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# Unlocked: Cloud Scale Analytics





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# Modern Analytics and Governance at Scale

A Microsoft Hybrid Approach to [Data Mesh](#) and [Data Fabric](#)

Emerson Gatchalian



# Microsoft Position:



Microsoft **focuses on organizations challenges and strategic vision** vs a framework to be implemented



Microsoft provides the **NorthStar** for implementing Modern Analytics Ecosystem (technology) in alignment to people and processes



Supports aspects of **Data Mesh** and **Data Fabric** but with the caution that **we're not purists** of either framework\solution

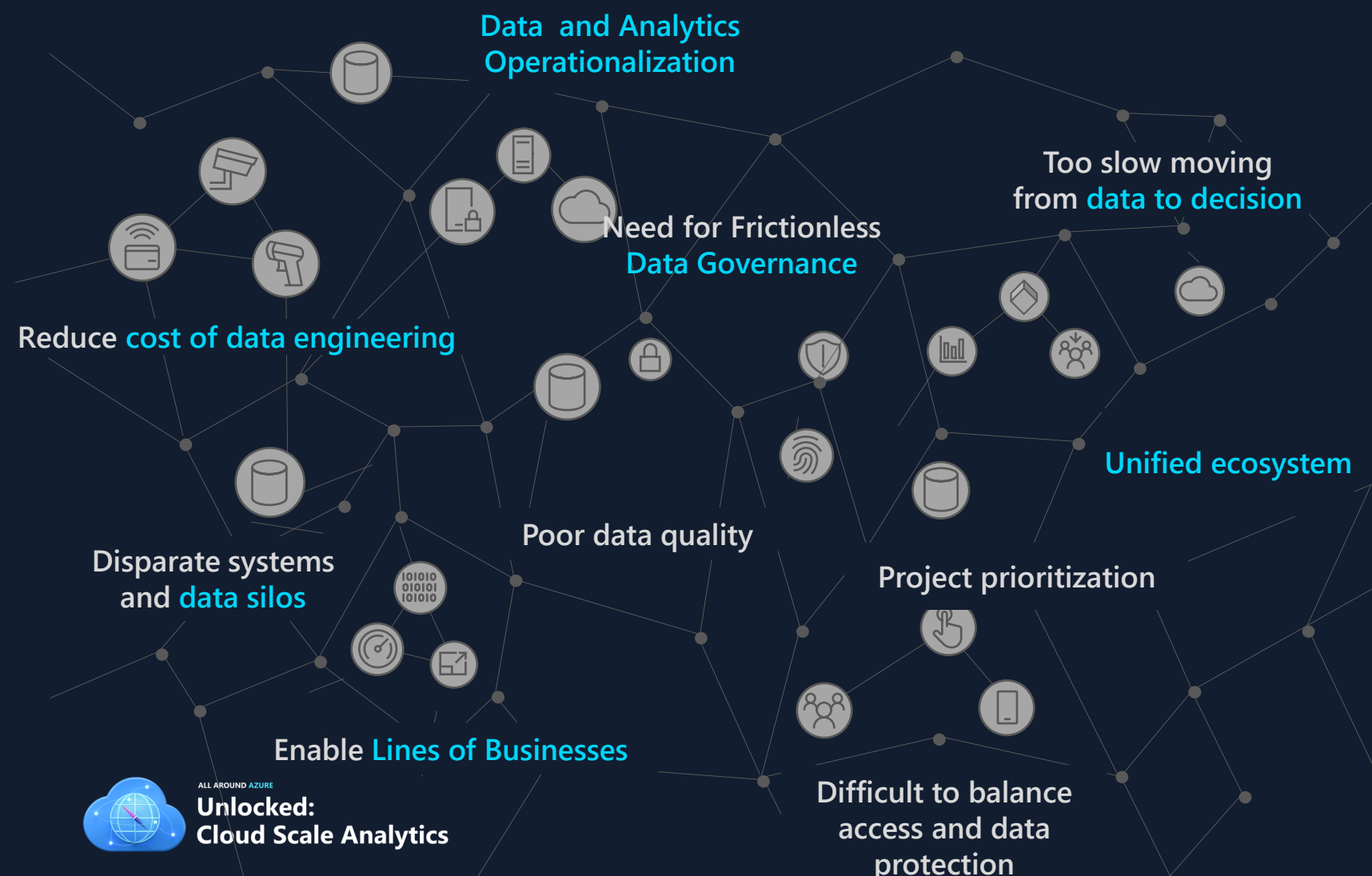


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# What we've heard



Ideally, organizations want to have.....

