Local Architecture Review Board (JDK Upgrade Project)

Building Permit

Prepared by Transformation & Team

November 12, 2025

Contents

1. Introduction

Why are we doing this?

Business Rationale

백성규

목적 : Tech-debt, JDK 1.5 → OS EOS 해결하지 못하서 보안 취약점에 노출되어 있음, 그리고 해당 JDK1.5를 사용하는 application Core, WAS, WEB, F/W

Impact : SSO, RD, batch scheduler, DEVOPS 환경, 성능, 가능성

Vision:

- *Provide stakeholders with reliable topline dashboards by using Tableau to accelerate business-oriented decision under consistent governance*
- *Establish a unified, SQL-based Data Cube integrating Motor, GI, and LI businesses into standardized, query-driven structures, ensuring a single source of truth across divisions*

Problem Statement:

목적 : Tech-debt, JDK 1.5 → OS EOS, WAS EOS, ProFrame EOS, AP EOS, HTTP

- *While various dashboards are being developed across divisions, there is no unified view that consolidates information into an enterprise-wide dashboard*
- *Data sources are scattered across multiple systems, and critical resource-related data lacks sufficient governance and management processes*
- *Reporting activities rely heavily on manual processes, creating a risk of errors and delays in delivering*

Intended Outcomes:

목적 : JDK 21, Tomcat, 차세대 F/W, 유지보수 생산성 높일 수 있다. HTTPS

- *Delivery of standardized, automated dashboards with drill-down features, improving transparency, efficiency, and reliability of reporting*
- *Establishment of a SQL based data cube integrating Motor, GI, and LI business into standardized, query-driven structures, serving as the single source of truth across divisions*
- *Clear governance of data, ensuring consistent KPI tracking and reducing manual dashboard workload across relevant Divisions*

Architectural Significant Elements:

목적 : OSS S/W 사용해서, 업체 dependency 줄임

- *Visualization Performance Architecture : Designing dashboards with optimized queries, extracts, and caching to handle large datasets while maintaining responsiveness and stability.*
- *Governance & Security Architecture : Applying role-based access control, certified data sources, and audit logging within Tableau to ensure trusted insights, and compliance with security standards.*

Implementation Risks and Mitigation:

목적 : 프로젝트의 RISK관리에

- *Project Schedule Delay : Internal or external decision making and alignment among departments and vendor may take longer than expected, causing schedule slippage => Set clear milestones and governance structure with weekly progress tracking and escalation to the weekly committee when delay risk is detected*

Architecture Considerations:

- *Scalable Dashboard Design : Design dashboards and data models to handle growing data volume and expanding business requirements without performance degradation*
- *System Integration : Ensure seamless connectivity with existing data warehouse, CRM, finance, and marketing systems to provide a consolidated enterprise view*
- *Security & Access Control : Apply role-based permissions, certified data sources, and audit logging to ensure data confidentiality, compliance, and governance*
- *Performance Optimization : Implement extract strategy, query optimization, and caching mechanisms to support real-time reporting and executive dashboards*
- *Usability & Ease of Operation : Ensure Tableau dashboards and authoring tools are intuitive and easy to use, enabling business users to build, modify, and consume insights without heavy IT dependency*

Initiative Timing:

- *Kick Off : Apr 17, 2025*
- *Gate 1 (MC Committee) : Sep 10, 2025*
- *POC period : Sep 01 ~ Sep 16, 2025*
- *LARB Dates : Nov 12, 2025*
- *Gate 2 Approval (BAU): Nov 17, 2025*
- *Vendor Dashboard Visualization : Feb 02 ~ Apr 30, 2026*
- *Topline Delivery : May 06, 2026*

2. Business Architecture Focus

How will this change the business?

Business Blueprint Evolution

	Impacted	CURRENT STATE (2025.09)	END STATE (2026.03)
Customer Interaction	*Which customer interaction mechanisms will be created, changed, or removed?*	• CM에서 호출하는 레가시 Core의 application jdk,WAS, HTTP	
Partner Interaction	*Which partner interaction mechanisms will be created, changed, or removed?*	• B2B : extranet.axa.co.kr (자동차보상, 일반계약) • application jdk,WAS, TLS 1.1	
Processes **(Processes & Functions)**	*Which processes and functions will be created, changed or removed and how will automation be applied?*	• N/A	• N/A
Organization **(Organization, Staff, Skills and Culture)**	*Which parts of the organization will be created, changed or removed?* *Which roles and skills will be created, changed or removed?*	• 현재는 IT 개발조직에서 습득해야 하는 F/W의 종류가 5가지여서...	• 2~3개로 표준화됨으로.
Technology **(Technology, Tools, IT & Buildings)**	*Which technology, IT, tools or buildings will be created, changed or removed by the project?*	• jdk,WAS, HTTP	
Information **(Information & Data)**	*What data or ways of using data will be created, changed or removed?*	• N/A	• N/A

Business Capabilities Mapping

Business capabilities in scope & their dependencies positioned on the Business Capabilities Reference Model

Strategic

BUSINESS DIRECTION MGMT	BUSINESS TRANSFORMATION MGMT	BUSINESS GOVERNANCE MGMT	BUSINESS RESPONSIBILITY MGMT
Mission Mgmt	Strategy Mgmt	Business Policy Mgmt	Communication Mgmt
Vision Mgmt	Operating Model Mgmt	Corporate Risk Mgmt	Stakeholder Mgmt
	Architecture Mgmt	Compliance Mgmt	Corporate Social Responsibility Mgmt
	Innovation Mgmt	Legal Service Mgmt	
	Research & Development Mgmt		

