POLESTAR DATA NEXUS - FABRIC
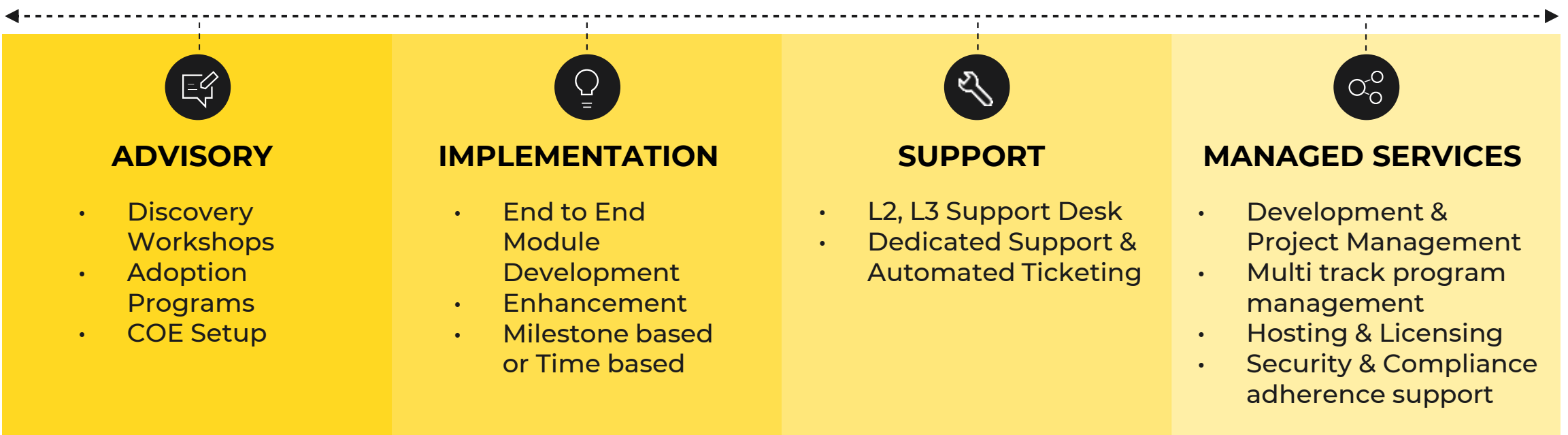
DATA ESTATE AND INSIGHTS

POLEST★R

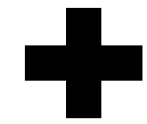# How do we help?

IMPLEMENTATION SNAPSHOTS

INSIGHTS

Data Estate Optimization
- Data Ingestion Optimization
- Data Lake Automation
- Data Warehouse Optimization
- Data Cataloging and MDM

Data Migration and Integration Excellence
- Data Synchronization and Replication
- Transformation and Cleansing Strategies
- Data Quality Assurance
- Change Data Capture (CDC) Solutions

Data Monetization
- Communal Data layer with external and internal user access
- Embedded Analytics enabling customers of customers
- Product Engineering with Data driven Engine

Analytics + AI
- Dashboarding
- Role-Based Access Controls (RBAC)
- Self Service Analytics
- ML Model deployment
- AI based actionable Insights

Advanced Intelligence
- Event-Driven Architectures
- Gen AI based interactive chatbots
- Prescriptive Analytics

DATA

AVENUES OF ENGAGEMENT

ADVISORY
- Discovery Workshops
- Adoption Programs
- COE Setup

IMPLEMENTATION
- End to End Module Development
- Enhancement
- Milestone based or Time based

