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INTELLUS GROUP

FANUC

Modernizing Data with SAP Datasphere & Microsoft Fabric

Intellus Summit 2025

TE AM

Making data intelligent !

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Modernizing Data with SAP Datasphere and Microsoft Fabric

1. **Introduction**

2. **Project introduction**
   - Current architecture
   - S/4 project impacts
   - Current issues

3. **Project approach**
   - Proposed architecture
   - Key success factors
   - Lessons learnt

4. **Q&A**

Introduction

Who is FANUC?

- **F**UJI **A**UTOMATIC **NU**MERICAL **C**ONTROL
- 1st in factory automation worldwide
- More than 17,500,000 FANUC products installed worldwide
- More than 5,000 employees worldwide (2,000 for EU spread in 27 entities)
- EU Headquarters (sales and service) in Luxembourg

The global project at Fanuc

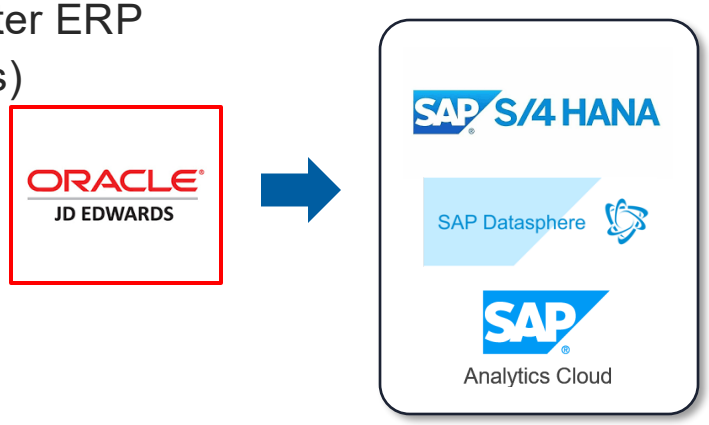
BOOST
BUILDING OPERATIONAL EXCELLENCE BASED ON SIMPLIFYING TECHNOLOGY
powered by FX

Transition to S/4HANA (with dual ERP running)

- BOOST = **B**uilding **O**perational excellence based **O**n **S**implifying **T**echnology
  - Fanuc vision: Boost customer growth and satisfaction by becoming the # 1 partner for automation.
  - Fanuc mission: Provide first class products, services and user experience which have its seeds in state-of-the-art technology, efficient and flexible processes.

- Implement and deploy S/4HANA in 2 steps:
  - 3 companies start on new S/4HANA, and others remain on JDE as master ERP
  - MOST companies switch to S/4HANA, some remain on JDE (exceptions)

- High impact on Legacy BI solution:
  - How to handle interim period and reconcile data coming from SAP and JDE to produce European reporting?



What is a data platform?

Landing zone

File

Database

Streaming

…

Data Storage

Data Warehouse

Data Lake

ODS

virtual

…

(advanced) Analytics

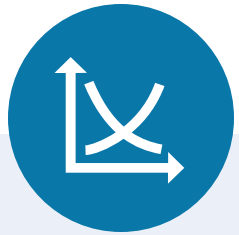
- ✓ Statistical processing and Machine Learning
- ✓ Need for scalable flexible data platform

Sandbox

- ✓ Quick/ad-hoc analysis
- ✓ Experiment with data

Business rules

- ✓ Apply (complex) business rules
- ✓ Industrialize // IT



Visualization & Dashboarding

- ✓ Insights through visualizations
- ✓ Show key figures
- ✓ Look for trends

The reasons for a new data platform

Data Integration
Bring all data together (physically or virtually) in one central place