Core

DISTRIBUTION CHANNEL MGMT	CUSTOMER MGMT	INTERMEDIARY MGMT	PROVIDER MGMT	INTERACTION MGMT	MARKETING & SALES MGMT	VALUE PROPOSITION CREATION MGMT	PROPOSITION AGREEMENT MGMT	PROPOSITION ADMINISTRATION MGMT	PROPOSITION FULFILMENT MGMT	BILLING & PAYMENT MGMT
Distribution Channel Insight Mgmt	Customer Insight Mgmt	Intermediary Insight Mgmt	Provider Insight Mgmt	Touch Point Mgmt	Brand Mgmt	Value Proposition Development Mgmt	Proposition Exposure Mgmt	Contract Lifecycle Mgmt	Claims Mgmt	Charging Mgmt
Distribution Channel Administration	360 Degree Customer View Mgmt	360 Degree Intermediary View Mgmt	360 Degree Provider View Mgmt	Request Mgmt	Market Insight Mgmt	Value Proposition Lifecycle Mgmt	Contract Risk Evaluation Mgmt	Financial Product Mgmt	Service Fulfilment Mgmt	Invoice Mgmt
	Customer Relationship Mgmt	Intermediary Relationship Mgmt	Provider Relationship Mgmt	Collaboration Mgmt	Campaign Mgmt	Pricing Mgmt	Customer Advice Mgmt	Customer Estate Mgmt	Customer Support Mgmt	Customer Payments Mgmt
	Customer Community Mgmt	Intermediary Network Mgmt	Provider Network Mgmt	Experience Mgmt	Sales Funnel Mgmt	Contract Risk Acceptance Mgmt	Proposition Management	Contract Portfolio Mgmt	Customer Dispute Mgmt	Revenue Sharing Mgmt
					Sales Performance Mgmt		Retention Mgmt	Commercial Risk Mgmt	Recovery Mgmt	
									Risk Consulting Mgmt	

Supporting

WORKFORCE MGMT	OPERATIONS MGMT	FACILITIES MGMT	FINANCE MGMT	TRANSFORMATION MGMT	PROCUREMENT MGMT	INFORMATION MGMT	TECHNOLOGY MGMT
Workforce Lifecycle Mgmt	Operational Plan Mgmt	Physical Workplace Mgmt	Financial Planning Mgmt	Portfolio Mgmt	Procurement Risk Framework Mgmt	Data Resource Mgmt	IT Service Mgmt
Identity & Access Mgmt	Operational Crisis Mgmt	Health & Safety Mgmt	Financial Accounting Mgmt	Program and Project Mgmt	Procurement Operations Mgmt	Master Data Mgmt	Infrastructure Mgmt
Workforce Competence Mgmt	Business Process Mgmt	Fleet Mgmt	Financial Transaction Mgmt	Change Mgmt	Purchase Mgmt	Meta Data Mgmt	Software Mgmt
Workforce Performance Mgmt	Operational Resiliency Mgmt		Tax Mgmt	Quality Mgmt		Knowledge Mgmt	License Mgmt
Workforce Reward Mgmt	Service Catalogue Mgmt		Asset Mgmt	Benefits Mgmt		Business Intelligence Mgmt	
Workforce Service Mgmt	Fraud Mgmt					Information Security Mgmt	
Workforce Relations Mgmt						Content Mgmt	

Scope Dependencies

Architecture Benefits & Measures

What benefits do we expect the architecture to deliver and how we measure that it has been successfully implemented. Please consider decommissioning, complexity, flexibility, speed of change, security, data quality and accessibility etc.

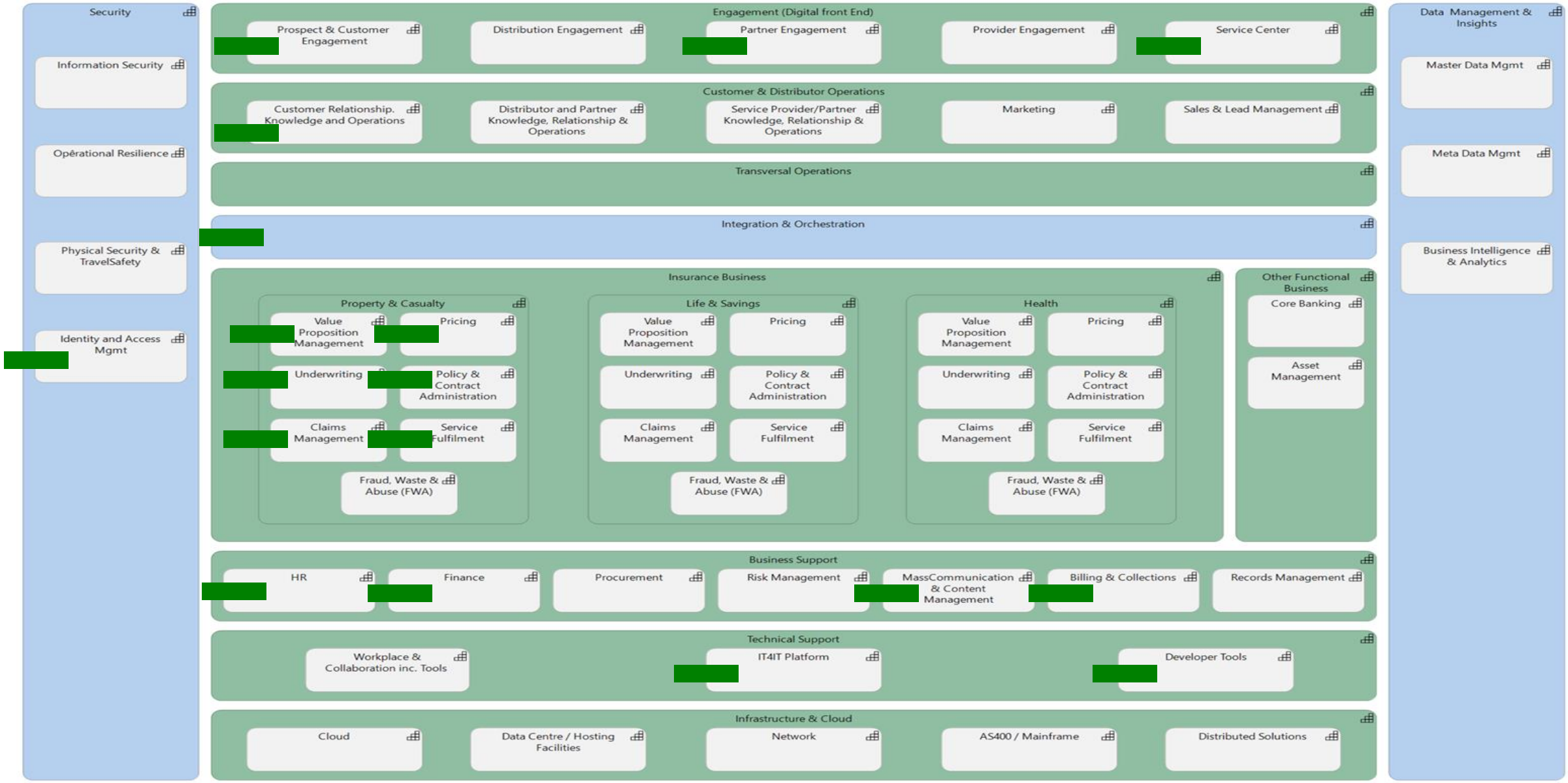
Architecture Impact	Measure	Current KPI	Target KPI
자동차 계약의 impact	*Application Complexity Index Score 측정 (5가지 측정 항목 표시)*	2,2	Invest
자동차보상의 impact	*Application Complexity Index Score 측정 (5가지 측정 항목 표시)*	박상후 자료 제공	*Invest*
일반 계약의 Impact, TM impact, customer impact, p&R impact, account impact	*Application Complexity Index Score 측정 (5가지 측정 항목 표시)*		*Ensure data quality, certified dashboards, audit compliance*
Nets, RD, Batch scheduler impact	*Application Complexity Index Score 측정 (5가지 측정 항목 표시)*		