SUPPORT
- L2, L3 Support Desk
- Dedicated Support & Automated Ticketing

MANAGED SERVICES
- Development & Project Management
- Multi track program management
- Hosting & Licensing
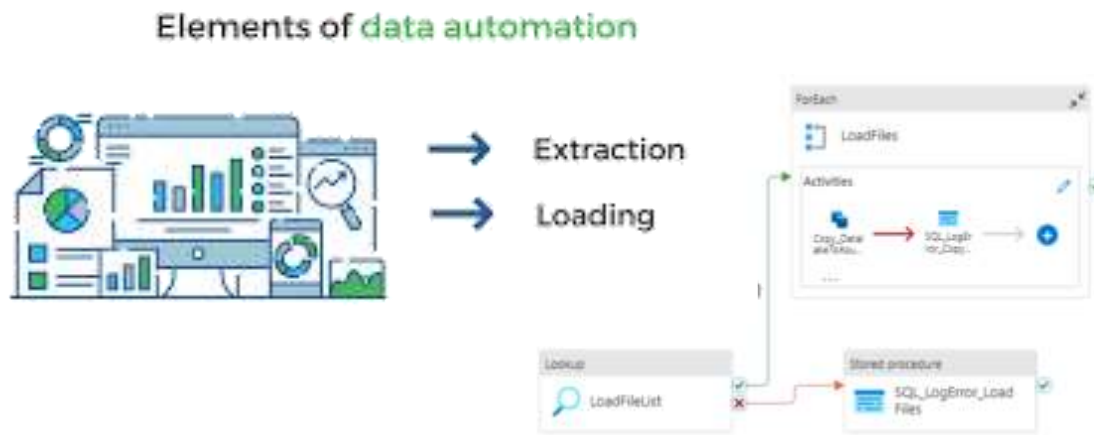- Security & Compliance adherence support

Polestar's Data Nexus: Data

Modernize your data estate using **our in-house developed accelerators**

## 1 Data Lake Automation Accelerator

Configurable Accelerator designed to automate data lakes. Set up new data pipelines (Databases, REST APIs, and modern Web UIs etc.)

- Connect to any source system
- Move Incremental Data and Historical data to Lake
- Audit and Reporting with logs
- Configurable Framework to Add/ Edit/ Delete New Tables, New Columns with the help of Metadata for different timelines
- Following Best practices to enable Parallelism in Data loading resulting in quicker data extractions

## 2 Data Quality Automation Accelerator

Accelerator designed to automate checks, identify discrepancies, and elevate data quality for seamless, error-free insights.
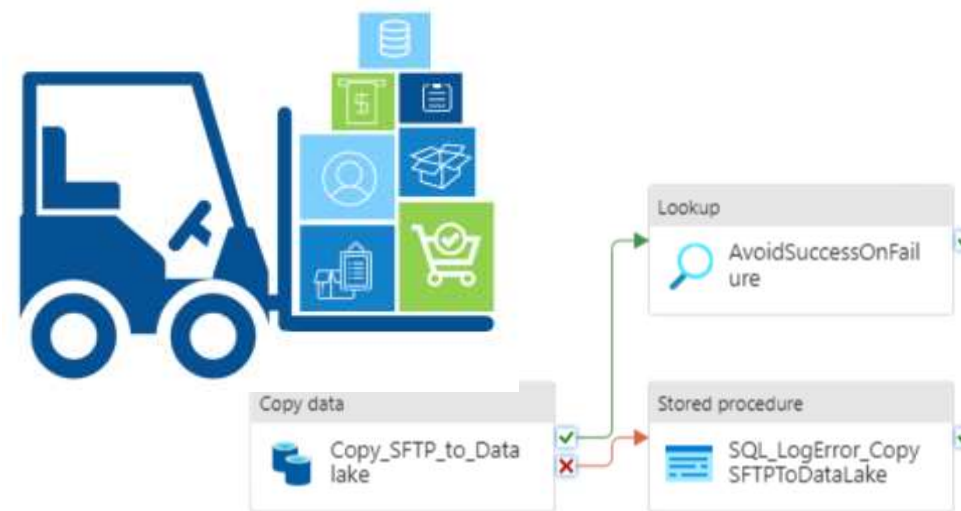
- Metadata based Configurable Framework to automate data quality at Column Level
- Already have 100+ different data quality rules
- Data Quality rules starting from Row Level like "Value > 0" to Column level like "Column Median should be < 1000" can be configured via Configuration file with no code level changes

