

# COMPAS

COMPLIANCE PROCESS AUTOMATION SERVICE

Executive Vision Document

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DATE

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VERSION

2.0

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## Compliance Process Automation Service

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## Executive Summary

COMPAS (Compliance Process Automation Service) is an intelligent platform designed to transform how Sinar Mas Group entities manage compliance, governance, and standard operating procedures. Through real-time monitoring, predictive risk assessment, and automated regulatory adaptation, COMPAS addresses the critical challenge of maintaining compliance across 40+ subsidiaries while reducing manual effort and minimizing regulatory risk exposure.

*The Vision: Make compliance invisible yet omnipresent*

—a system that works silently in the background, ensuring every process, every document, and every employee action aligns with regulations, while surfacing only what matters to decision-makers.

## The Problem

### Current State Pain Points

Challenge	Impact
<b>Fragmented Compliance</b>	40+ SMMA subsidiaries each managing compliance independently with inconsistent standards
<b>Reactive Approach</b>	Issues discovered during audits, not before—leading to fines and remediation costs
<b>Manual Processes</b>	Compliance officers spend 60–70% of time on documentation, not strategic risk management
<b>Regulatory Lag</b>	New regulations (OJK, BI, MOE 2025) require months to cascade across all entities
<b>Knowledge Silos</b>	Institutional compliance knowledge lives in people's heads, not systems
<b>Audit Anxiety</b>	Preparation for audits is stressful, time-consuming, and resource-intensive
<b>Data Privacy Gaps</b>	No unified approach to PDP Law 2023 compliance across entities

### The Cost of Non-Compliance

Category	Impact	Estimated Annual Exposure
<b>Financial</b>	OJK fines, MOE environmental penalties	Rp 5–50 Billion
<b>Operational</b>	License suspension, business halt	Rp 100+ Billion revenue at risk
<b>Reputational</b>	Investor confidence, credit ratings	Long-term valuation impact
<b>Strategic</b>	M&A valuation, partnership opportunities	Deal value reduction 10–20%

## Baseline Metrics (Current State)

Metric	Current State	Industry Benchmark
Audit preparation time	4–6 weeks	1–2 weeks
Compliance FTE hours on documentation	60–70%	30–40%
Regulatory update cascade time	2–3 months	2–4 weeks
Compliance violations per audit	8–12 findings	2–4 findings
Employee SOP comprehension rate	~60%	85%+

## The Opportunity

### Regulatory Tailwinds

- MOE Regulation No. 20/2025** - New environmental monitoring requirements for mining (effective Oct 2025)
- OJK Strengthening** - Increased scrutiny on financial services compliance
- PDP Law 2023** - Personal Data Protection requirements (mandatory compliance)
- ESG Pressure** - Investors demanding better governance and transparency
- Digital Transformation** - Regulators expecting digital compliance reporting

### Market Context

Market Segment	2024 Size	2030 Projection	CAGR
Compliance Monitoring	\$1.8B	\$5.2B	19.4%
RegTech	\$14.9B	\$106.9B (2035)	19.6%
Process Mining	\$2.46B	\$42.7B (2032)	42.0%

### SQE's Unique Position

- Built-in Customer Base:** 40+ SMMA subsidiaries ready for pilot and deployment
- Group Synergy:** Potential expansion to Mining pillar (DSSA/GEMS - USD 3B revenue)
- Local Expertise:** Deep understanding of Indonesian regulatory landscape (OJK, BI, MOE)

- **Proven Track Record:** Successful digital products (ASJ, GARASI Dealer)
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## | The Solution: COMPAS

### Product Definition

**COMPAS** is an intelligent compliance management platform that:

1. **Monitors** operational processes in real-time against SOPs and regulations
2. **Detects** deviations and potential compliance risks before they become violations
3. **Adapts** automatically when regulations change, with human-approved SOP updates
4. **Enables** employees to understand and follow compliance through contextual engagement
5. **Reports** audit-ready documentation with generated insights
6. **Protects** personal data in compliance with PDP Law 2023