-  Platform to actionable Insights to the business
-  Robust data governance
-  Ability to increase the value of hidden data
-  To spend less time preparing data
-  Improve Operational Efficiency

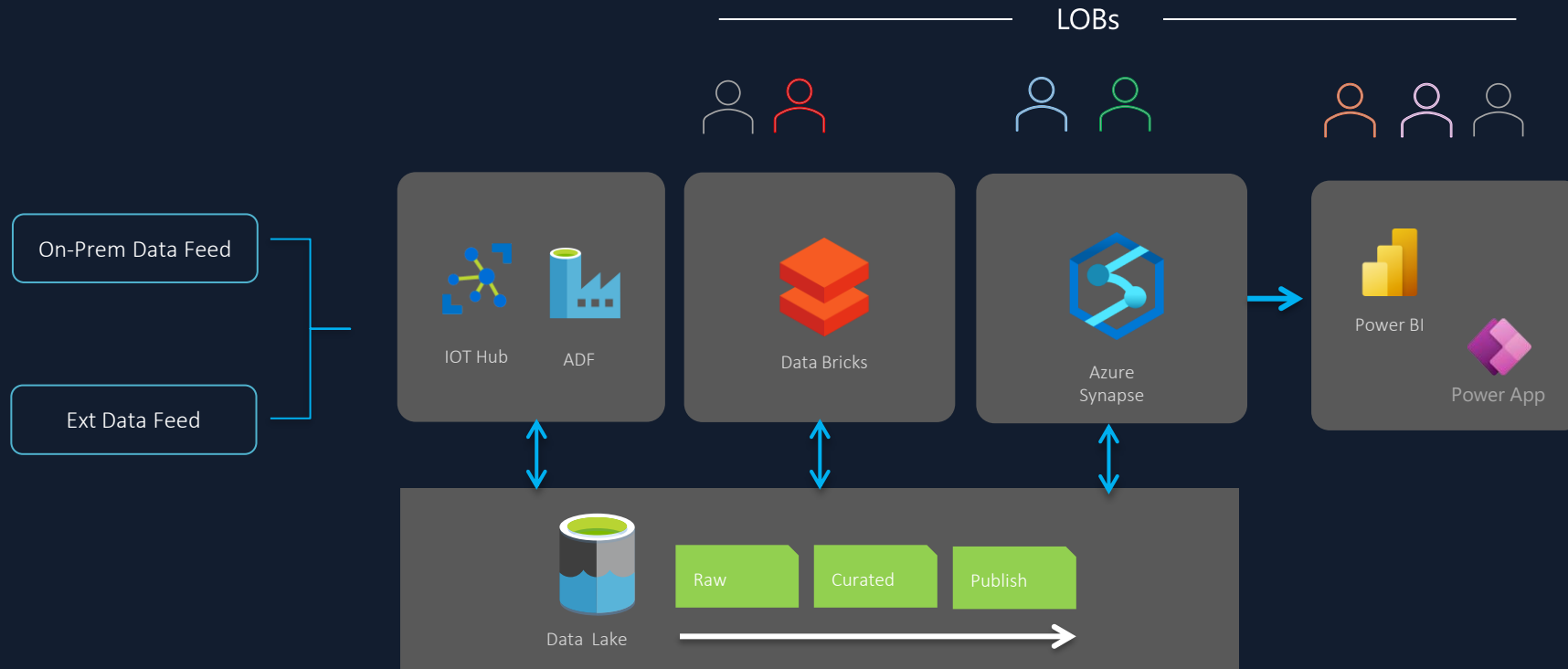
Barriers to achieve business outcomes

# Traditional Implementation

## DW and Hadoop Migration Scenario



Azure Purview