3. IT Solution Architecture and Complexity Focus

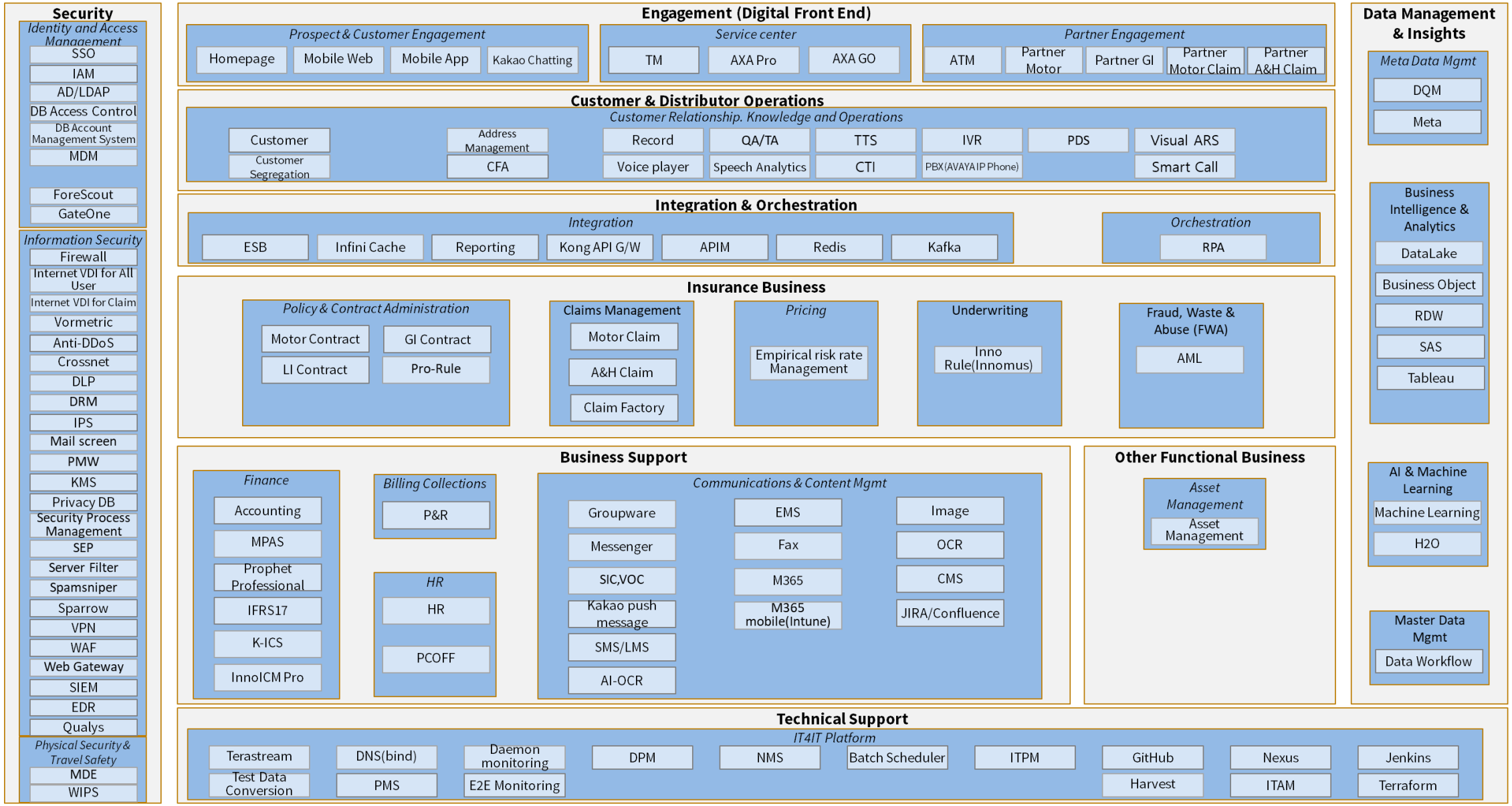
What is the solution?