### Core Value Propositions

Stakeholder	Value Delivered	Quantified Impact
C-Level / Board	Single dashboard showing enterprise-wide risk exposure in Rupiah	80% faster risk visibility
Compliance Officers	Focus on strategic risk management, not documentation	70% reduction in manual work
Managers	Real-time visibility into team compliance; actionable alerts	50% faster issue resolution
Employees	Easy-to-understand SOPs; contextual learning; assistant	40% better SOP comprehension
Auditors	Pre-compiled audit trails; explained findings	70% faster audit cycles

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## | Key Features

### 1. Intelligent Risk Dashboard (C-Level View)

**Purpose:** One-screen visibility into enterprise-wide compliance health

**Components:** - **Risk Heatmap** - Visual map of all entities: RED/YELLOW/GREEN status with trend indicators - **Financial Exposure Ticker** - Real-time "Rp X.X B at risk" calculation - **Regulatory Countdown** - Upcoming deadlines with days remaining - **Cross-Entity Benchmarking** - Performance comparison across subsidiaries - **Drill-Down Capabilities** - Click-through to entity/department/individual level

## 2. Real-Time Deviation Detection & Alerts

**Purpose:** Catch compliance issues before they become violations

**How It Works:** - System continuously monitors process logs, documents, and transactions - Compares against SOP rules and regulatory requirements - Generates alerts with severity levels and confidence scores - Provides explained reasoning ("This transaction flagged because...")

## Human-in-the-Loop Workflow:



**Risk Mitigation:** - Low confidence alerts escalate to human review - All decisions logged with full audit trail - Explainability layer for every flagged item - RAG (Retrieval-Augmented Generation) to ensure accuracy

### 3. Dynamic Regulatory Adaptation Framework

**Purpose:** Stay current with evolving regulations without manual SOP rewrites

**The Flow:**



**Key Components:** - **OCR-to-Structured-Rule Engine** - Process Indonesian regulatory PDFs (often with handwritten notes) - **Knowledge Graph Layer** - Map relationships between regulations and SOPs - **Regulatory Scenario Simulations** - Model impact of sudden regulatory changes - **Regional Tuning** - Locale-specific adjustments for Bahasa Indonesia variations

### 4. Compliance Assistant (Natural Language)

**Purpose:** Democratize compliance knowledge across the organization

**Capabilities:** - Answer compliance questions in Bahasa Indonesia (formal & informal) - Cite relevant SOPs and regulations with source links - Explain "why" behind compliance requirements - Guide document compliance checking - Available 24/7 for all employees

**Technical Safeguards:** - RAG architecture to ground responses in actual SOPs/regulations - Confidence scoring on every response - "I don't know" fallback when uncertain - Human escalation path for complex queries

**Use Cases:** - "Apa syarat untuk approve loan di atas 500 juta?" - "Dokumen apa saja yang perlu untuk audit OJK?" - "Apakah transaksi ini sesuai dengan SOP anti-money laundering?"

## 5. Contextual Compliance Engagement Framework

**Purpose:** Make compliance engaging without trivializing regulatory risks

**Hybrid Engagement Model:**

Risk Level	Engagement Approach
Low-Risk Tasks	Light gamification (badges, points, streaks)
Medium-Risk Tasks	Structured learning with assessments
High-Risk Compliance	Compulsory rule-based workflow, senior escalation

**Features:** - **Personal Compliance Score** - Individual dashboard with achievement tracking - **Department Performance Metrics** - Team-based compliance visibility - **Contextual Quizzes** - Learning triggered by actual work context - **Achievement Timeline** - Visual journey of trainings, certifications - **Local-Centric Incentives** - Link to real performance metrics

**Special Features:** - **New Joiner Onboarding (NJO) Track** - Structured compliance learning path - **SOP Update Modules** - Mandatory completion for new/updated SOPs - **Impact KPIs** - "Regulatory risk exposure reduced by X%" metrics