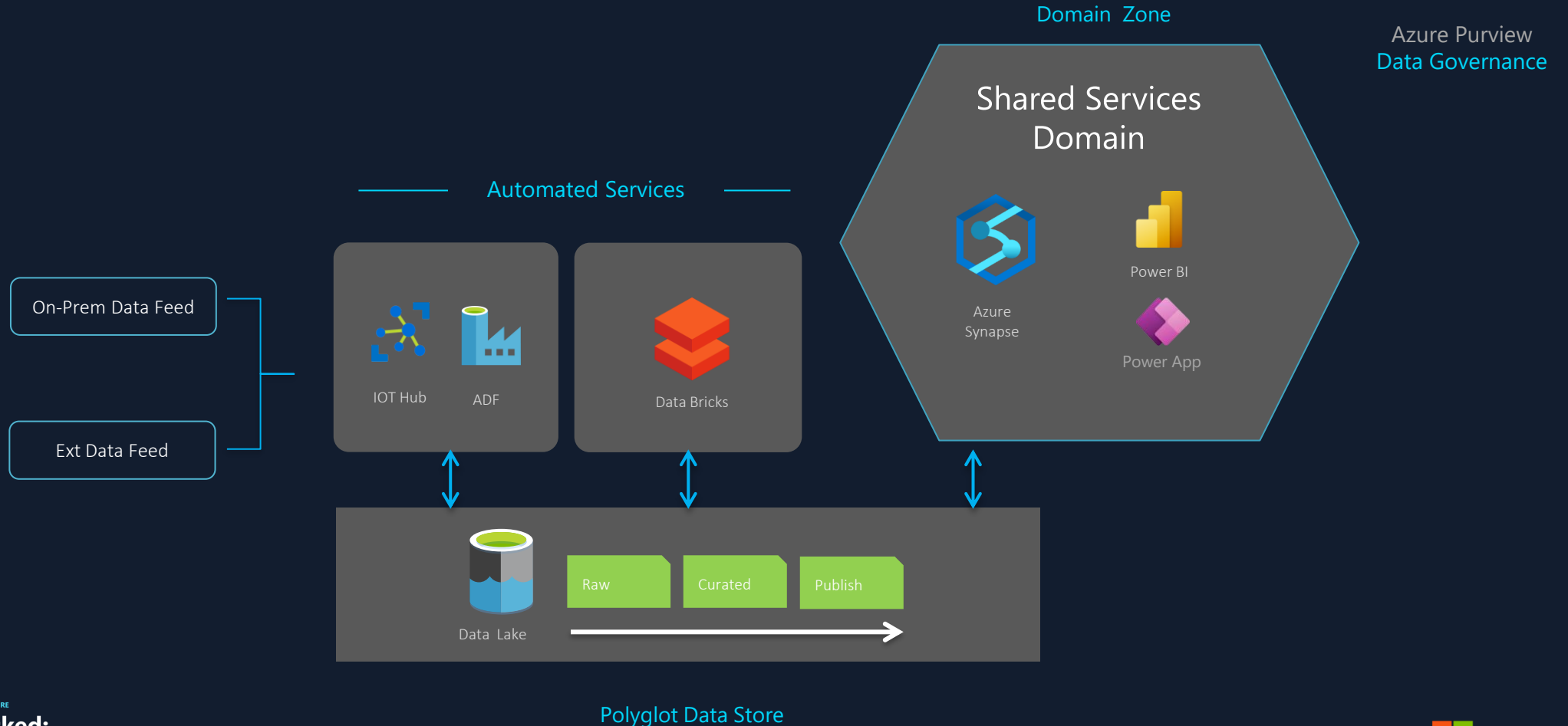
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# Traditional Implementation

## DW and Hadoop Migration Scenario



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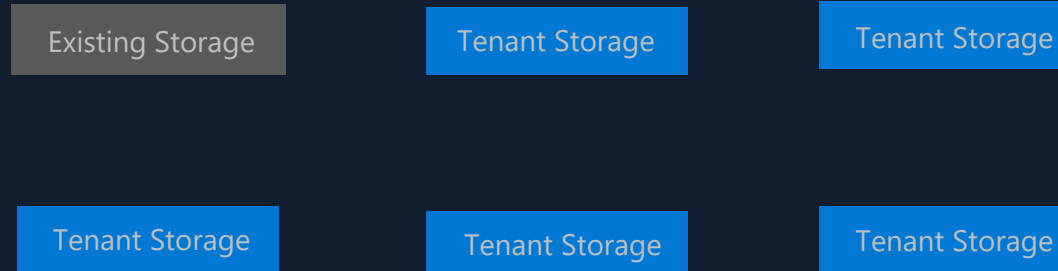
Polyglot Data Store