Impacted Domains

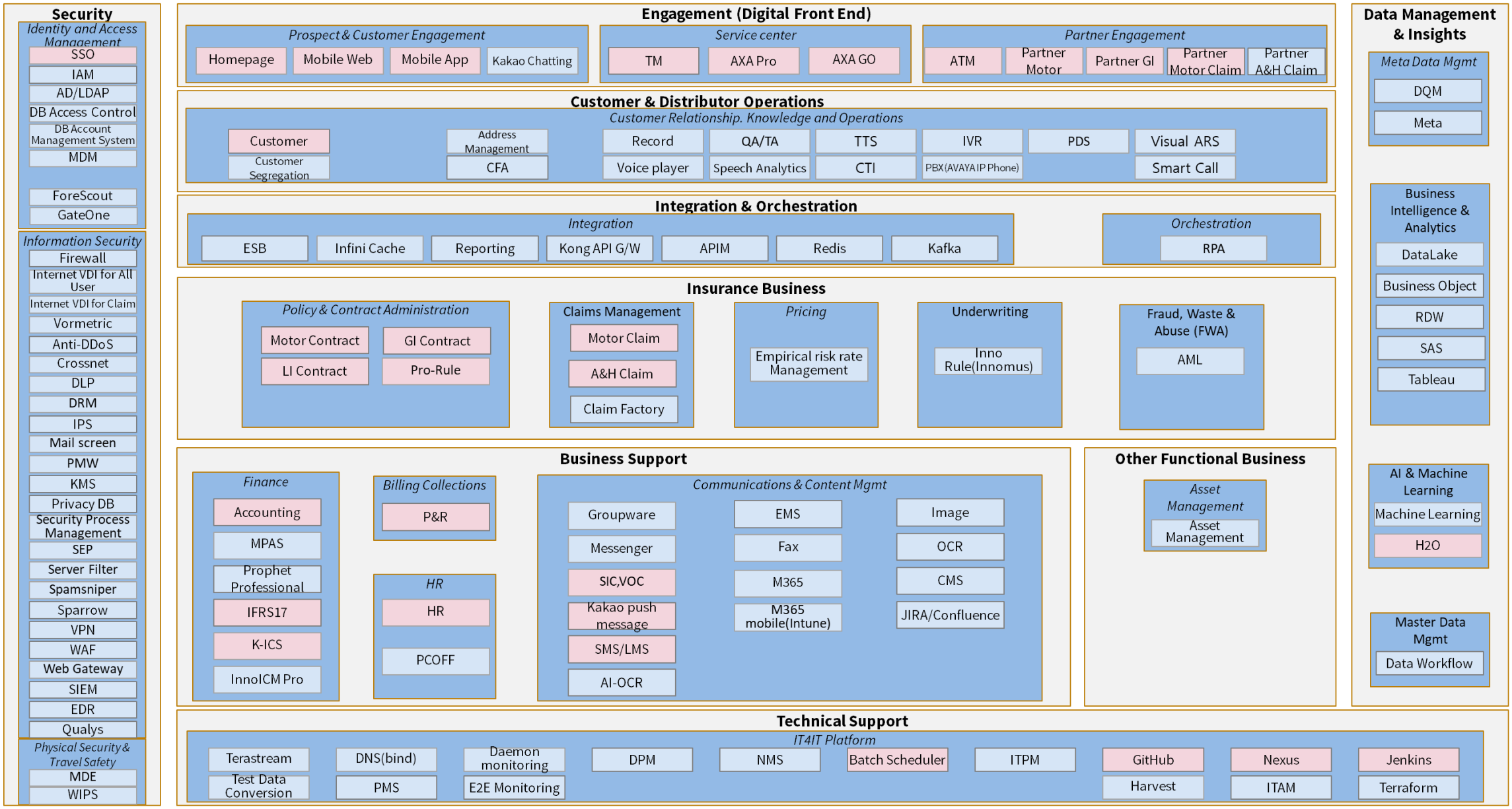
Legend:
- Modification to existing solution or service
- New AXA solution or service
- New external service outside AXA



IS Architecture (As-Is)



IS Architecture (To-Be)