## 6. Automated Audit Report Generation

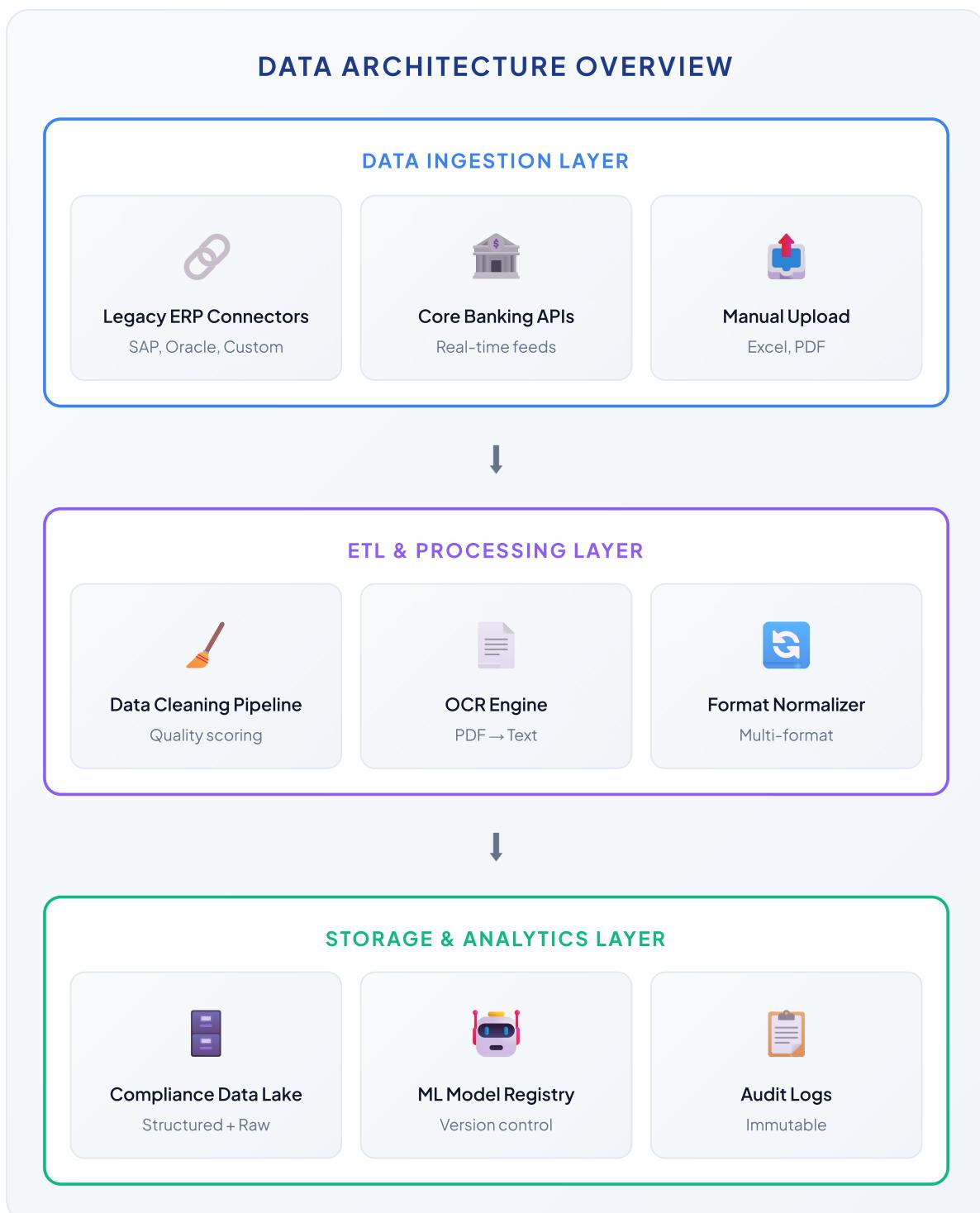
**Purpose:** Transform audit preparation from weeks to days

**Capabilities:** - Auto-compile compliance data across all monitored processes - Generated executive summary with key findings - Full audit trail with timestamps and responsible parties - Grace period status report (who's transitioned, who hasn't) - Export in regulator-required formats (OJK, BI, MOE templates) - Drill-down capabilities for auditor deep-dives

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## Data Strategy

### Data Architecture Overview



## Legacy System Integration Plan

System Type	Integration Approach	Timeline
Modern APIs	Direct REST/GraphQL integration	Phase 1
Legacy ERP (SAP/Oracle)	Middleware connectors	Phase 2
Custom Internal Systems	Custom adapters	Phase 2–3
Manual Processes	Digitization + OCR	Phase 3