History
Collect history from systems to perform time-dependent queries

Interoperability
Easy communication with other tools & applications

Data Transformations
Enrich data with easy to complex transformations

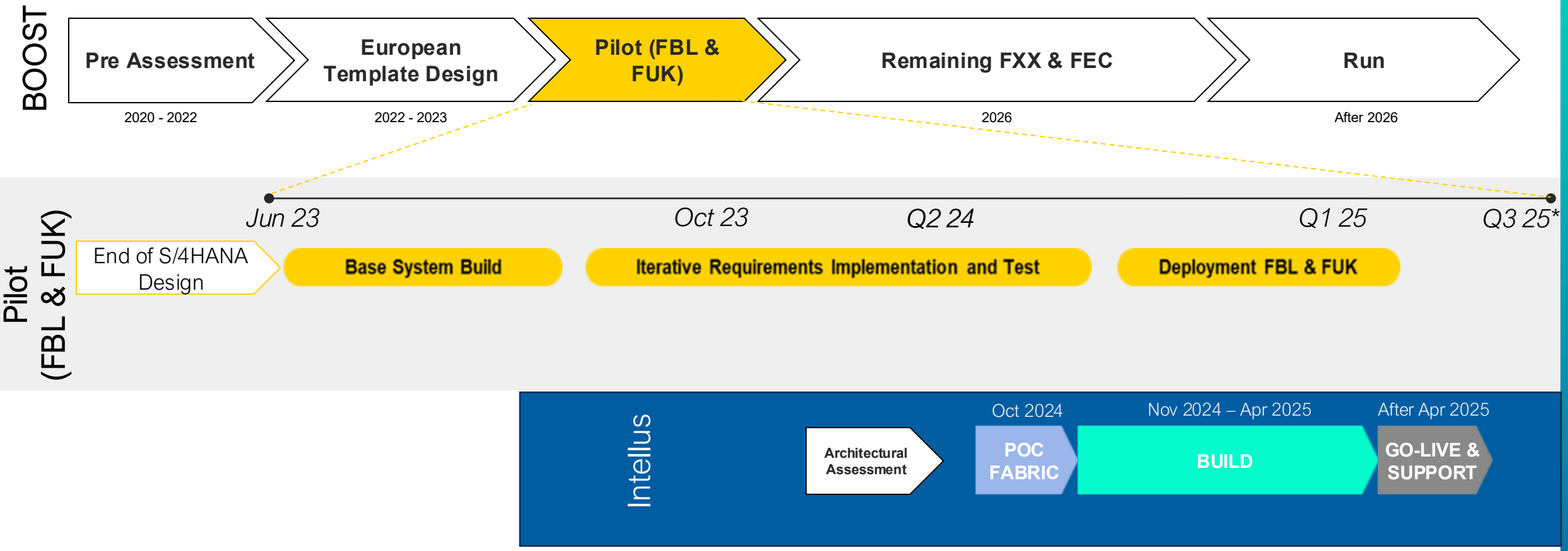
Scalability
Grow data platform together with Fanuc's organization and data needs

AI Use Cases
Easy development of AI use-cases using the tools and models needed

Insights at fingertips
Get quick insights from data through data exploration and visualization tools