# Evolution to MS Hybrid Data Mesh



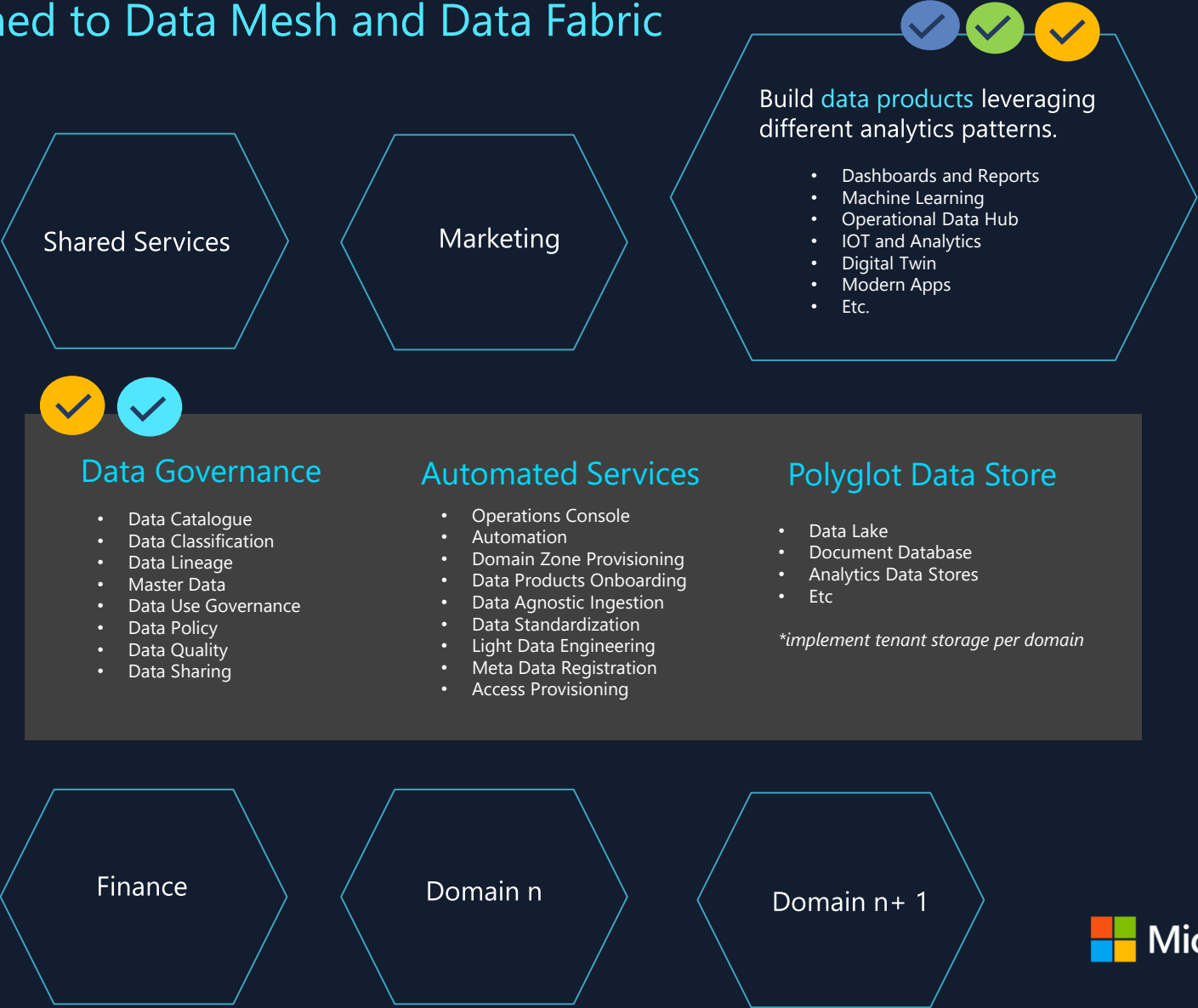
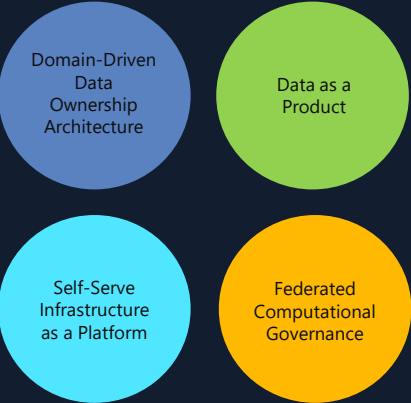
- Data Governance
- Polyglot Data Store
- Automated Services