## Data Quality Framework

- **Automated Quality Scoring** - Every data point rated for completeness, accuracy
- **Data Lineage Tracking** - Full audit trail of data transformations
- **Anomaly Detection** - Flag unusual data patterns for review
- **Staged Onboarding** - Entity-by-entity data onboarding with validation

## Privacy & Security Framework

### PDP Law 2023 Compliance

Requirement	COMPAS Implementation
Data Minimization	Collect only necessary compliance data
Purpose Limitation	Clear data usage policies per module
Consent Management	Built-in consent tracking for employee data
Data Subject Rights	Self-service portal for access/correction requests
Cross-Border Transfer	On-premise option; data residency controls
Breach Notification	Automated incident detection and reporting

## Security Standards

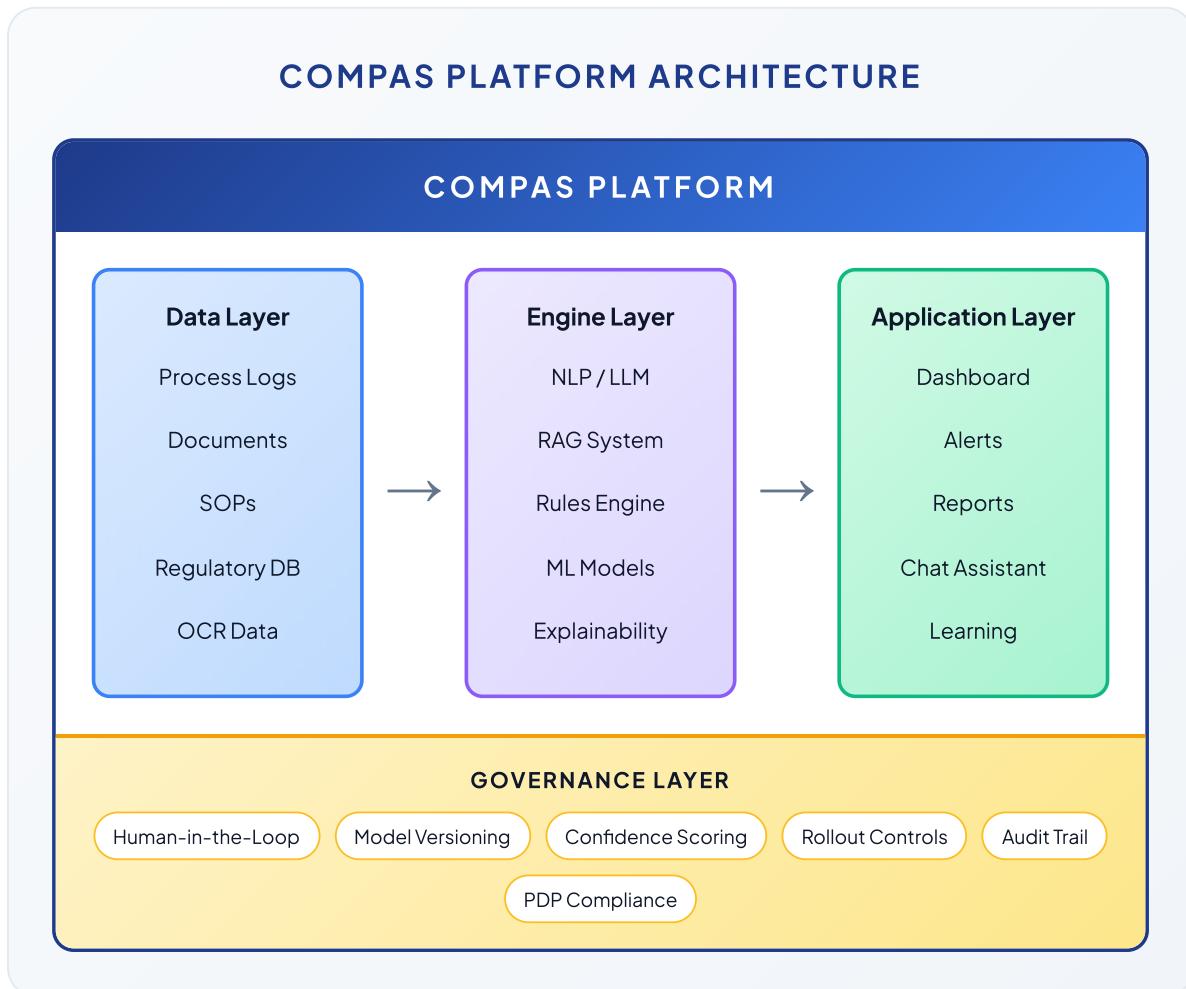
Standard	Implementation
ISO 27001	Information security management aligned
SOC 2 Type II	Ready for certification
Encryption	At-rest (AES-256) and in-transit (TLS 1.3)
Access Control	Role-based (RBAC) + Attribute-based (ABAC)
Audit Logging	Immutable logs, 7-year retention