3 Data Profiling Wizard

Executes on top of Polestar Data Nexus to provide continuous Data Profiling of Master and Transactional Data
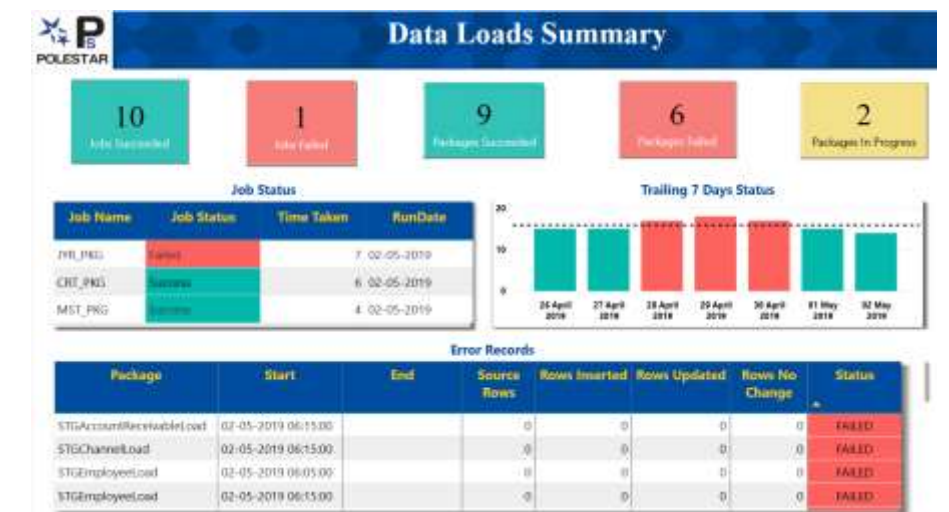
- Data Load Summary to provide latest updates with Altering mechanism for Failures
- Data Recon Reporting for Every Loads
- Profiling of all the data including Masters and Transactions
- Column level sampling for every tables

Polestar's Data Nexus: Insights

AI/Generative AI/ML

- **Deep Learning Models:** Utilize neural networks with multiple layers to identify complex patterns and forecast future trends and behaviors
- **Natural Language Processing (NLP):** Extract insights from unstructured data through techniques like sentiment analysis and entity recognition.
- **Anomaly Detection:** Identify unusual patterns or outliers in data, crucial for fraud detection and anomaly prevention.

Data Democratization

- Data Access Control: Role-based access control (RBAC) and fine-grained permissions to regulate access and rights to specific datasets.
- Analytics COE: Setting up Analytics Centre of Excellence to propagate data driven decision making