# Modern Analytics and Governance at Scale

A Microsoft Hybrid Approach Aligned to Data Mesh and Data Fabric

## 4 Principles





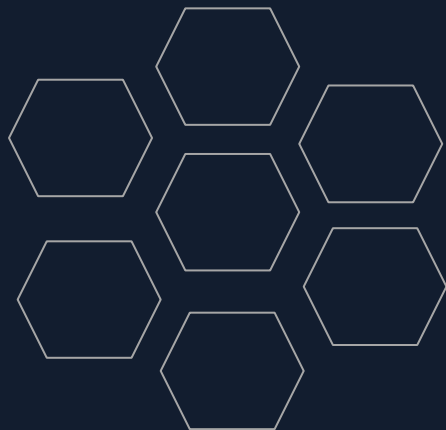
# Enterprise Data Governance



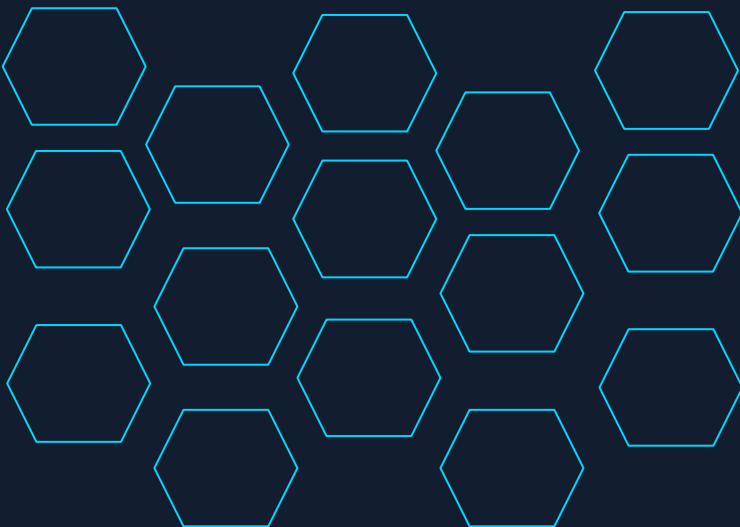
Azure Purview

Data Catalogue	Data Classification	Data Lineage	Master Data	Data Use Governance	Data Policy	Data Quality	Data Sharing
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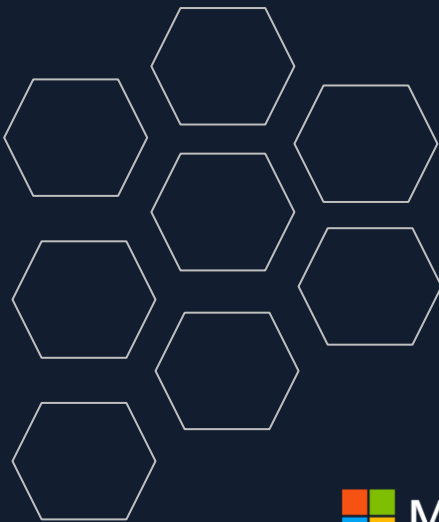
On Premise



Azure



3rd Party Cloud



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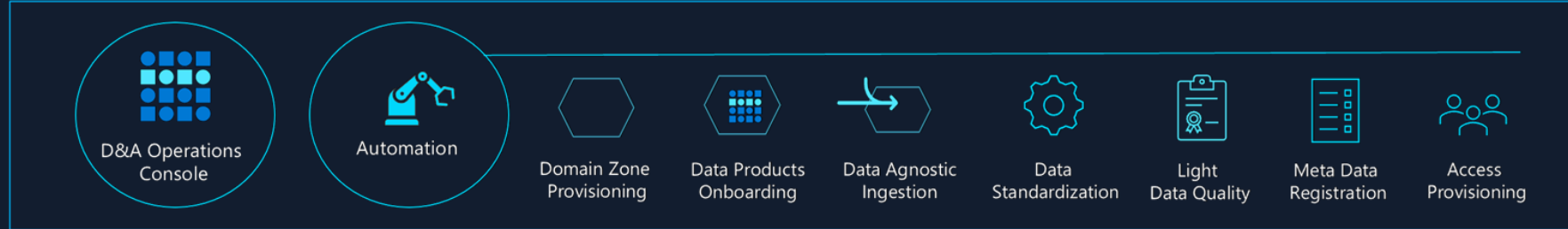
# Automated Data and Analytics Operations

For partner delivery using Azure Services



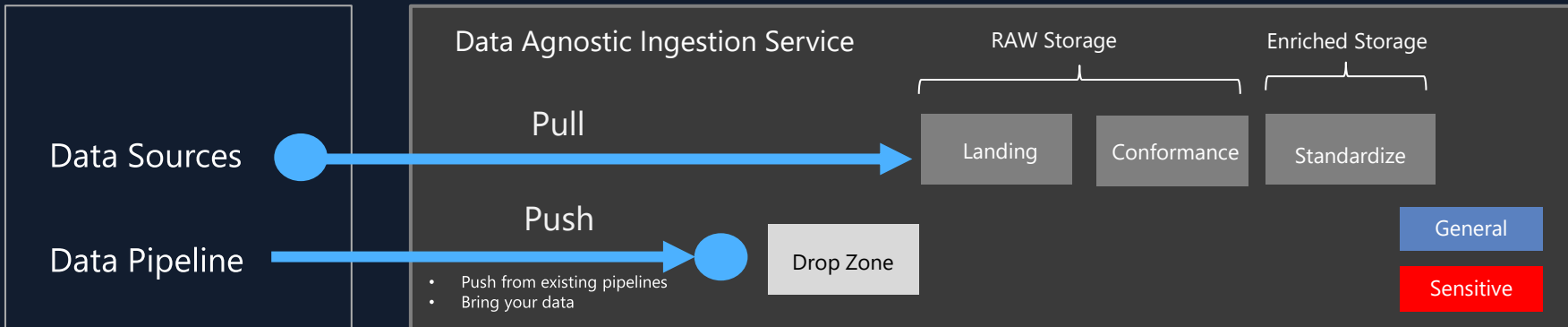
# Automated Operations

## Data Standardization and Data Agnostic Ingestion Services



On-premise or  
Other Cloud Provider

Azure



Note: Containers above are for illustration only.