The global project at Fanuc

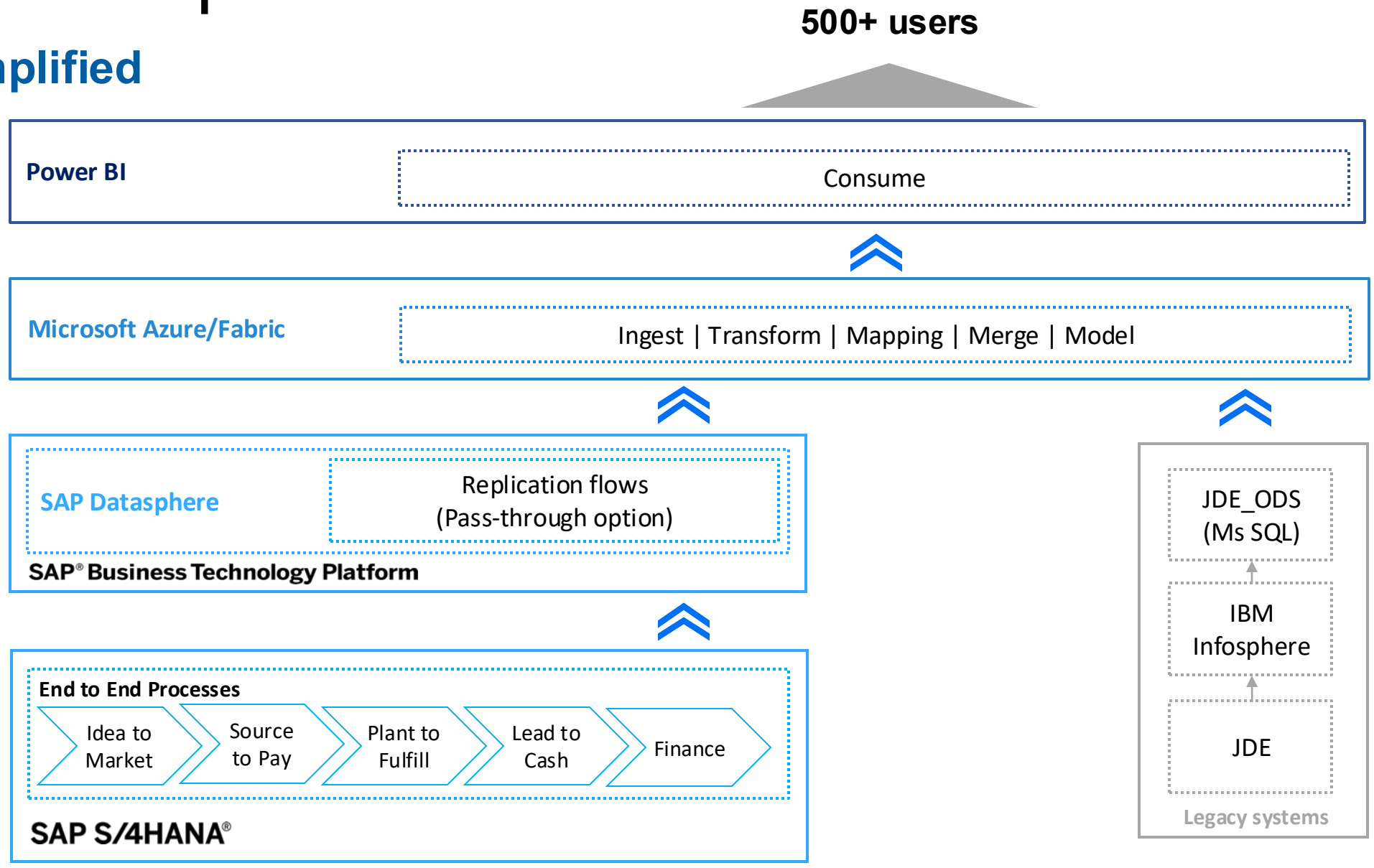
BOOST Pilot approach and the overall BOOST roadmap



Project introduction

The scope

Simplified



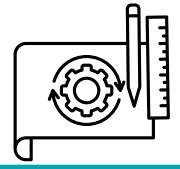
Project Approach

From Proof of Concept to a scalable architecture

- **Initiated with a targeted PoC** to validate integration between SAP Datasphere and Microsoft SQL into Microsoft Fabric
- **Positive outcomes** enabled a phased rollout strategy grounded in **Medallion architecture**
- Combined short-term impact with a **scalable**, **long-term** vision

Discovery & Assessment

Understand current data landscape and reporting needs/mappings



Architecture Design (PoC validation)

Define Medallion architecture and integration plan

Implementation

Build pipelines and replicate ERP data

Consumption

Deliver insights, data merge via Microsoft Fabric

Governance

Ensure data quality and evolve architecture

Project Approach

Operational reporting in S/4HANA

To make most of it, keep these tips in mind during the project:

1. Leverage the Standard

   Instead of recreating the existing reports, map them to the standard analytics content and tools provided