BI/MIS Reporting

- Standard Enterprise wide reporting packs
- Descriptive and Diagnostic Analytics (what happened and why did it happen?)
- Statutory Reporting
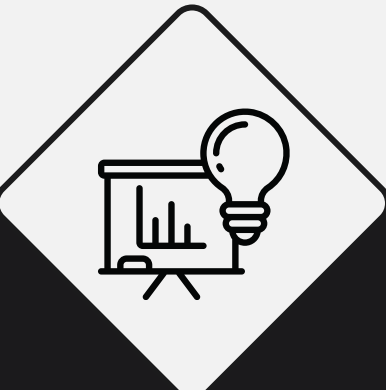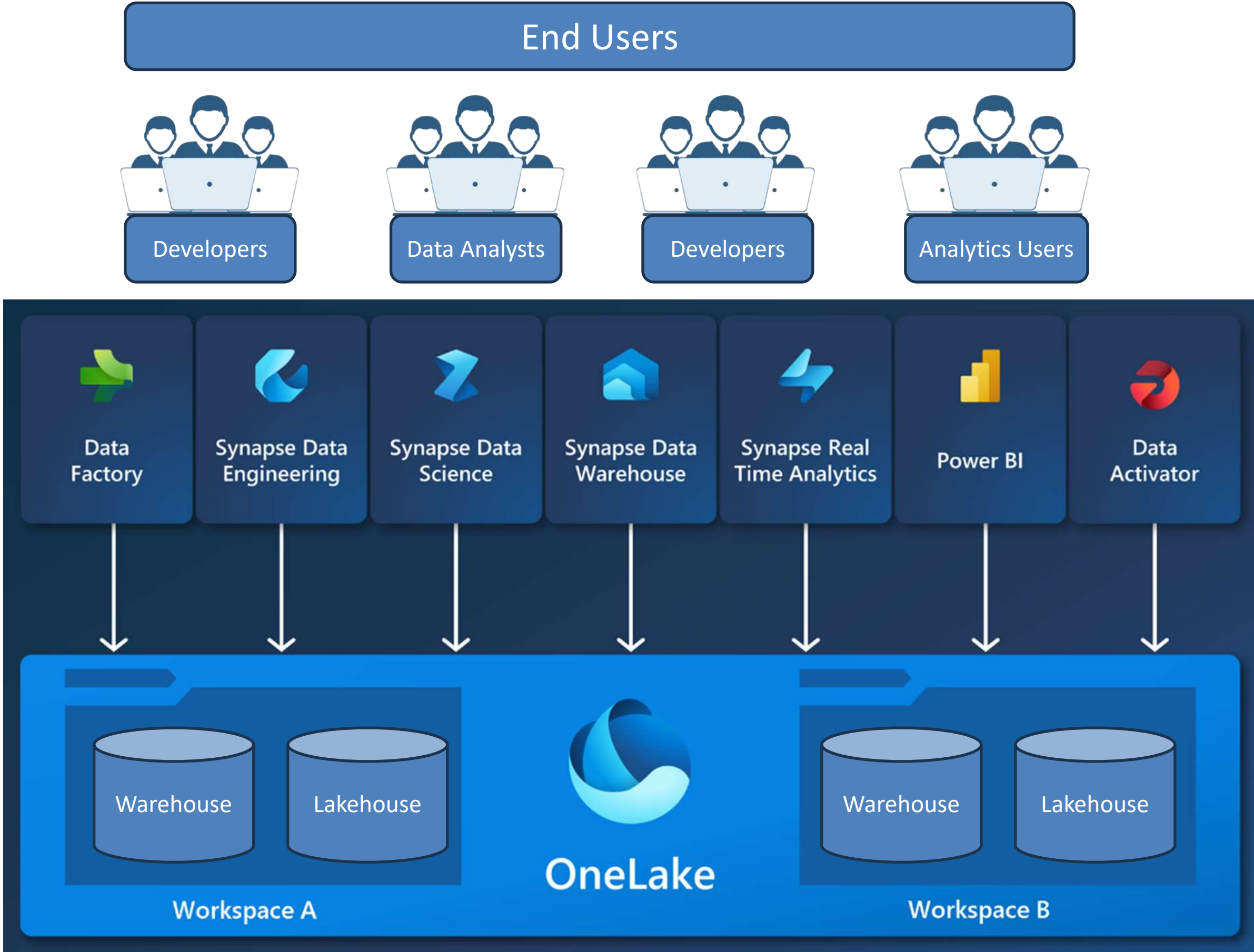
CXO Dashboards