## Ethics & Governance

- **Bias Audits** - Regular fairness assessments on models
  - **Transparency Reports** - Published metrics on decision accuracy
  - **Human Override** - Always available for any automated decision
  - **Model Versioning** - Full lineage and rollback capability
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## Technical Architecture

### Platform Architecture (High-Level)



## Risk Mitigation Strategy

Risk	Mitigation
<b>False Positives</b>	Confidence scoring; user feedback loop; threshold tuning
<b>False Negatives</b>	Conservative thresholds; regular validation against known cases
<b>Accuracy Issues</b>	RAG architecture; source citation requirement; human verification
<b>Bahasa NLP Limitations</b>	Regional fine-tuning; hybrid rule+ML approach; continuous improvement
<b>Outdated Model</b>	Continuous regulatory feed; scheduled retraining; drift monitoring
<b>Data Privacy</b>	On-premise option; encryption; PDP Law compliance framework
<b>Explainability</b>	Every decision comes with reasoning and source
<b>Model Drift</b>	Automated monitoring; scheduled retraining; version control

## Non-Functional Requirements

Requirement	Specification
<b>Latency</b>	Dashboard load < 3 seconds; Alerts within 5 minutes of event
<b>Availability</b>	99.9% uptime SLA
<b>Security</b>	ISO 27001 aligned; SOC 2 Type II ready
<b>Privacy</b>	PDP Law 2023 compliant; GDPR-ready architecture
<b>Scalability</b>	Support 40+ entities, 10,000+ concurrent users
<b>Auditability</b>	7-year data retention; immutable audit logs

## Go-To-Market Strategy

### Phase 1: Foundation & Internal Pilot (Months 1–6)

**Target:** SQE internal compliance processes

**Deliverables:** - Core SaaS platform architecture - Synthetic data pipelines for testing - Basic Dashboard + Assistant MVP - Internal SOP digitization

**Success Criteria:** - 80% of SQE SOPs digitized and monitored - Platform stability validated - Initial model accuracy benchmarks

**Risk Buffer:** +1 month for data quality issues

### Phase 2: Financial Services Pilot (Months 7–12)

**Target:** One SMMA subsidiary (recommended: Sinarmas Multifinance)

**Deliverables:** - Human-in-the-Loop modules for high-risk alerts - Legacy system integration (first connector) - Full compliance monitoring deployment - User training and adoption program

**Success Criteria:** - 50% reduction in audit preparation time - Zero missed compliance deadlines - 90% user adoption rate - Pilot ROI demonstrated (target: 3:1)

**Risk Buffer:** +2 months for integration challenges

### Phase 3: Financial Services Rollout (Months 13–18)

**Target:** Expand to Bank Sinarmas, Asuransi Sinar Mas, other SMMA entities

**Deliverables:** - Cross-entity benchmarking operational - Full regulatory auto-adapt functionality - Comprehensive audit report generation - Multi-entity data consolidation

**Success Criteria:** - Measurable compliance score improvement across entities - 70% reduction in compliance FTE documentation time - Full PDP Law compliance certification

**Risk Buffer:** +2 months for multi-entity coordination

### Phase 4: Mining Expansion & Optimization (Months 19–24+)

**Target:** GEMS/DSSA (Mining pillar)

**Deliverables:** - Mining-specific compliance modules (SMKP, MOE 2025, ESG) - Edge computing capabilities for remote sites - Advanced analytics and predictive capabilities