Impacted Apps | New Apps | Decommission

백성규

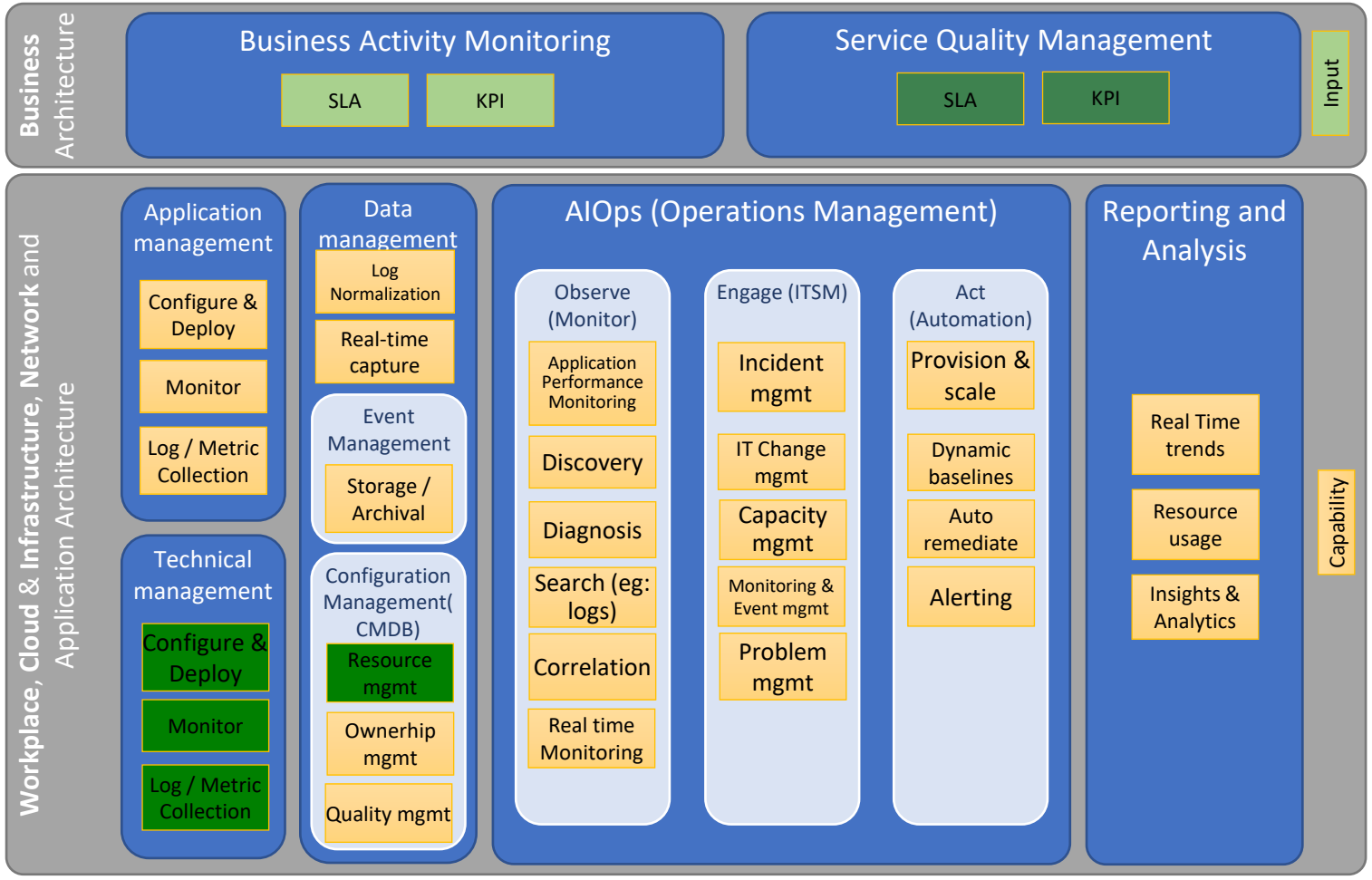
Selection Approach

Project requirements were delivered to two vendors, followed by a technical evaluation and RFP process to assess their proposals.

G Green A Amber R Red

No.	Criteria	Evaluation	Bigxdata		Milvus	
1	Architecture/ Standard	Deployment flexibility	G	• On-prem or SaaS	G	• On-prem or SaaS
		Security & IAM	G	• SSO, fine-grained permissions (groups/inheritance), row-level security, TLS/E2E encryption.	G	• SSO, fine-grained permissions (groups/inheritance), row-level security, TLS/E2E encryption.
		Integration with Oracle / PostgreSQL / Databricks	G	• Native connectors	G	• Native connectors
2	Requirement Coverage	Fit for topline dashboard requirements	G	• Requirement fulfilled during POC Period	R	• Requirements not fulfilled during POC / Delayed delivery
3	Project Delivery	Implementation timeline	A	• Requires more time than initially planned for the project timeline	A	• Requires more time than initially planned for the project timeline
4	Vendor qualification	Local reference in financial industry	G	• Tableau Premier Reseller • Extensive experience in the insurance sector	A	• Tableau Premier Reseller • Limited references in the insurance sector
		Technical support & skills	G	• Dedicated local partner support, with regular training program	G	• Dedicated local partner support, with regular training program
5	Total Cost Ownership	Dashboard Visualization + License cost	G	• Moderate - within budget • Dashboard: KRW 102,300,000 (9.5M/M) • Licenses: KRW 19,800,000	A	• Amber – Opex over budget • Dashboard: KRW 82,500,000 (6.5M/M) • License: KRW 24,716,000
6	Operability	Usability for executives	G	• Strong visualization, highly intuitive	R	• Lacks visualization, not intuitive
		Customization & Flexibility	A	• High flexibility, but requires user training	A	• Less flexible

Focus on Monitoring & Management



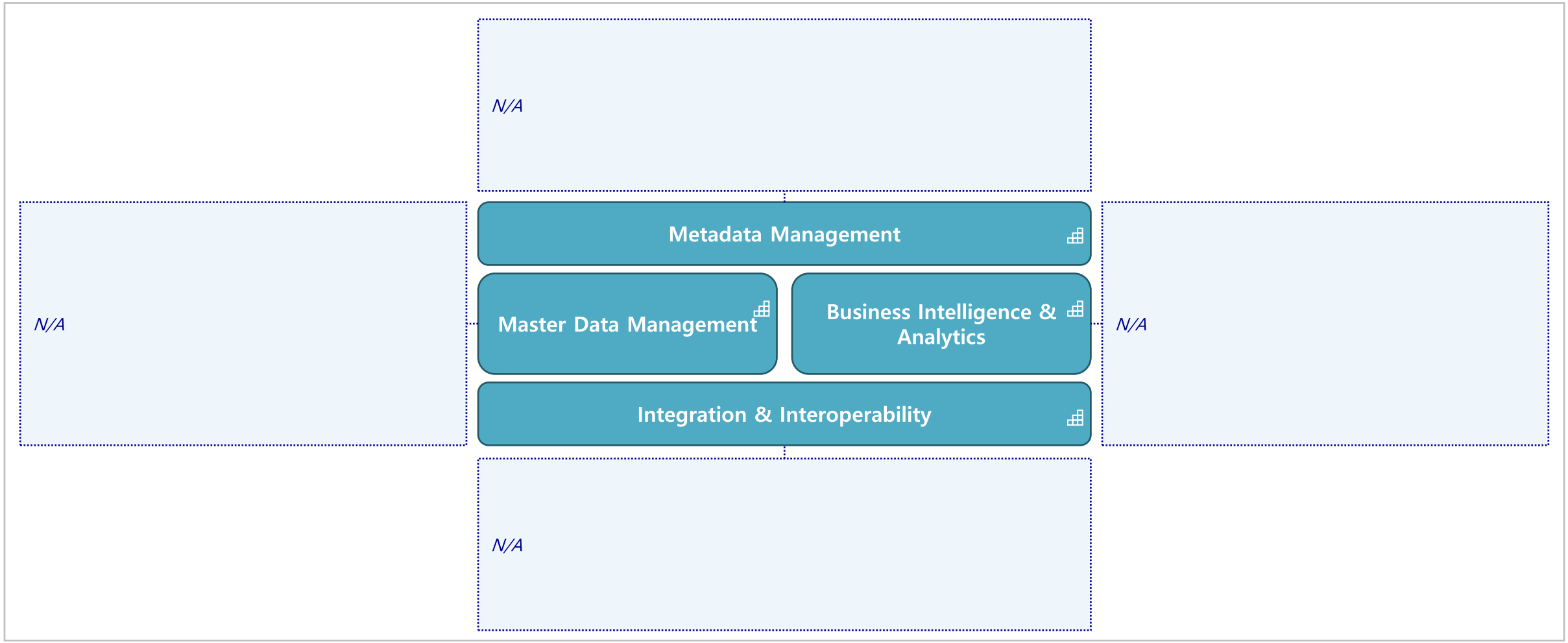
Legend:

- Reuse Shared Service provided by AXA GO
- Modification to existing solution or service
- New AXA solution or service
- New external service outside AXA