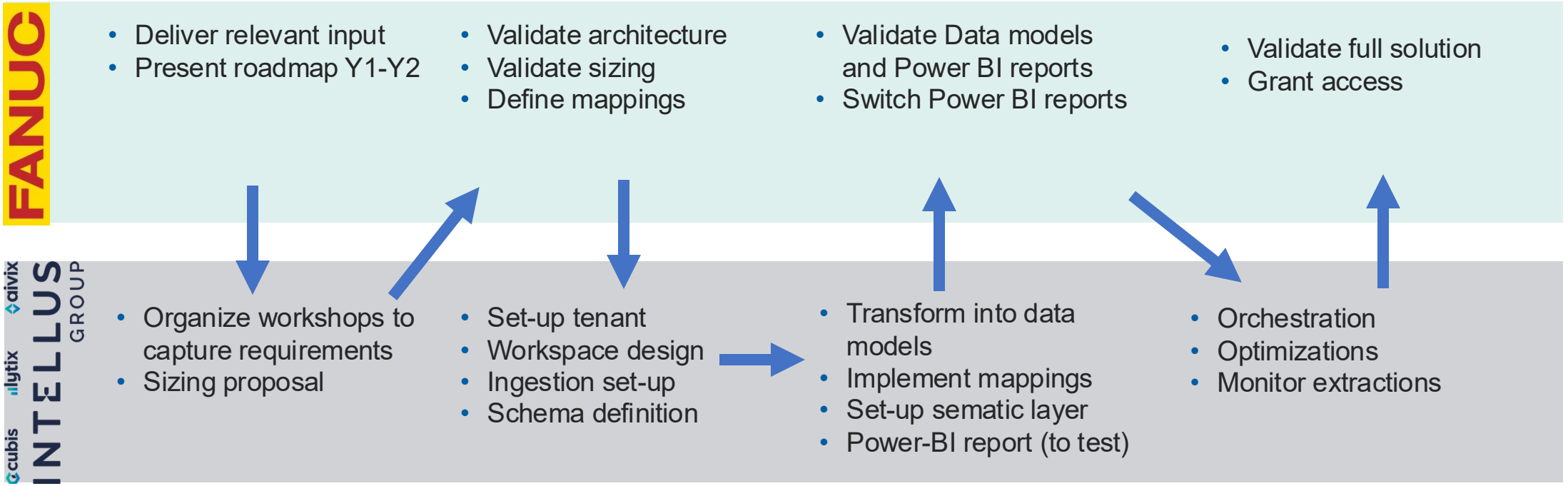
2. Prioritize change management

   Invest time in training users to effectively navigate and work with the new system

3. Focus on operational reporting

   Use SAP S/4HANA Analytic (Fiori) for its primary purposes: streamlining operational reporting