- **Data Agnostic Ingestion Service**

- Pull\Push
- Format Agnostic
- Data Agnostic

- **Data Standardization Service**

- Analytics Format Conversion
- Versioning
- Merging
- PII Handling
- Data Quality
- Common Data Model Transformation
- Master Data Unification
- Synchronous Processing
- GDPR

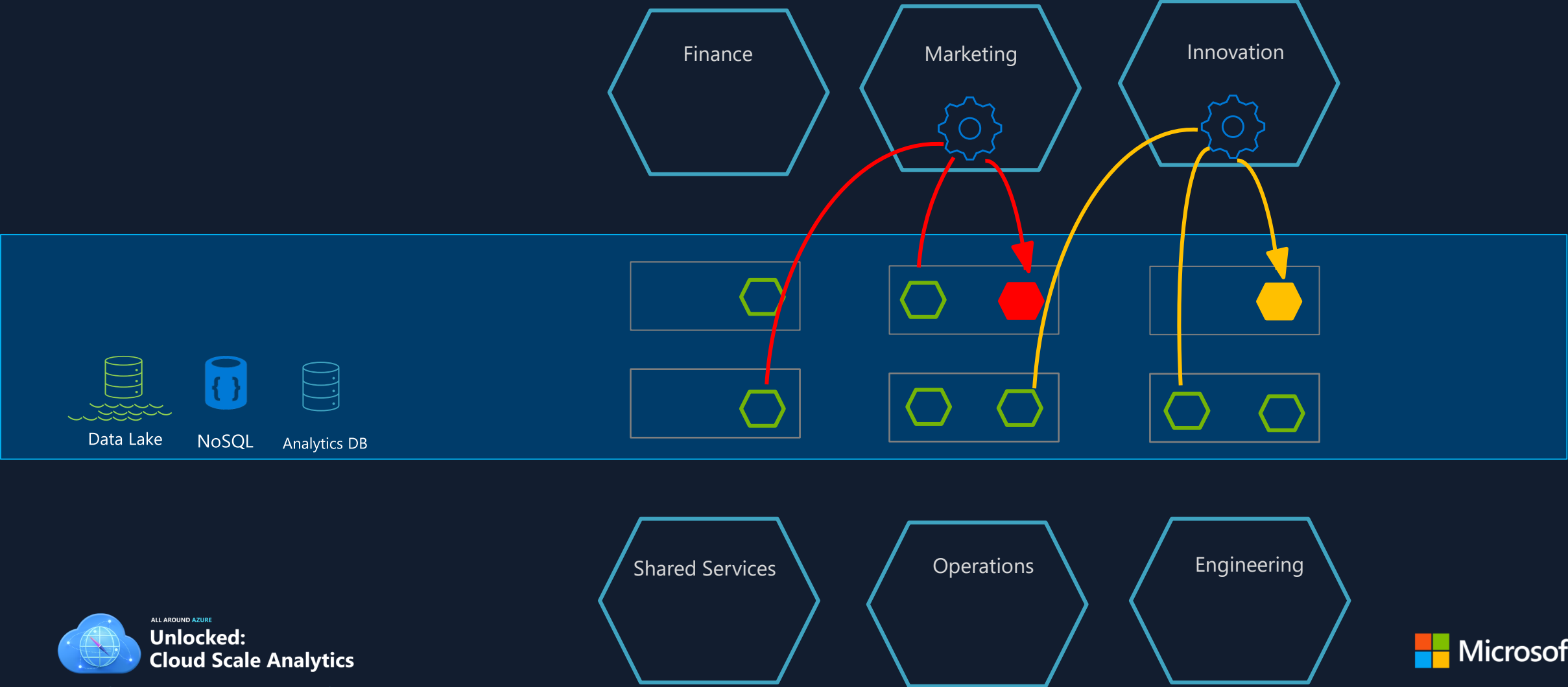


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# Polyglot Data Store



# Domain Architecture

Current Challenge: **Complexity!**

## ENTERPRISE REQUIREMENTS

Security & Privacy

Governance & Compliance

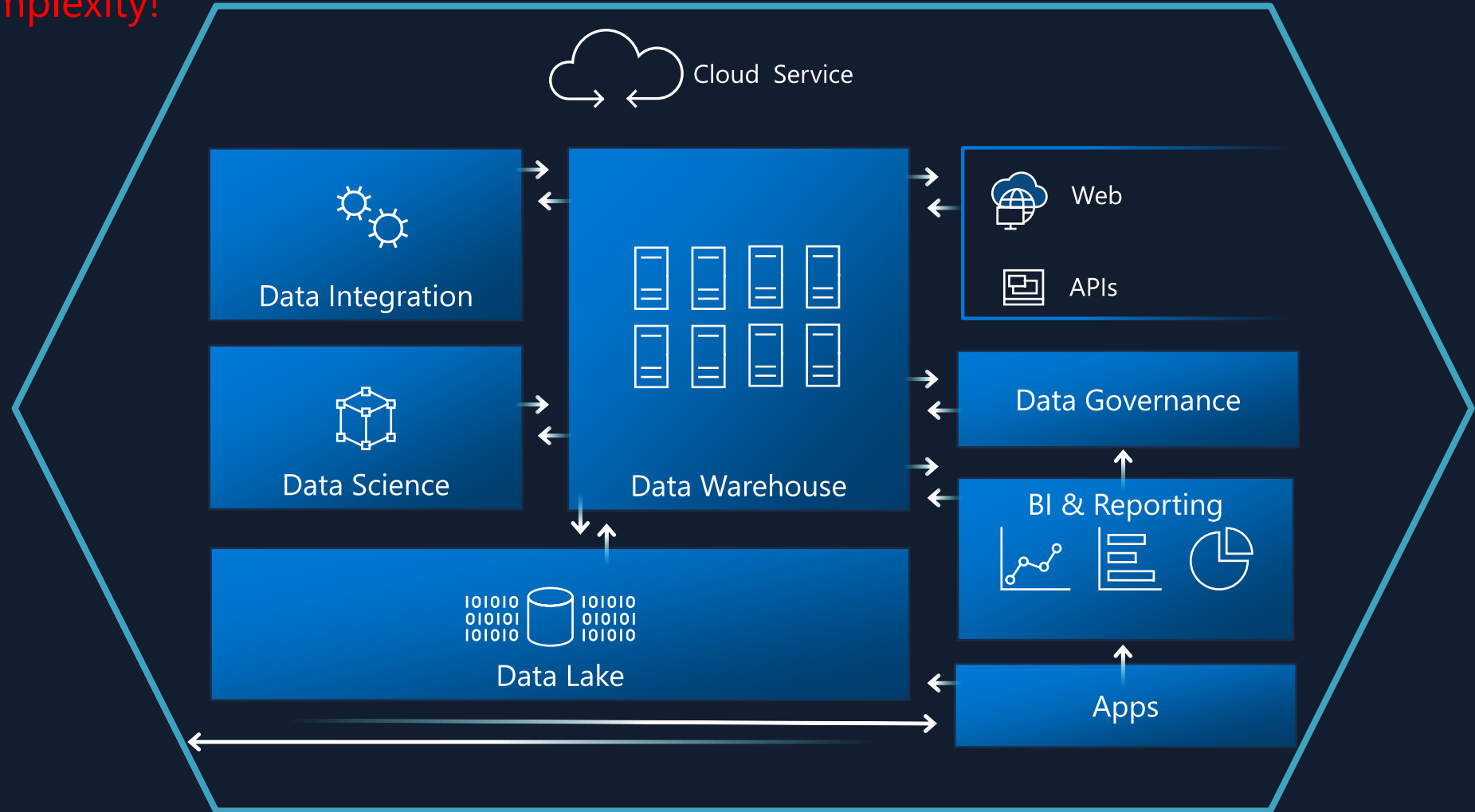