- Display mission critical KPIs aligned with organizational goals, enabling CXOs to get a bird eye view of performance
- A single screen with drill-down capabilities that allow CXOs to explore deeper insights to view outliers
- Decluttered scorecards accessible across multiple devices/platform to enable insights on the go!
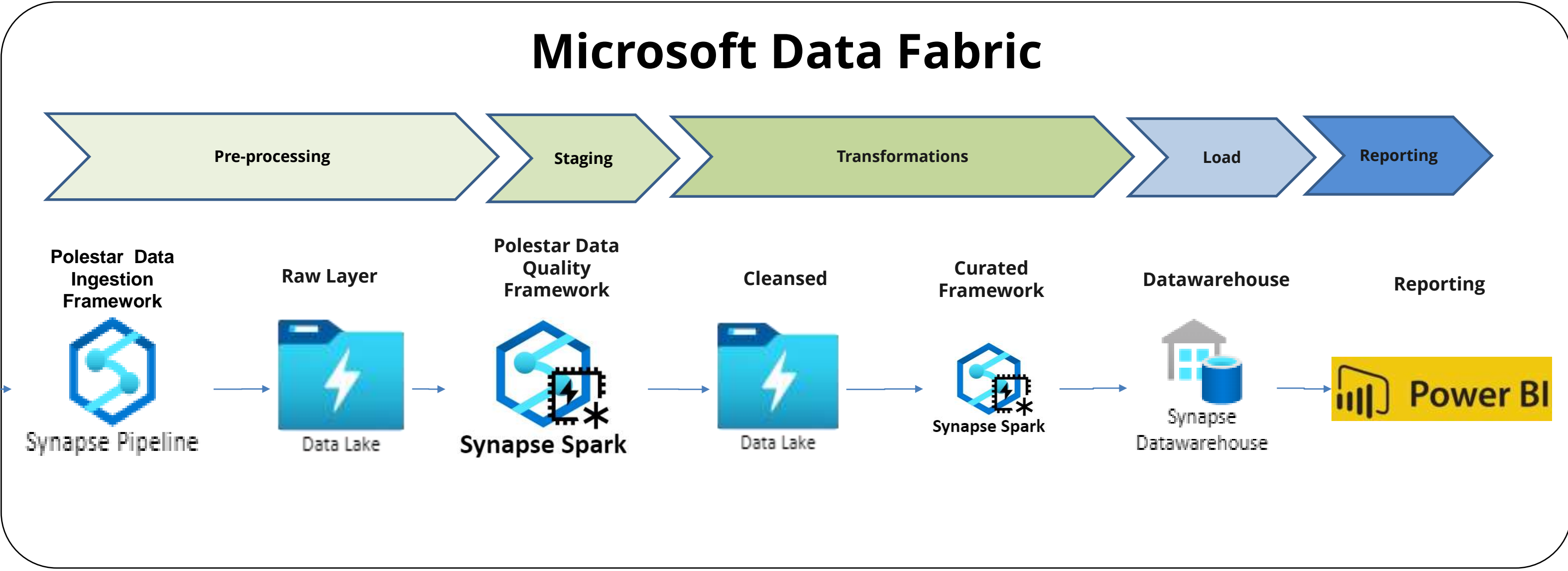
Self Service Analytics

- Self Service Analytics Apps to allow users to play around with the data
- Intuitive Insights recommendation with simple drag and drop capabilities
- Quick Ignition for individuals/smaller teams

