LUVINA
LUVINA SOFTWARE

CASE STUDY

Scalable & Secure Data Integration

Visit our website

1. PROJECT OVERVIEW

PROJECT OVERVIEW

CLIENT & CONTEXT

Our client was a large corporation operating across multiple industries, including industrial equipment, machinery, home appliances, architecture/exterior design, construction machinery, and energy. Due to the vast and diverse business scope, managing their extensive data assets was a significant challenge.

Luvina played an integral role in this project as a dedicated team member under the client's direction. Our responsibilities focused on **coding** and **UT/IT testing** to support their data management and system integration efforts.

RELIGION: Japan

INDUSTRY: Industrial Equipment, Construction, Energy

FOCUS AREA: Business management

DURATION: August 2023 – Present

SIZE: 5.5MM/month

SERVICES:

- System Investigation & Design
- Development & Implementation
- Comprehensive Testing (UT/IT)

TECHNOLOGY STACK: Data Spider ver 4.4, MySQL ver 8.0

PROJECT OVERVIEW

CHALLENGE

- Weak data integration between systems, lacking a unified linkage and storage mechanism.
- No centralized data management system, leading to uncontrolled data.
- High labor costs for data aggregation and modification.

SOLUTION

- **Enhanced Data Integration:** Implemented a Data Integration Platform (ETL/ELT) using SAP and AWS to establish seamless connectivity between systems.
- **Centralized Data Management:** Deployed a unified Data Lake/Data Warehouse using GCP to manage non-AWS data sources like GWS, ensuring comprehensive data governance.
- **Agile Resource Allocation:** Maintained a readily available team, swiftly adapting to evolving project requirements and personnel changes to ensure seamless execution.

3

PROJECT OVERVIEW

ACHIEVEMENT

Zero major technical challenges encountered, thanks to a well-structured training plan and strong team competency.

High-quality assurance compliance, adhering to industry best practices and quality standards to ensure robust and reliable software solutions.

On-time delivery with minimal delays, following the customer's WBS (Work Breakdown Structure). Any priority task changes were efficiently managed without significant schedule impact.