Project Approach



Project planning

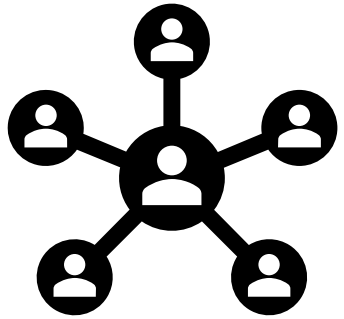
Proposed architecture

New Architecture

Goals

Modernity

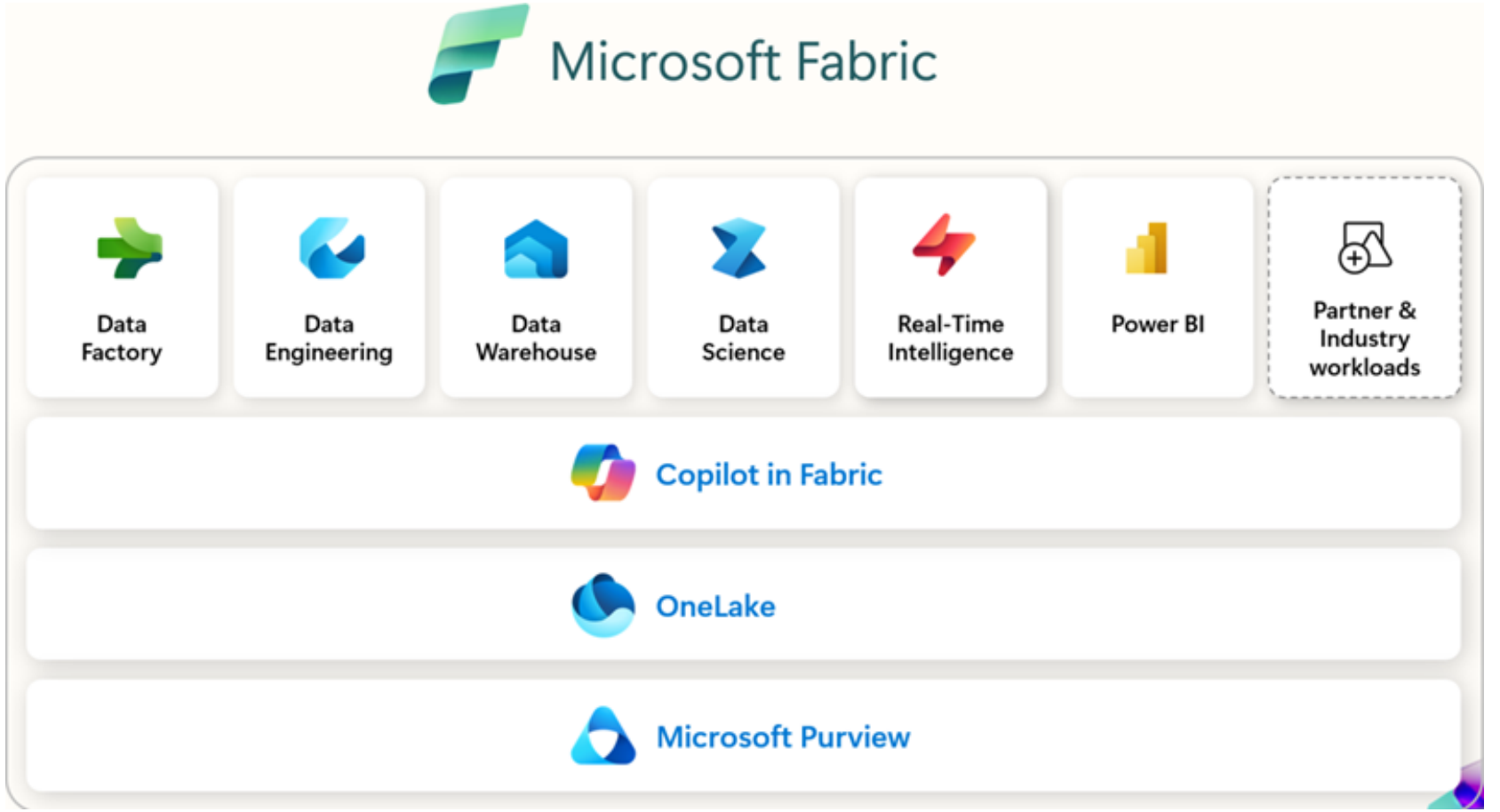
Flexibility



Governance

Architecture

Fabric: SaaS Solution



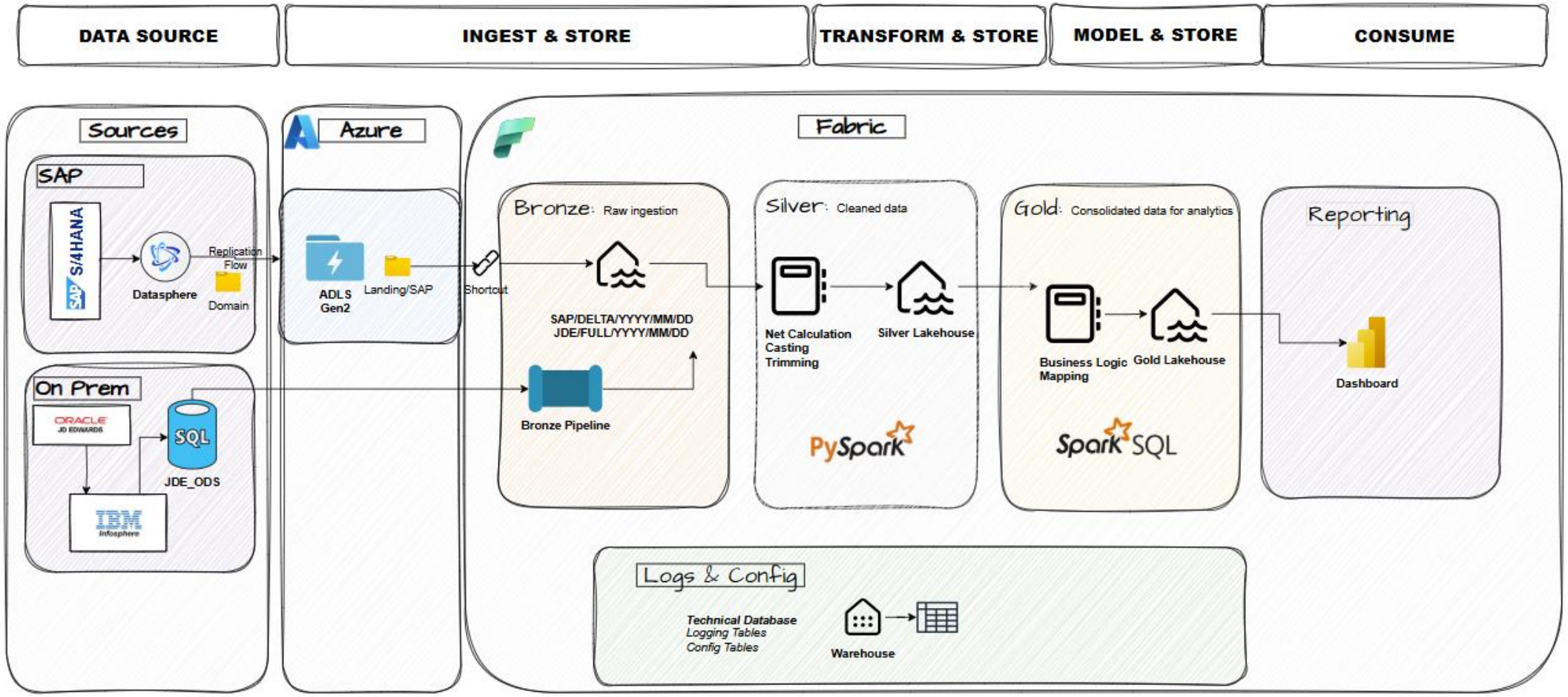
Architecture

Lakehouse Architecture using Medallion layer

- Clear separation of raw, curated and trusted data
- Easier governance and lineage tracking

Architecture implemented

Global Overview



Design Choices

- Layered Workspace Structure
  - Each layer (Bronze, Silver, Gold) serves a distinct purpose, improving data handling
- Using Notebooks for Data Manipulation
  - By privileging notebooks for data manipulation, we gain a solution that is: more flexible, more robust, more performant
- Lakehouse used vs Warehouse for the gold
  - Integrates with Spark, open-source tools, and real-time processing frameworks