Availability & Recovery

Performance & Scalability

Skills & Training

Licensing & Usage

Observation & Monitoring



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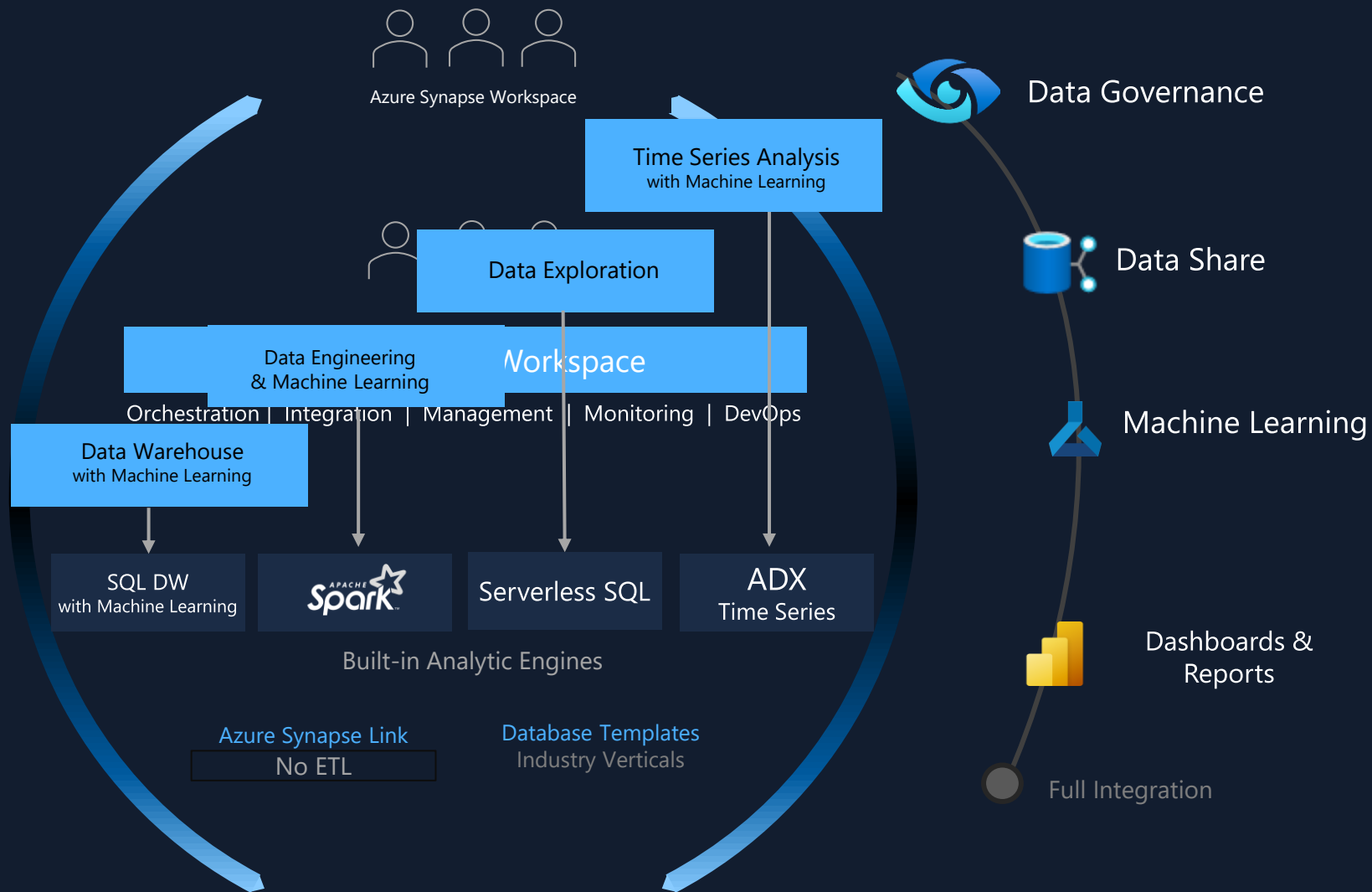
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# Azure Synapse Analytics

Unified, Secured, and Integrated Ecosystem



Polyglot Data Store:

On-premise



Cloud data



Operational Data



Streaming data



# Modern Analytics and Governance at Scale

## Alignment to the three defined layers of architecture of Data Mesh

### Mesh Experience Plane

Mesh Supervision  