Data processing efficiency improved by
35%

Operational workload reduced by
30%

Data retrieval time reduced by
40%
Enabling faster decision-making.
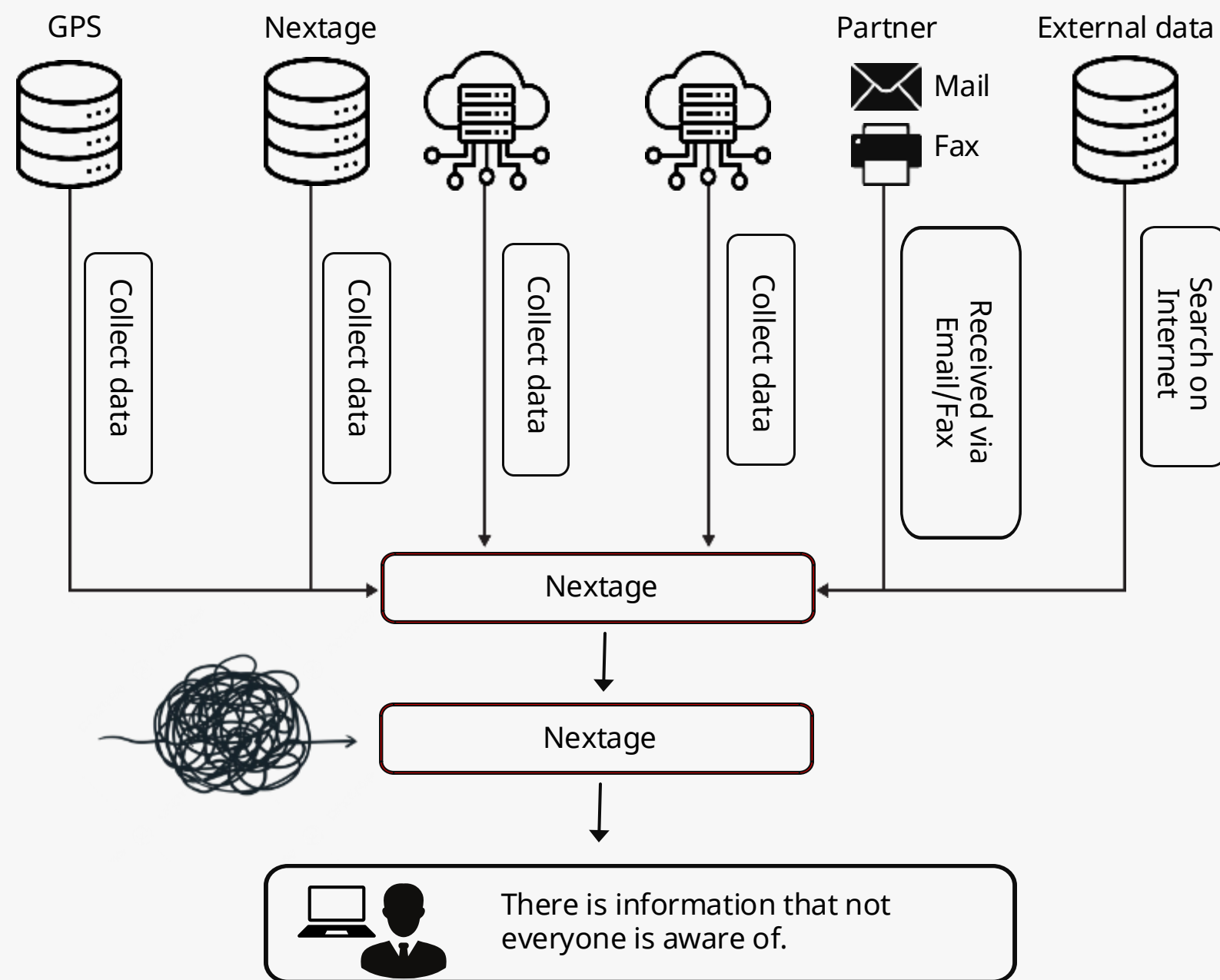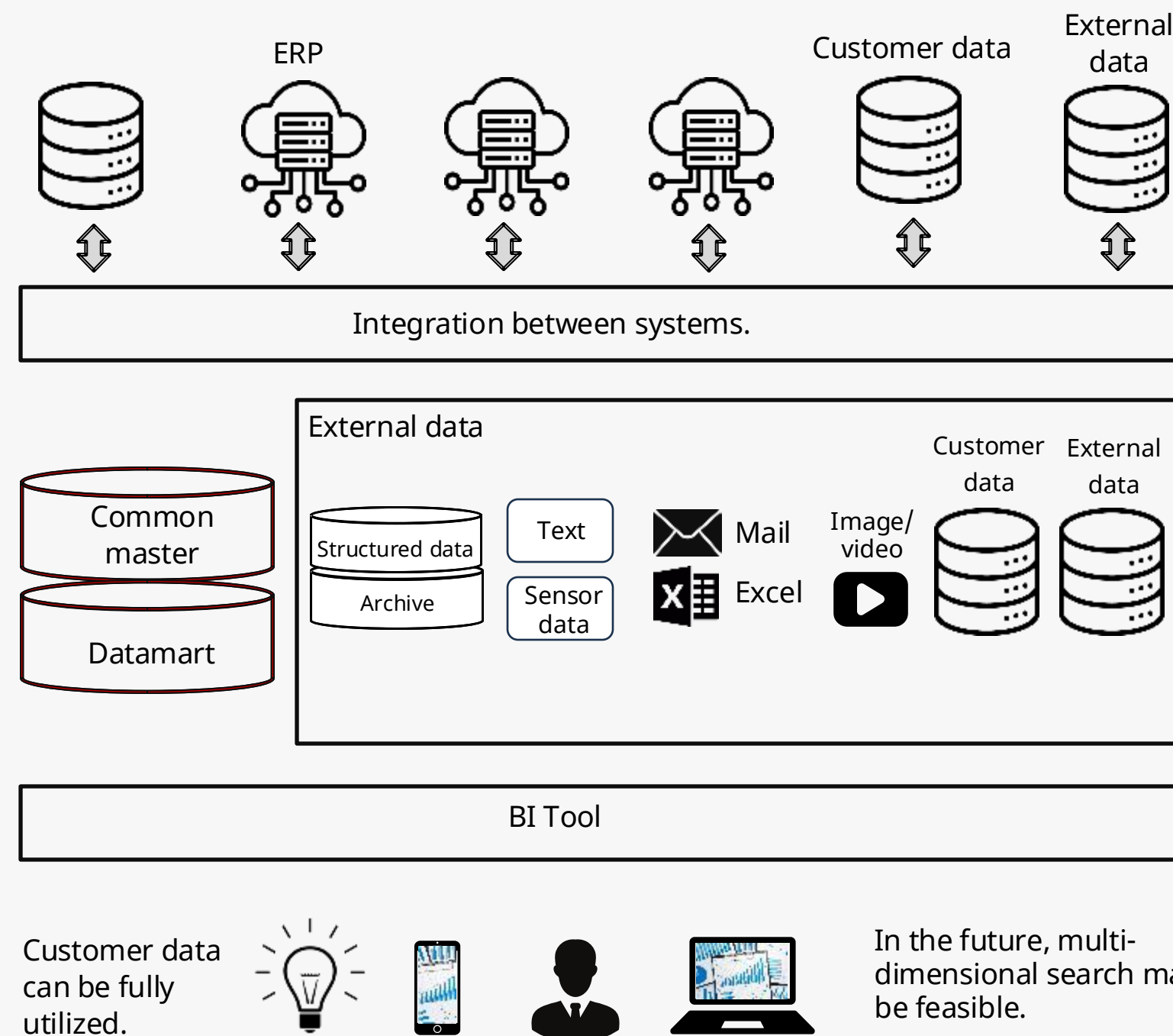
Reduced IT maintenance costs by
25%