Categories	Description
Service Status Monitoring	Real-time visibility into key performance metrics and assurance of service high availability. Monitor whether report generate right figures in line with inquiry field change
Infrastructure & Asset Monitoring	Monitoring the status and performance of servers, networks, and IT ass Utilizing Integrated Monitoring Toolsets (DPM, SMS)
Process Performance Management	Managing process performance metrics such as cycle time, efficiency rates, quality indicators, and productivity trends to identify bottlenecks and drive continuous improvement

Shared IT Based Data Management Capabilities

AS-IS and TO-BE impact of the transformation



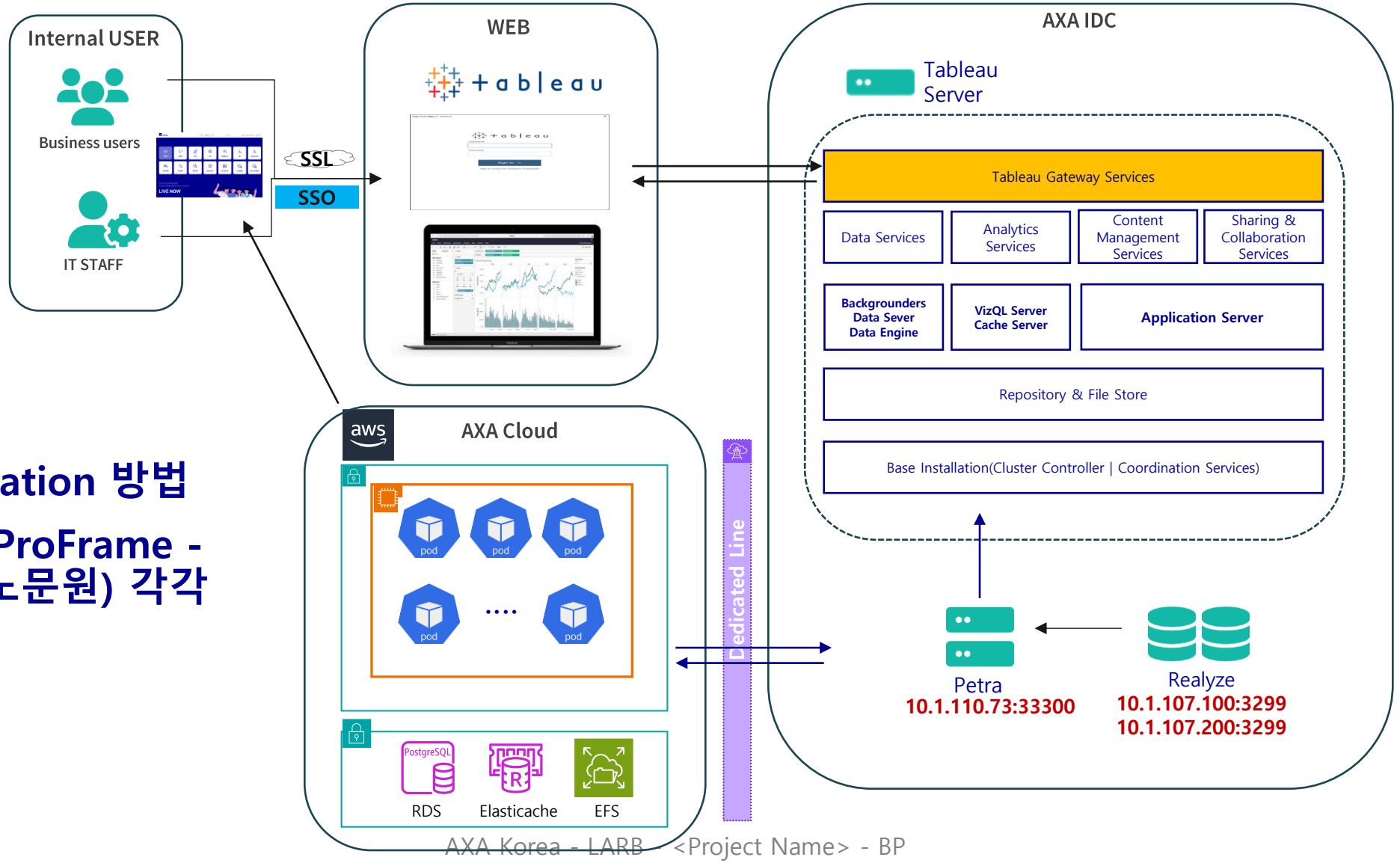
Legend – Opengroup Archimate 3.0 standard:

Capability

A capability represents an ability that an active structure element, such as an organization, person, or system, possesses. Here we describe capabilities provided by the Information Technology (IT) Department.

Blueprint of Integration Layout of the Project

The Tableau server is configured only for the operational environment, with the Tableau solution installed that packages Web/WAS, and the database is connected to the existing Realyze DB



느리적인 Migration 방법

AP - 김광삼, ProFrame - 노재풍, HR - 노문원) 각각 한장씩

Key Integration Attention Points (DevOps process)

이승민, 노재풍

특히 ProRule에 대한 Flow가 있어야 함.

System Architecture (AS-IS)

이승민

전체 서버 군 + 서버별 S/W 가 표시되는 그림이 필요함.

WEB, WAS, RD, Nets, Batch Scheduler

System Architecture (TO-BE)

이승민

전체 서버 군 + 서버별 S/W 가 표시되는 그림이 필요함.

Service Requirements

김광삼

What level of service is required for this solution?

Critical Service Requirements	Target Value	How will this be achieved?	What is the business impact of non delivery?
Service Availability (Core application) 자동차 계약, 보상, 일반 계약, TM, 고객, P&R	Standalone service availability > 99%	• Standalone process • Regular system and data cube backups to ensure quick recovery	• Delayed access to dashboards and reports • Disruption of management reporting and decision-making processes
Service Availability (Back office application) 재무, HR	Standalone service availability > 95%		
SSO Integration	100% Integration with server	• Unified credential and password management • Linked portal access and consistent user credential management.	• Frequent login failures or confusion for end users • Reduced user adoption and satisfaction
DR여부		• Frequency and detailed approach will be finalized in consultation with the vendor	• Potential data loss or delay in recovery

Note: Please access to the complete SQP list through the following link: **Link to latest SQR checklist**

Provider / Hosting Architecture

이승민

전체 cloud architecture + legacy :
통신은 Https가 표시 되어야 함.