Architecture

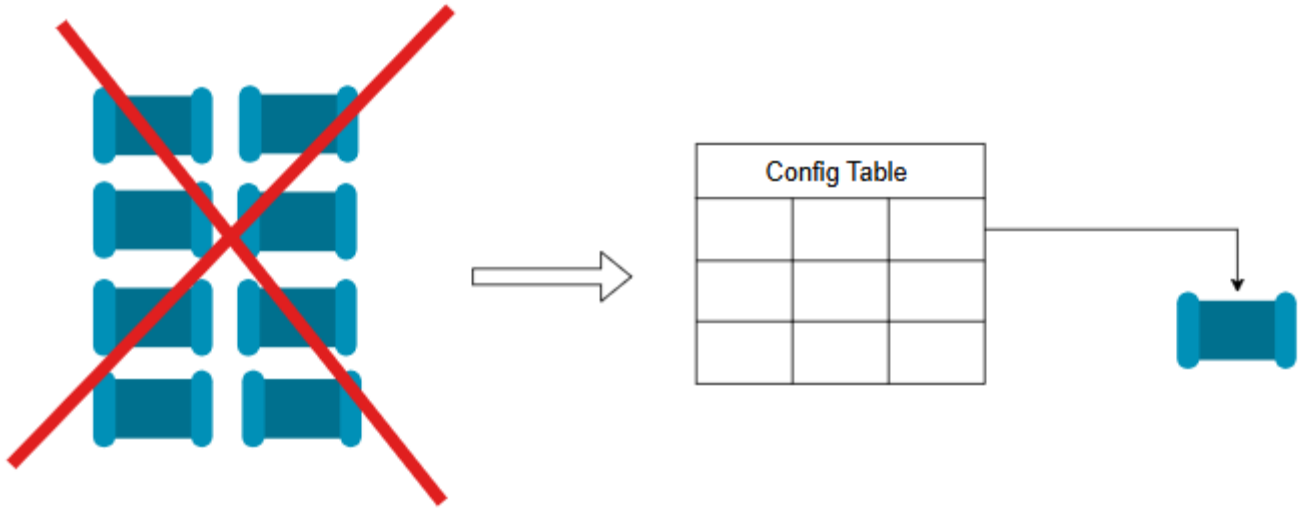
Challenges: Be up to date

- **Adaptability** :
  - Microsoft Fabric evolves fast
  - Stay updated to use new features

Architecture

Challenges: Build a generic Data Platform

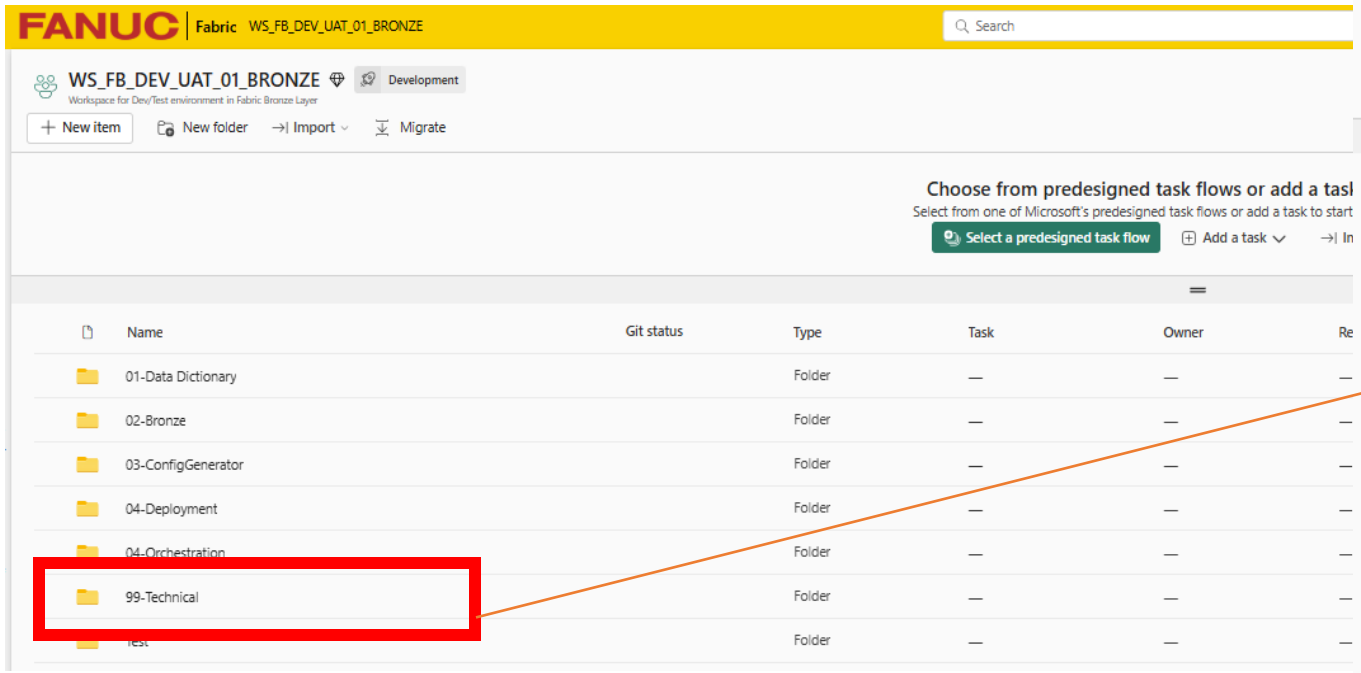
- **Think Global**:
  - Design processes flexible enough to handle diverse future data flows and avoid redundant job

