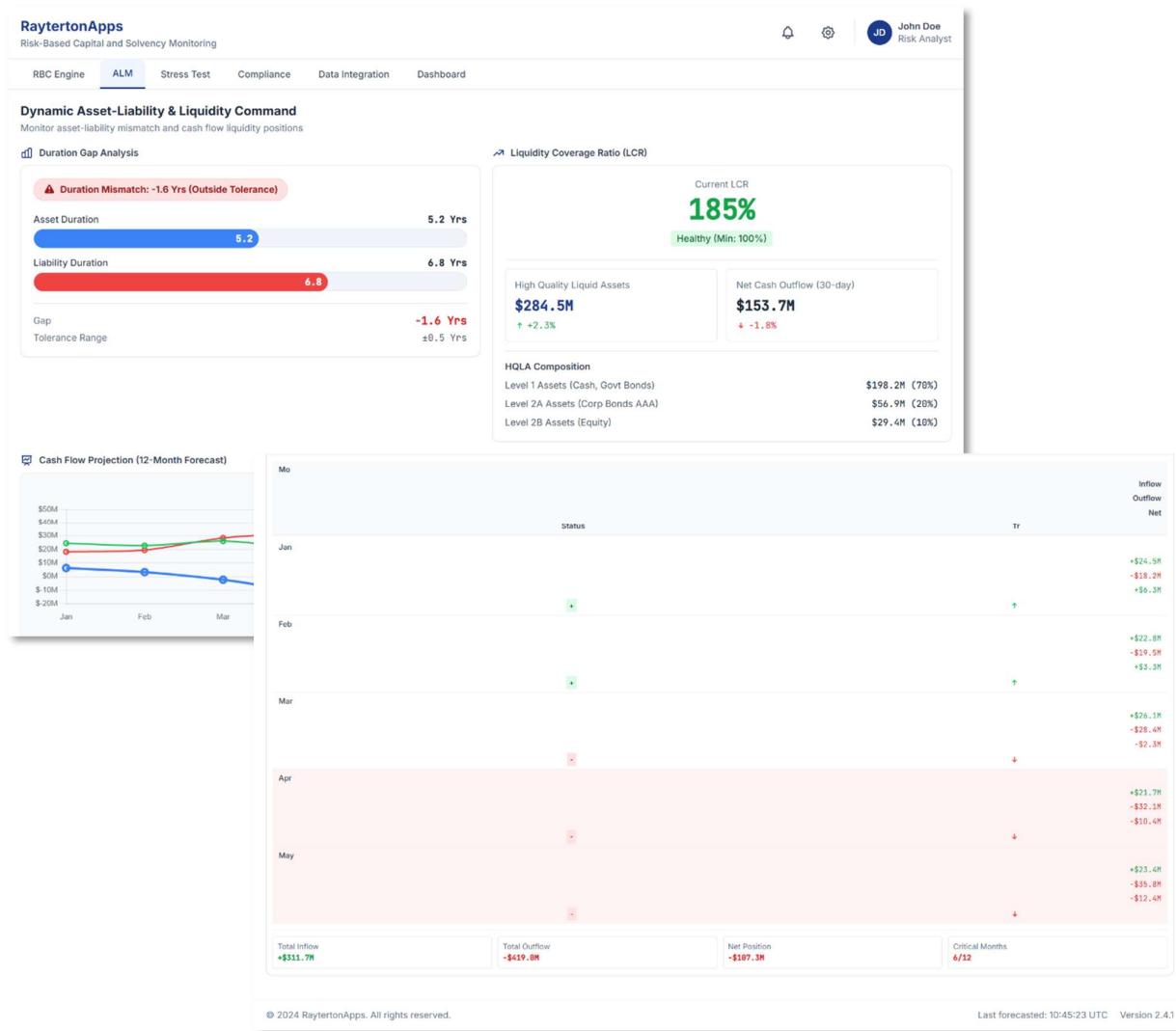
The calculation engine handles complex risk variables to determine the exact capital charges required by regulation.

- Credit and Market Risk : This component calculates risk weights for investments, interest rate sensitivity, and equity valuation. It specifically assesses Joint Financing portfolios and counterparty default risks.
- Insurance Risk : The module evaluates premium and reserve risks. It incorporates catastrophe modeling to assess technical insurance exposure.
- Operational Risk and Aggregation : The system computes operational risk charges based on gross revenue. It aggregates all risk factors to produce the final RBC calculation with diversification benefits.

Dynamic Asset-Liability and Liquidity Command

Financial stability depends on balancing assets against liabilities. This area detects duration mismatches and liquidity gaps.

- **Valuation Framework** : The system performs fair value assessments for assets and best-estimate valuations for liabilities.
- **ALM Strategy** : Duration Gap Analysis monitors the time sensitivity of assets versus liabilities. Currency matching logic prevents foreign exchange exposure.
- **Liquidity Control** : Cash Flow Projection tools forecast 12-month inflows and outflows. The Liquidity Coverage Ratio (LCR) monitor ensures sufficient high-quality liquid assets are available.