Key Security Requirements and Threats 노재풍

Measures and services planned and implemented to meet requirement and address threats

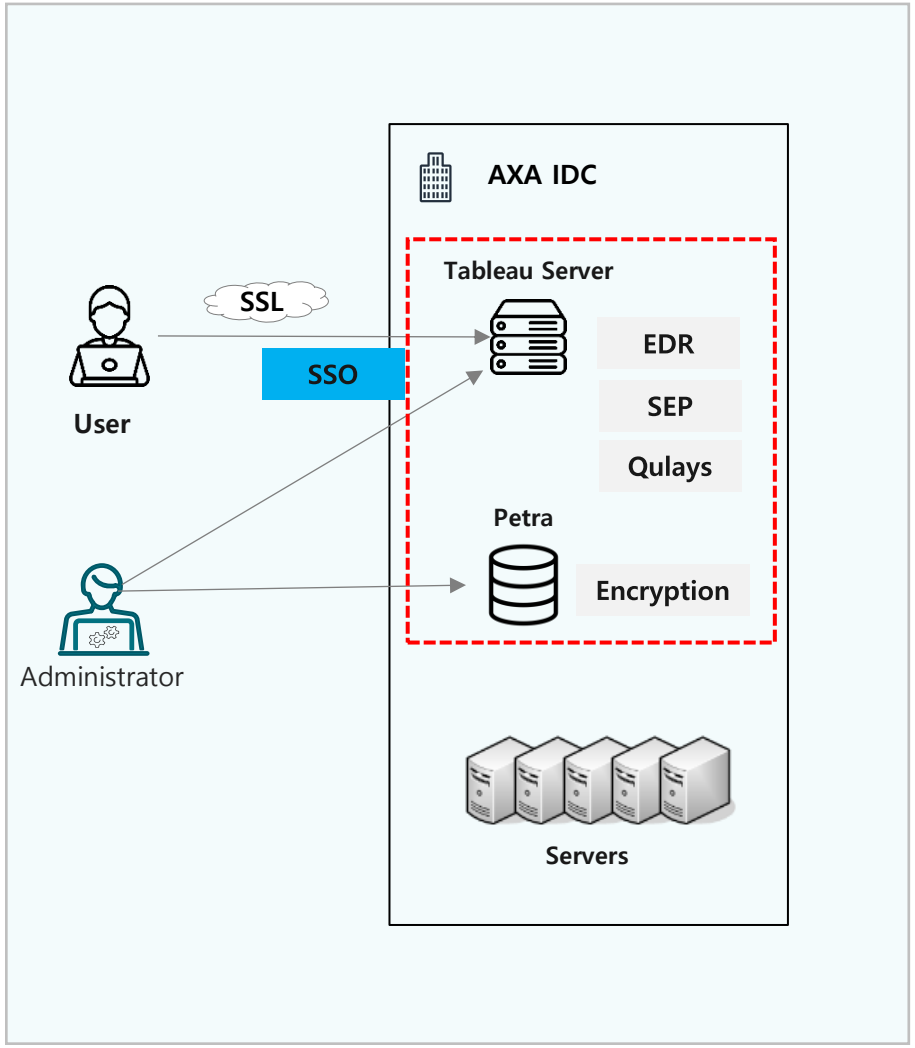
Key Security Requirements	(For BP) Implementation Detail
Access Control	• Integrate with SSO • Define roles for admin, user, and auditor • Implement approval-based access request workflows
Data Protection	• Use TLS/SSL for data in transit • Encrypt databases
Audit Logging & Traceability	• Automatically log all access and changes • Ensure log integrity • Generate audit reports automatically

Threats / Attack Scenarios	(For BP) Implementation Detail
Unauthorized Access to Tableau	• Integrate with SSO for centralized identity management • Define and enforce role-based permissions
Privilege Escalation by Internal Users	• Define strict admin roles • Enable audit logging for all admin activities • Use approval workflows for privilege changes
Insider Threats (Malicious or Negligent Behavior)	• Limit access to only necessary systems • Review access logs regularly

Detailed Security Architecture 노재풍

Tableau Server is securely accessed via SSO within an on-premise environment, with controlled integration to external systems for compliance and security.

Category	Compliance Approach
Network Security Architecture	• Ensure secure data transmission using SSL • Implement firewalls and access control policies
Authentication & Authorization	• Apply SSO for all users and systems • Use RBAC (Role-Based Access Control) to restrict access based on user roles
Data Protection	• Encrypt data in transit (TLS/SSL) • Apply data masking and anonymization for sensitive information • Monitor data access and integrate with anomaly detection systems
Server Protection	• Deploy EDR (Endpoint Detection and Response) • Ensure regular patching and vulnerability scanning



Security Application Checklist 노재풍

Microsoft Excel
크로 사용 워크시.

■ 프로젝트 수행 범위

No.	구분	(O,X체크해주세요)	Comment
1	프로젝트 범위에 클라우드 이용이 포함된다 (AWS, GCP, SaaS 등).	X	ex. AWS 시용
2	프로젝트 범위에 개인정보/신용정보/민감정보/연계정보의 처리가 포함된다.	X	
3	프로젝트 범위에 Web/App 서비스가 포함된다.	O	
4	프로젝트 범위에 외부 시스템과의 연계/연동이 포함된다	X	Tableau 서버 웹페이지 제공
5	프로젝트 범위에 외주 개발자의 투입이 포함된다	X	
6	프로젝트 범위가 전자금융업무에 해당된다	X	
7	프로젝트 범위에 생성형 AI가 사용된다 (ChatGPT 등)	X	
8	프로젝트 범위에 H/W와 S/W의 도입이 포함된다	O	ex. Server, DB, Apache 등