2. SOLUTION DETAILS

SOLUTION DETAILS - USER JOURNEY

BEFORE → **AFTER**

Before panel:

Collect data from a complex system based on individual subjective understanding, then organize and aggregate the data to increase the number of analytical targets.
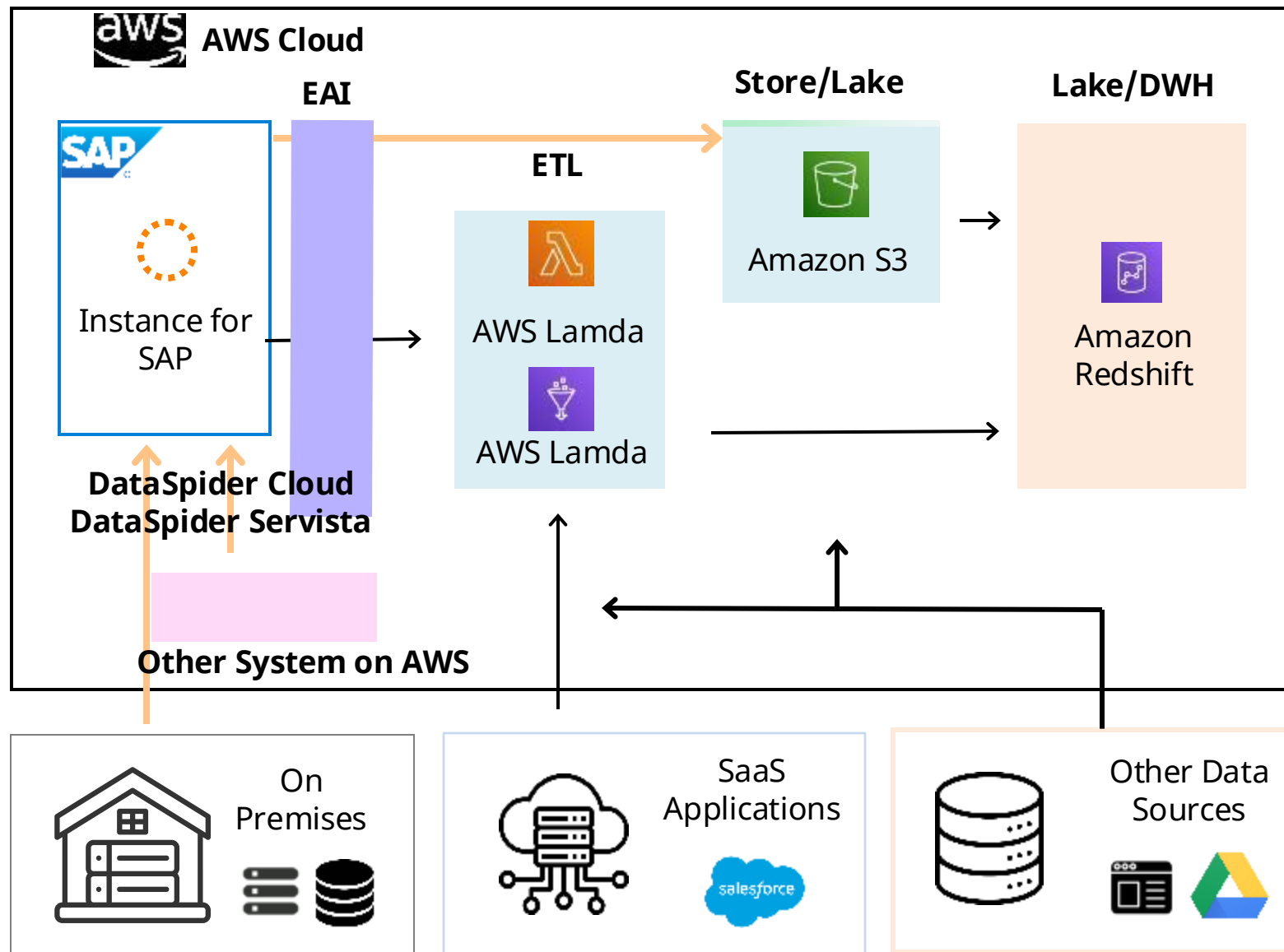
- GPS — Collect data
- Nextage — Collect data
- Collect data
- Collect data
- Partner — Mail, Fax — Received via Email/Fax
- External data — Search on Internet