Manage Mesh level graph



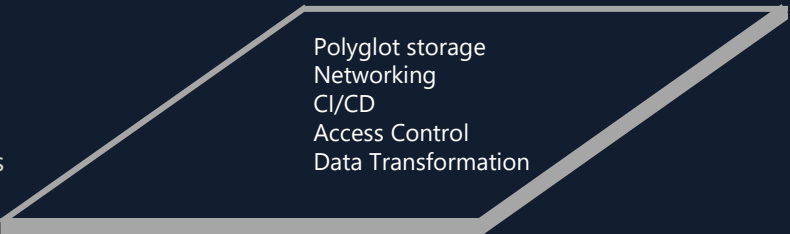
### Data Product Experience Plane

Data Product Lifecycle



### Utility Plane

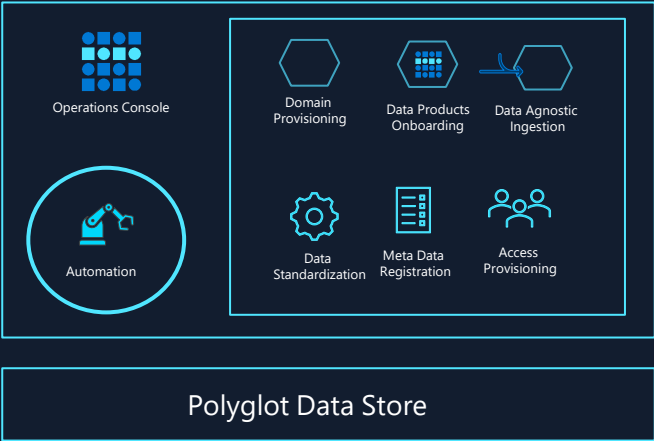
Multi-environment data Storage/Access  
Data transformation compute  
API and Services  
Data Observability  
Access Control



### Data Governance

- Data Product
  - Meta Data
  - Classification
  - Lineage
  - Data Profile
  - Data Owner
  - Business Glossary
  - Related Entities
- [Open In](#)

### Automated Services





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