**Strategic Value:** - Mining revenue = USD 3B (2x Financial Services) - Position SQE as cross-pillar digital enabler

**Risk Buffer:** +3 months for mining-specific requirements

**UAT & Stabilization Buffer: 3 months (Throughout)**

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## Success Metrics

### Business Impact Metrics (C-Level)

Metric	Baseline	Target	Measurement
Revenue Protection	2–3 incidents/year	Zero license suspensions	Incidents avoided
Cost Avoidance	Rp 5B potential exposure	Rp 10B+ fines prevented	Risk exposure reduction
Rating Confidence	Current Fitch rating	Maintain/improve	Annual rating reviews
Operational Efficiency	60–70% FTE on docs	30% reduction	Time tracking analysis

### ROI Projections

Year	Investment	Savings	Net Benefit	Cumulative ROI
Year 1	Rp 15B	Rp 5B	(Rp 10B)	-67%
Year 2	Rp 8B	Rp 20B	Rp 12B	52%
Year 3	Rp 5B	Rp 35B	Rp 30B	207%

**Target: 5:1 ROI by end of Year 3**

### Product Metrics

Metric	Baseline	Target	Measurement
Compliance Score	~75%	95%+ across all entities	Platform scoring
Audit Time Reduction	4–6 weeks	70% faster (1–2 weeks)	Before/after comparison
Incident Reduction	8–12 findings	50% fewer (4–6)	Year-over-year tracking
User Adoption	N/A	90% active users	Monthly active users
System Accuracy	N/A	95%+ precision, 90%+ recall	Model evaluation

## Employee Engagement Metrics

Metric	Baseline	Target	Measurement
Training Completion	~70%	100% within grace period	Platform tracking
Learning Participation	N/A	80%+ weekly active	Engagement metrics
Assistant Usage	N/A	500+ queries/month	Usage analytics
NPS Score	N/A	40+	Quarterly surveys
SOP Comprehension	~60%	85%+	Assessment scores

## Competitive Differentiation

### Why COMPAS vs. Global Players?

Competitor	Their Strength	COMPAS Advantage
IBM OpenPages	Enterprise GRC, Watson	Local regulatory expertise (OJK, BI, MOE); Native Bahasa Indonesia; Lower TCO
SAP GRC	ERP integration	Not locked into SAP ecosystem; works with any ERP; faster implementation
ServiceNow GRC	IT workflow integration	Purpose-built for compliance, not adapted from ITSM; compliance-first design
Celonis	Process mining	Compliance-first, not process-first; includes learning & engagement
Regional Players (Singapore, India)	Regional presence	Deep Indonesian regulatory knowledge; local support; Bahasa-first

### Unique COMPAS Differentiators

- Indonesian Regulatory Intelligence** - Built-in knowledge of OJK, BI, MOE, SMKP regulations with OCR for Indonesian PDFs

2. **Native Bahasa Indonesia** - Not just translation; trained on formal/informal Indonesian business language
3. **Contextual Compliance Engagement** - Culture-appropriate engagement for Indonesian corporate environment
4. **Human-in-the-Loop by Design** - Built for Indonesian corporate approval culture
5. **Cross-Pillar Architecture** - Designed for Financial Services AND Mining from day one
6. **Sinar Mas Integration Ready** - Pre-built for multi-entity group structure

### Competitive Response Strategy

If Competitor Does...	COMPAS Response
Launches Bahasa support	Deepen local regulatory expertise; faster OJK/BI integration
Offers lower pricing	Emphasize TCO advantage; local support value
Acquires regional player	Accelerate mining expansion; lock in SMMA contracts

## Investment & Resources

### Team Requirements

Role	Count	Responsibility
Product Manager	1	Product strategy, roadmap, stakeholder management
Tech Lead	1	Architecture, technical decisions
Backend Engineers	3	API, data pipeline, integrations
Frontend Engineers	2	Dashboard, mobile, UX
ML Engineers	2	Model development, NLP, explainability
Data Engineers	2	ETL, data quality, integration
QA Engineer	1	Testing, quality assurance
UX Designer	1	User research, interface design
Compliance SME	1	Domain expertise, regulatory knowledge
Security Engineer	1	Security, privacy, PDP compliance