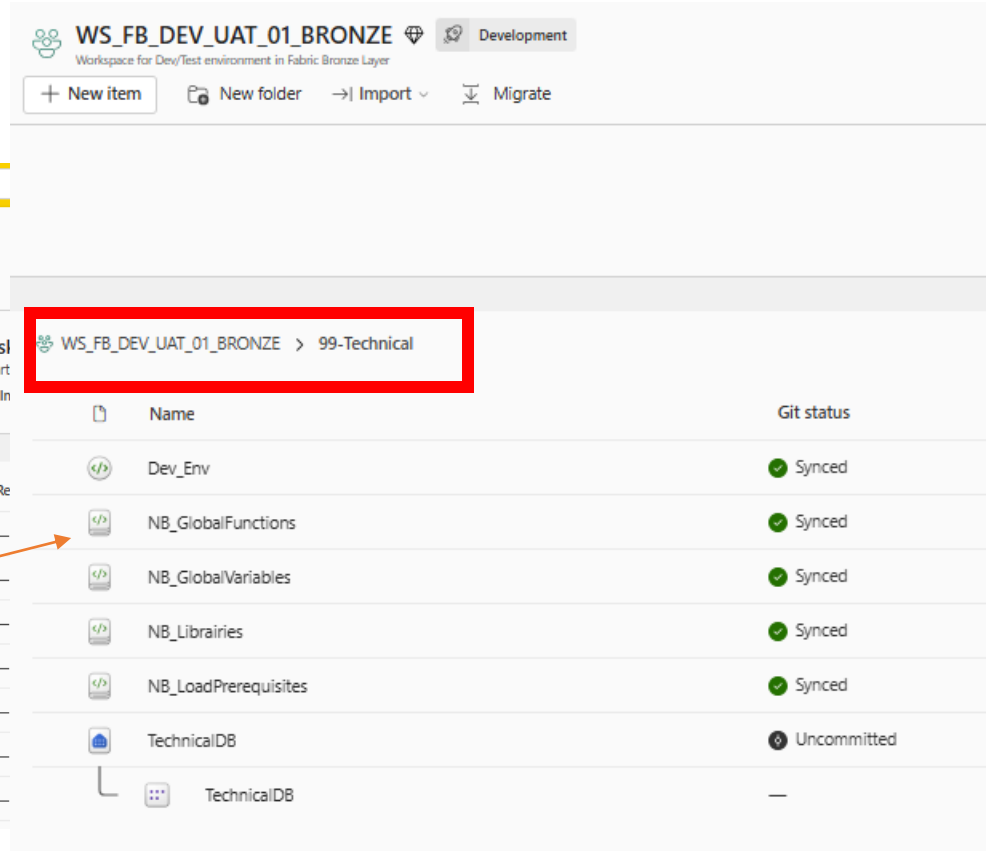


Architecture

Challenges : Streamlined Organization

- **Accessible Workspaces for Collaborative Success**
  - Creation dedicated workspaces
  - Organize object created into folder





Conclusion

- The success criteria
  - The platform has a structured approach
  - The platform can handle high-frequency loads
  - Key reports defined, limited disruption for end-users
- Lessons learnt
  - Start small, prove value early (PoC)
  - Dual ERP requires careful alignment and mapping rules
  - Consider BI as full part of S/4 project: Business engagement is non-negotiable (early and continuous involvement)
  - Agile delivery works, but with a strong architecture setup

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Questions?

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Thank you!