Predictive Stress Testing and Resilience

Insurers must prepare for future market volatility. This module simulates adverse scenarios to test capital resilience.

- Scenario Simulation : Users can apply Macro-Economic Shocks such as inflation spikes or interest rate changes. Specific simulations cover pandemic events and catastrophic claims.
- Capital Planning : The platform models the impact of capital injections and dividend distributions. Reverse stress testing identifies exact breaking points in the financial structure.
- Result Analyzer : Comparative views display the difference between base scenarios and stressed outcomes to support strategic planning.

Pillar 4: Predictive Stress Testing
Run "What-if" scenarios to analyze capital impact under crisis conditions

Define Stress Parameters

Interest Rate Shock	+200 bps	
-500 bps	0	+500 bps
Equity Market Fall	-30%	
-50%	-25%	0%
Pandemic Claim Spike	+15%	
0%	50%	100%
Credit Spread Widening	+150 bps	
Property Market Crash	-20%	
Liquidity Crisis	Severe	

Simulation Results: Base vs. Stressed

Base Case	Stressed Scenario
Current Position	Under Crisis Conditions
Solvency Ratio	135%
Capital Surplus	\$45M
Available Capital	\$195M
Warning: Approaching Minimum	

Impact Analysis: Capital Erosion Breakdown

Equity Market Drop (-30%)	-\$112M (60%)
Interest Rate Shock (+200 bps)	-\$45M (24%)
Pandemic Claim Spike (+15%)	-\$28M (15%)
Credit Spread Widening (+150 bps)	-\$15M (8%)
Other Factors	-\$12M (6%)
Total Capital Erosion	-\$212M
Remaining Buffer Above Minimum (100%)	\$45M

Risk Factor Sensitivity Heatmap

	Low	Medium	High	Extreme
Interest Rate	Low	Medium	High	Extreme
Equity Market	Low	Medium	High	Extreme
Credit Spread	Low	Medium	High	Extreme
Claims Volatility	Low	Medium	High	Extreme

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Automated Regulatory Compliance Bridge

Regulatory reporting should be accurate and timely. This section automates the generation of mandatory disclosures.

- **Regulatory Reporting** : The system auto-generates OJK RBC forms and public disclosure reports. It produces valid XBRL output for regulator submission.
- **Governance Control** : A strict Sign-off Workflow governs report approvals. The Audit Trail Logs record every data modification to satisfy external auditors.
- **Submission Management** : Teams can track submission history and log regulator feedback directly within the platform.

Pillar 5: Automated Regulatory Compliance
Manage regulatory reports, approval workflows, and audit trails

Upcoming Deadline: Q3 OJK RBC Report
Due in 4 Days 12 Hours

Priority: High **Finalize Now**

Report Generator

- Form 1: Assets**
Balance sheet asset positions
- Form 2: Liabilities**
Balance sheet liability positions
- Form RBC: Risk Calculation**
Risk-based capital computation
- Form LCR: Liquidity Coverage**
Liquidity ratio calculation

Governance & Audit Trail

- CFO Approval**
CFO: Sarah Johnson approved Form 1 (Assets) at 10:30 AM
Comment: "All figures verified and accurate"
- System Validation**
System: Auto-validation passed for Form 1 at 10:05 AM
Result: 0 errors, 0 warnings
- User Modification**
User: Andi S. modified Risk Factor Equity at 10:00 AM
Changed from 100% to 150% weight
- Data Import**
System: Imported data from Oracle Financials at 09:45 AM
Source: ERP System | Records: 1,247
- Report Generation**
User: John Doe generated Form 1 draft at 09:30 AM
Template: Standard OJK RBC Template v2.4
- Session Start**
User: John Doe logged in at 09:00 AM
IP: 192.168.1.100 | Location: Jakarta HQ