Nextage → Nextage → There is information that not everyone is aware of.

After panel:

Retrieve and utilize linked, accumulated, and formatted data from the data lake.

- ERP
- Customer data
- External data

Integration between systems.

Common master / Datamart

External data
- Structured data
- Archive
- Text
- Sensor data
- Mail
- Excel
- Image/video
- Customer data
- External data

BI Tool

Customer data can be fully utilized.

In the future, multi-dimensional search may be feasible.

SOLUTION DETAILS - TECHNICAL DETAILS

Single Cloud Platform (AWS)

Multi-Cloud Platform (AWS + GCP)
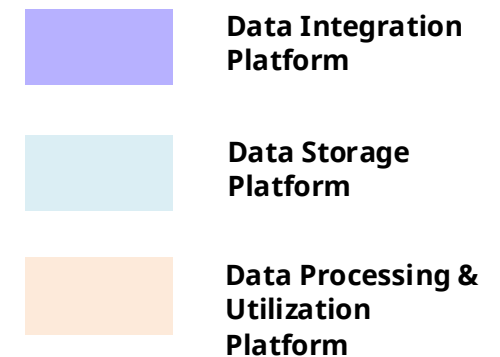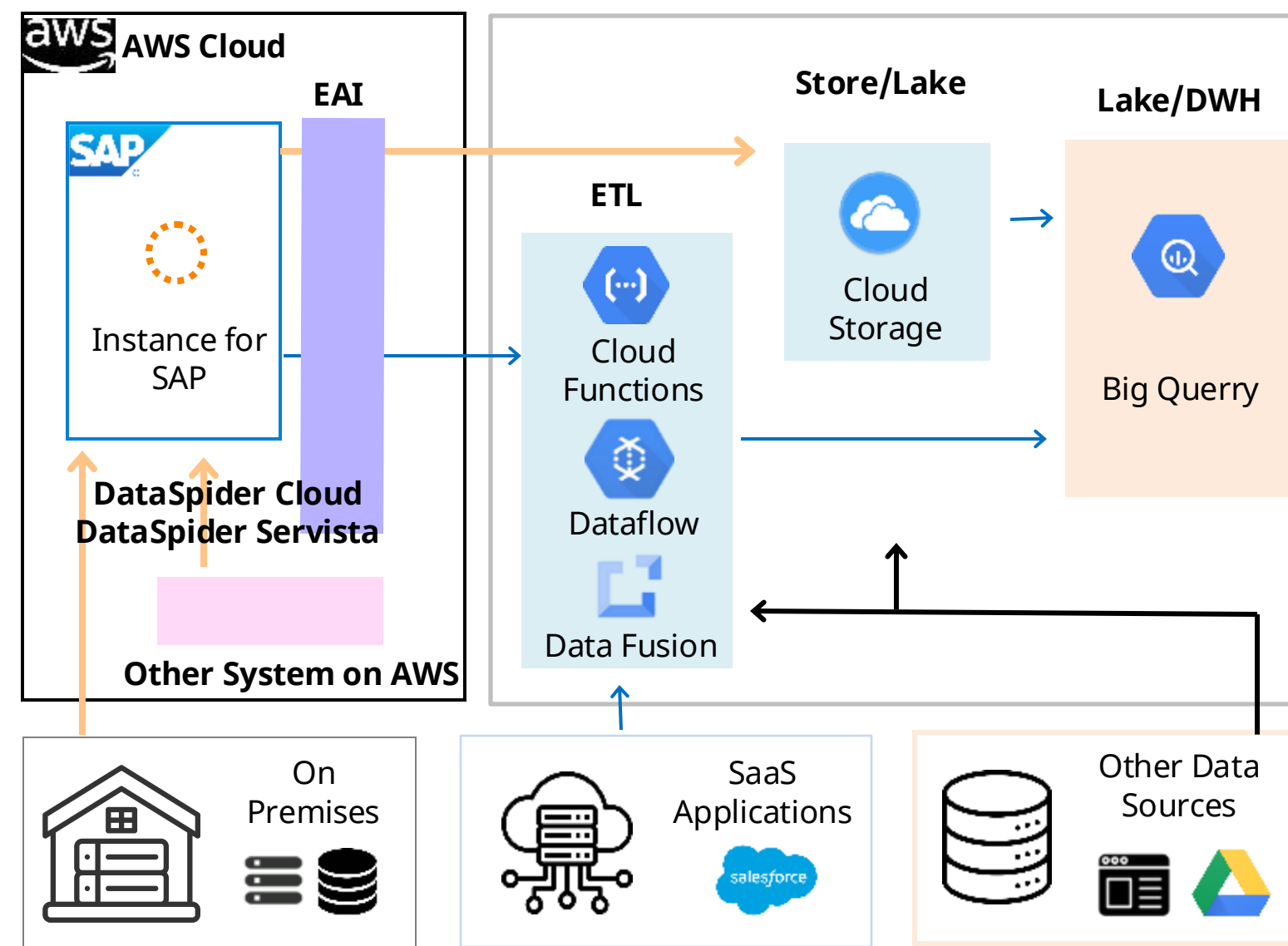
1. The **Data Integration Platform** primarily utilizes SAP on AWS.

2. The **Data Storage** and **Data Processing & Utilization Platforms**, including non-AWS data sources like GWS, will be built on GCP.

3. EXTRA POINTS

EXTRA POINTS

Tech stack and project management

- **Maximizing Low-Code efficiency:** Mastering the tool, understanding its limitations, and preparing alternative solutions in advance to mitigate constraints.
- **Deep domain expertise:** Assigning team members to specialize in different business areas, ensuring tailored data processing approaches.
- **Innovative problem-solving:** Identifying tool limitations early and organizing brainstorming sessions to address complex processing logic.
- **Agile adaptation:** Always having contingency plans to respond promptly to changes.
- **Proactive project involvement:** As an integral part of the project, Luvina actively updated progress, shared challenges, and took on additional responsibilities to ensure project success.

Quality assurance

People: Team members demonstrated high levels of responsibility and commitment.
- Regular, structured training ensured continuous skill enhancement.
- Strong technical expertise met project requirements effectively.

Tools & Processes:
- Established clear quality standards for each phase of development.
- Implemented rigorous review procedures using checklists to maintain consistency and accuracy.

EXTRA POINTS

STRICT SECURITY REQUIREMENTS ➜

The project adhered to **ISO 27001** standards, undergoing annual audits conducted by certification bodies. Key security control measures included:

01 Strict Security Regulations for Project Members

- Work was conducted exclusively on designated project devices.
- Access to network resources was tightly controlled, with permissions managed and strictly confidential.
- Only pre-approved software was allowed for installation and use.
- Any connection to the client's environment required prior registration with the project manager.
- All accounts used in the client environment were registered with Luvina's email, strictly prohibiting personal email usage.

02 Strict Security Regulations for Offboarded Members

- All project-related accounts, files, and documents were deleted upon exit.
- Personal computers were reset before leaving the project.
- Client stakeholders were promptly updated on personnel changes.

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Chart our course
to **success,**
together.

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