**Total: 15 FTE**

### Technology Investment

Category	Year 1	Year 2	Year 3
Cloud Infrastructure	Rp 3B	Rp 4B	Rp 5B
LLM API Costs	Rp 2B	Rp 3B	Rp 4B
Security & Compliance Tools	Rp 1B	Rp 0.5B	Rp 0.5B
Development Tools	Rp 0.5B	Rp 0.3B	Rp 0.3B
<b>Total Tech</b>	<b>Rp 6.5B</b>	<b>Rp 7.8B</b>	<b>Rp 9.8B</b>

## Pricing Strategy (Internal Cost Allocation)

Tier	Features	Suggested Allocation
<b>Foundation</b>	Dashboard, Basic Alerts, Audit Reports	Rp 500M/entity/year
<b>Professional</b>	+ Assistant, Engagement, Auto-Adapt	Rp 800M/entity/year
<b>Enterprise</b>	+ Custom Integration, Dedicated Support	Rp 1.2B/entity/year

## Risk Assessment

### Project Risks & Mitigations

Risk	Probability	Impact	Mitigation	Owner
Stakeholder Buy-in	Medium	High	Early C-level sponsorship; quick wins in pilot; regular steering committee	PM
Data Quality Issues	High	Medium	Staged data onboarding; quality scoring; dedicated data team	Data Lead
Change Resistance	Medium	Medium	Contextual engagement; extensive training; grace periods; champion network	PM + HR
Regulatory Changes	High	Low	Auto-adapt feature; modular architecture; regulatory partnerships	Compliance SME
Technical Complexity	Medium	Medium	Phased delivery; proven tech stack; external partnerships	Tech Lead
Resource Constraints	Medium	Medium	Prioritized MVP; contingency budget; external partnerships	PM
Bahasa NLP Accuracy	Medium	High	Hybrid rule+ML; continuous tuning; human fallback	ML Lead
Legacy Integration	High	Medium	Middleware approach; staged rollout; dedicated integration team	Tech Lead

Risk	Probability	Impact	Mitigation	Owner
PDP Compliance	Low	High	Privacy-by-design; legal review; certification path	Security + Legal

## Contingency Plans

Scenario	Trigger	Response
Pilot fails to meet targets	<70% of success criteria	Extend pilot 3 months; add resources; re-scope if needed
Major regulatory change mid-project	New OJK/MOE regulation	Pause non-critical features; prioritize regulatory update
Key resource departure	Loss of Tech Lead or ML Lead	Pre-identified backups; knowledge documentation; contractor backup
Budget overrun >20%	Quarterly review shows overspend	Scope reduction; phase delay; executive escalation

## The Ask

### Immediate Next Steps

1. **Executive Sponsorship** - Secure C-level champion within SMMA
2. **Pilot Agreement** - Confirm first pilot entity (recommend: SQE internal → Sinarmas Multifinance)
3. **Team Formation** - Allocate core team resources (15 FTE)
4. **Budget Approval** - Initial 12-month runway (Rp 15B Year 1)
5. **Data Access** - Secure access to compliance data for pilot entity
6. **Legal Review** - PDP Law compliance assessment

### Decision Required

Approve COMPAS for development with:

- Phase 1 pilot starting Q1 2025
- Initial budget allocation for 12-month runway
- Designated pilot entity within SMMA
- Commitment to 18–24 month full rollout timeline

## Governance Structure

Role	Responsibility	Cadence
Executive Sponsor	Strategic direction, budget approval	Monthly
Steering Committee	Cross-functional oversight, escalations	Bi-weekly
Product Team	Delivery, day-to-day decisions	Daily standups
User Advisory Group	Feedback, requirements validation	Monthly

## Closing

Compliance is not just about avoiding fines—it's about building a culture of excellence, transparency, and trust. COMPAS transforms compliance from a burden into a competitive advantage.

For Sinar Mas Group, with its diverse portfolio across Financial Services and Mining, a unified compliance platform isn't a nice-to-have—it's a strategic imperative. The regulatory environment is only getting stricter, and the companies that thrive will be those that turn compliance into operational efficiency.

COMPAS is that bridge.

*"Be the golden bridge that people want to pass and could pass to make their lives and activities easier."*

— Tata

## Document Control

Version	Date	Author	Changes
1.0	Dec 2024	Banat Zata	Initial version
2.0	Dec 2024	Banat Zata	Enhanced with detailed frameworks

*"Be the golden bridge that people want to pass and could pass to make their lives and activities easier."*

— **Tata**