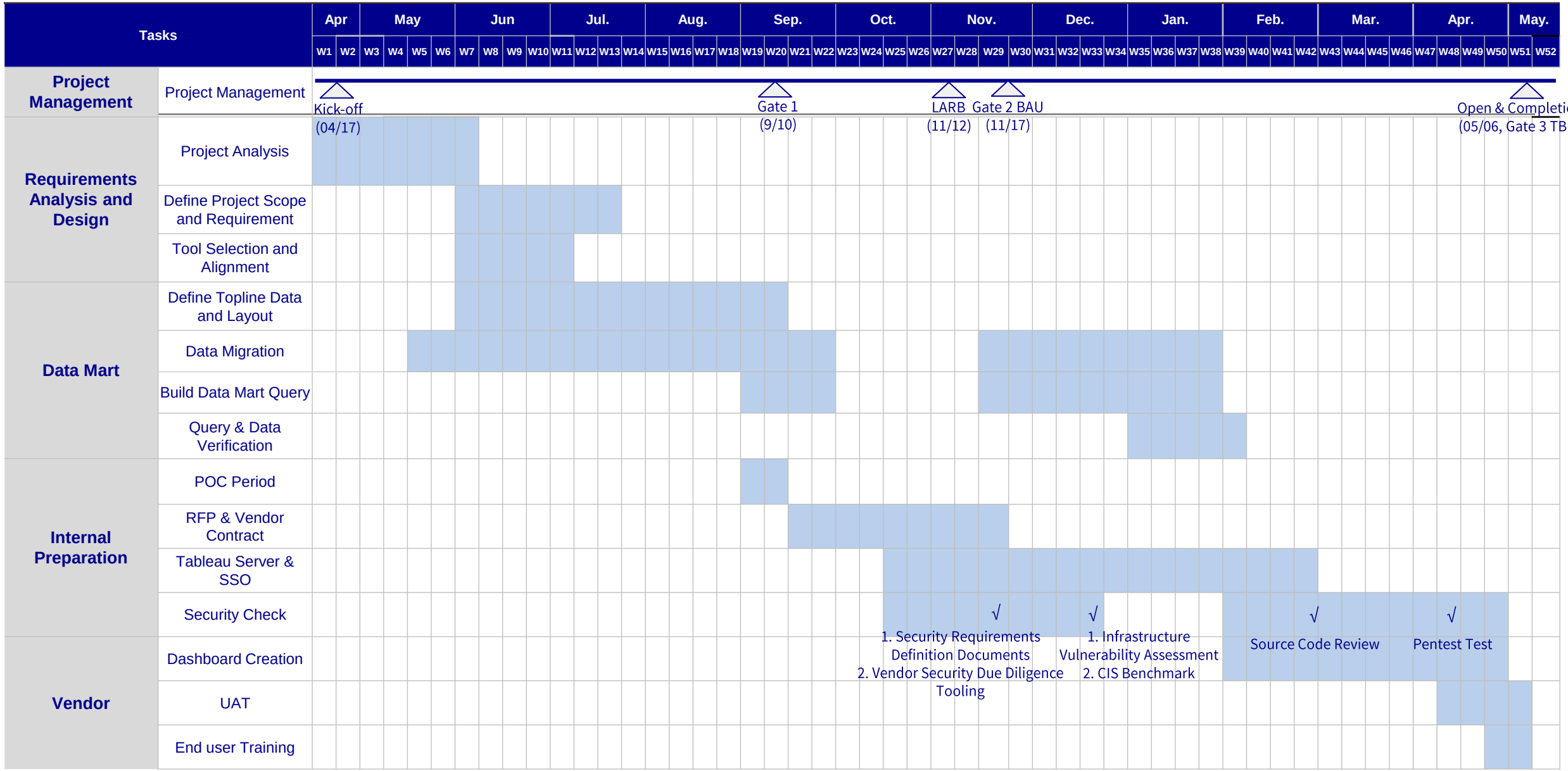
■ 보안 점검 계획

No.	구분	해당 수행 범위	담당자	수행 계획	비고
1	보안성 심의	4, 6	*N/A*		
2	보안요건 정의서	All	*이광운, 이서현*	*~2025.11.20*	*계약 체결 단계*
3	Pentest Test	3	*이서현*	*2026.04.01~04.24*	*테스트 단계*
4	인프라 하드닝(CIS Benchmark)	1, 8	*이서현, 임민혁*	*~2025.12.19*	*도입, 설치 단계*
5	소스코드 점검	3	*이서현*	*2026.02.02~04.24*	*개발 단계*
6	시큐어 코딩 교육 / 보안 교육 계획 및 실적	5	*N/A*		
7	Digital Permit	3	*N/A*		
8	Vendor Security Due Diligence Tooling	All	*이광운, 조성민*	*~2025.11.20*	*계약 체결 단계*
9	인프라 취약점 점검	1, 8	*이서현, 임민혁*	*~2025.12.19*	*도입, 설치 단계*
10	AI Risk Assessment	7	*N/A*		

4. Approach Focus

Project Schedule

백성규



Project Cost Details

백성규

(Unit: mKRW)

Type	Category	Cost Details	Unit Cost	Unit	2025	2026	2027	2028	2029	Total	Remarks
Cockpit Project	CAPEX	Tableau Infrstructure	21.7	1	23.9	-	-	-	-	23.9	Server
		SSO	7.8	1		8.6	-	-	-	8.6	
		Tableau Consultant (Senior)	14.0	3		46.2	-	-	-	46.2	
		Tableau Consultant (Junior)	9.5	3		31.4	-	-	-	31.4	
		Tableau Consultant (Junior)	9.5	3		31.4	-	-	-	31.4	
		Technical support (Senior)	14.0	0.5		7.7	-	-	-	7.7	
		Discount				- 14.3	-	-	-	- 14.3	
	CAPEX Subtotal				23.9	111	-	-	-	134.8	
	OPEX	Tableau License (Creator)	1.0	10		11.0	11.0	11.0	11.0	44.0	
		Tableau License (Viewer)	0.2	40		8.8	8.8	8.8	8.8	35.2	
		Wiring & Other expenses	1.0	1		1.1	-	-	-	1.1	
		Maintenance Cost					4.9	4.9	4.9	14.6	15% of Server & SSO
	OPEX Subtotal				-	20.9	24.7	24.7	24.7	94.9	
	Total				**23.9**	**131.8**	**24.7**	**24.7**	**24.7**	**229.7**	

End of Document