Architecture – Microsoft Fabric
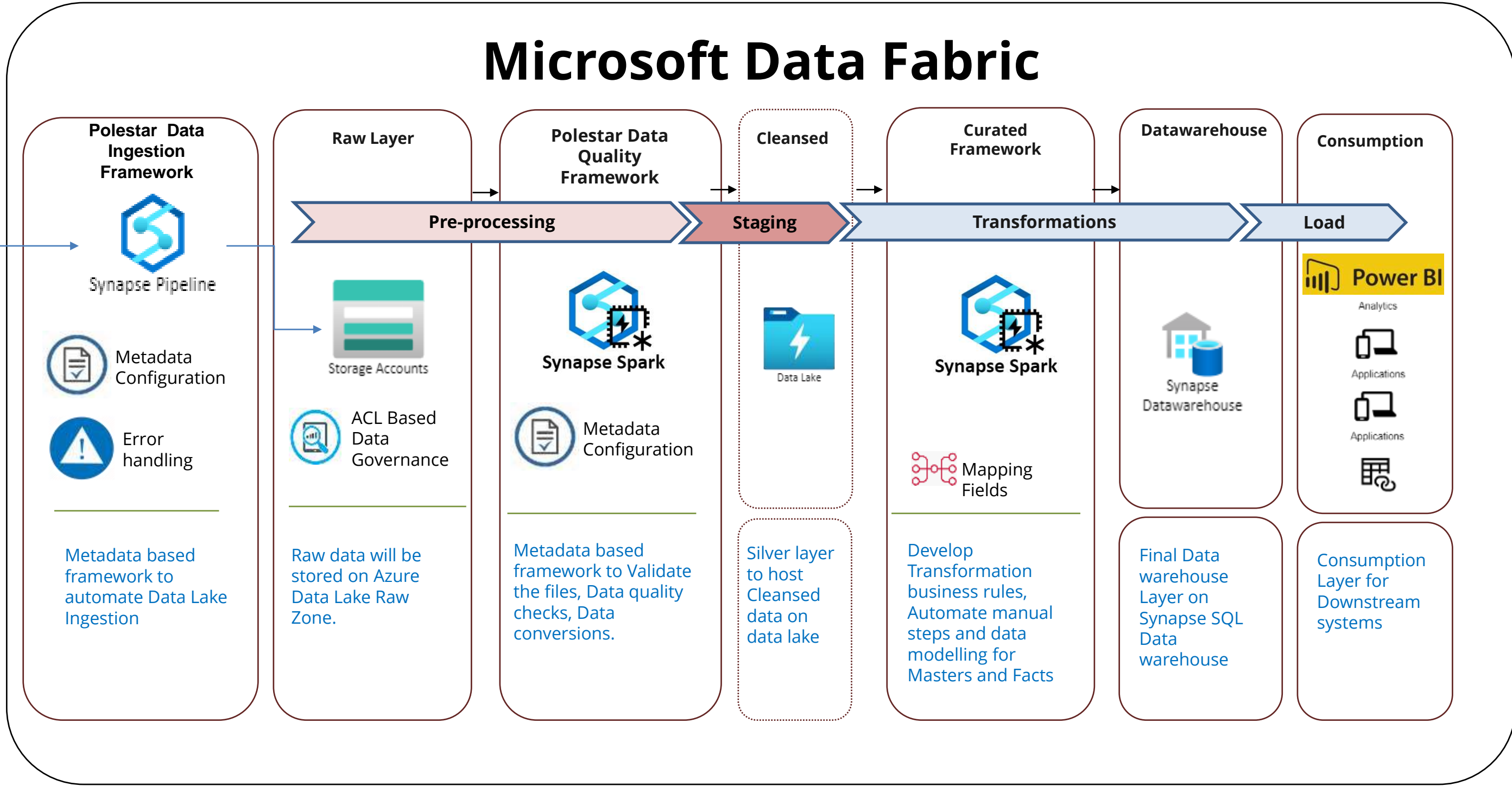
Fabric - Architecture

Fabric - Logical Architecture

Microsoft Data Fabric

Source System

- Logs, files, and media (unstructured)
- Business/custom apps (structured)

Polestar Data Ingestion Framework

Synapse Pipeline

Metadata Configuration

Error handling

Metadata based framework to automate Data Lake Ingestion

Raw Layer

Storage Accounts

ACL Based Data Governance

Raw data will be stored on Azure Data Lake Raw Zone.

Polestar Data Quality Framework

Synapse Spark

Metadata Configuration

Metadata based framework to Validate the files, Data quality checks, Data conversions.

Cleansed

Data Lake

Silver layer to host Cleansed data on data lake

Curated Framework

Synapse Spark

Mapping Fields

Develop Transformation business rules, Automate manual steps and data modelling for Masters and Facts

Datawarehouse

Synapse Datawarehouse

Final Data warehouse Layer on Synapse SQL Data warehouse

Consumption

Power BI
Analytics
Applications
Applications

Consumption Layer for Downstream systems

Process flow
Pre-processing → Staging → Transformations → Load

Platform
- Azure Active Directory
- Cost Management
- Azure Key Vault
- Azure Monitor
- Security Center
- Azure DevOps & GitHub
- Azure Policy

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Thank You.