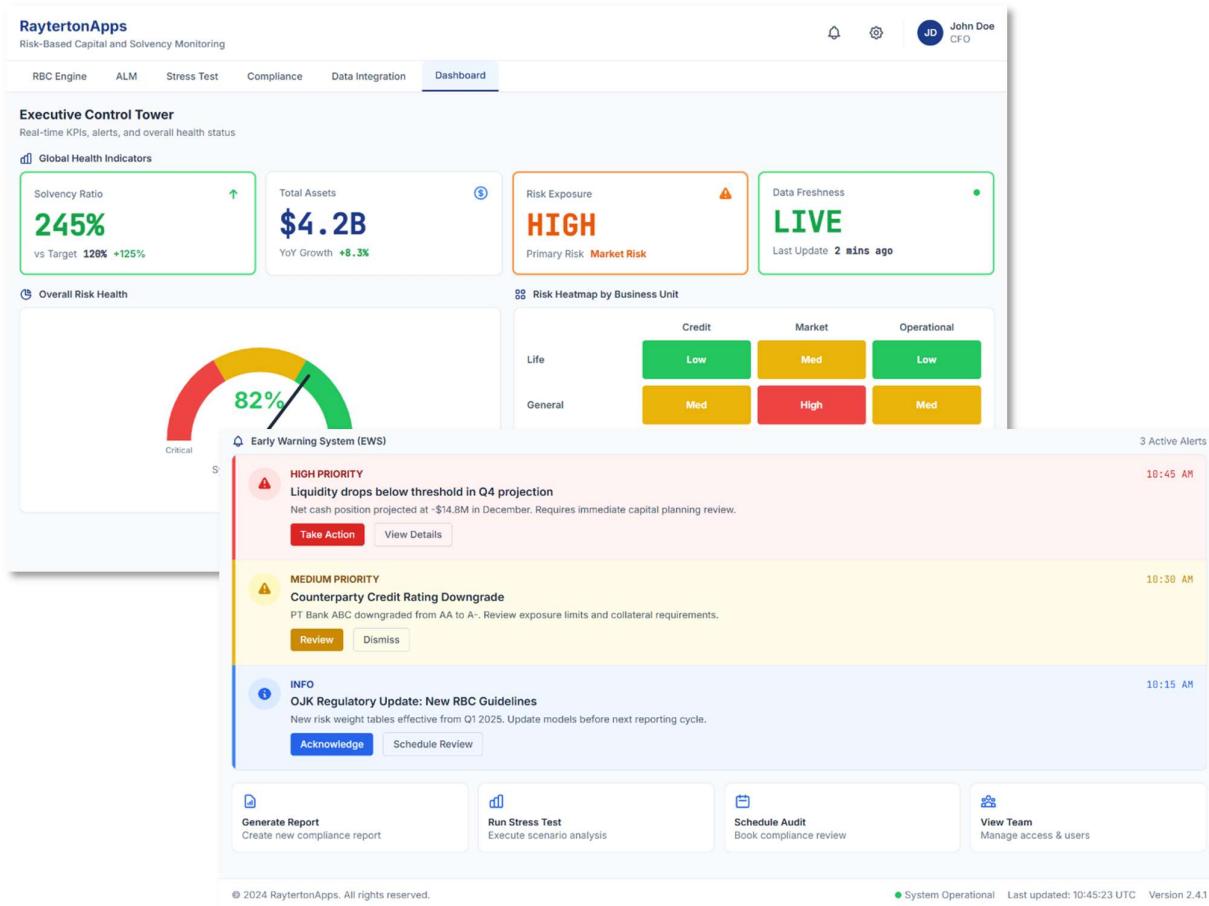
Compliance Summary

Reports Ready	Pending Review
2	1
Validation Errors	Total Submissions
1	4

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Executive Control Tower and Decision Intelligence



Leadership teams need immediate insights. This dashboard consolidates complex data into clear performance indicators.

- **Executive Overview :** The Global Solvency Dashboard presents real-time health scores. Multi-entity support allows viewing performance by branch or subsidiary.
- **Risk Intelligence :** The system highlights top risk exposures and tracks Key Risk Indicators. Financial heatmaps visualize risk concentration across business units.
- **Alerts and Actions :** An Early Warning System triggers notifications when thresholds are breached. The Mitigation Plan Tracker ensures issues are resolved systematically.

Glossary of terms & abbreviations

- **RBC** (*Risk-Based Capital*) : A regulatory framework that determines the minimum capital an insurer must hold based on the size and risk profile of its operations.
- **Joint Financing** : A financing arrangement where multiple parties share capital funding for a specific project. The system calculates risk weights and capital charges specifically for these shared portfolios.
- **ALM** (*Asset-Liability Management*) : The practice of managing financial risks resulting from mismatches between assets and liabilities. The system uses duration gap analysis to monitor these positions.
- **LCR** (*Liquidity Coverage Ratio*) : A standard metric used to determine if an institution has enough high-quality liquid assets to cover short-term obligations under stress.
- **XBRL** (*eXtensible Business Reporting Language*) : The global standard for digital business reporting. The engine generates these files automatically to meet regulatory submission requirements.
- **EWS** (*Early Warning System*) : A proactive monitoring tool that triggers alerts when risk indicators approach critical thresholds. This enables immediate mitigation before violations occur.
- **OJK** (*Otoritas Jasa Keuangan*) : The Financial Services Authority of Indonesia. The system includes pre-configured reporting templates and logic compliance with their specific regulations.
- **API** (*Application Programming Interface*) : A connection protocol that allows different software systems to communicate. This enables real-time data sync between the Core Insurance System, ERP, and the RBC engine.
- **Data Scrubbing Engine** : An automated feature that validates and cleanses raw data. It fixes inconsistencies in financial records before they enter the calculation workflow.
- **Stress Testing** : A simulation technique that tests the resilience of investment portfolios against hypothetical negative economic scenarios.

Deploy Your Solvency Intelligence Platform

Share your investment portfolios, liability data, and Joint Financing agreements. Rayterton will construct a dedicated Risk-Based Capital pilot environment aligned with your specific regulatory framework. We then execute a full-scope solvency drill featuring automated reconciliation, dynamic stress testing, and instant OJK-compliant reporting. This allows your stakeholders to verify calculation accuracy, system readiness, and audit defense capabilities before committing to a full-scale rollout.

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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