

# Traditional Modern Data Warehouse



ORANGEMAN

# Just Thorning Blindbæk

- ▶ Self-employed BI consultant in justB
- ▶ Trainer at Orange Man
- ▶ Founder
  - Danish Microsoft BI Community ([MsBIP.dk](http://MsBIP.dk))
  - Power BI UG Denmark ([PowerBI.dk](http://PowerBI.dk))
- ▶ Strong focus on
  - Architecture
  - Analysis Services
  - Reporting Services
  - Power BI
- ▶ just@blindbaek.dk / blog.justB.dk / @justblindbaek



**Microsoft**  
CERTIFIED  
Trainer

**Microsoft**  
CERTIFIED  
IT Professional

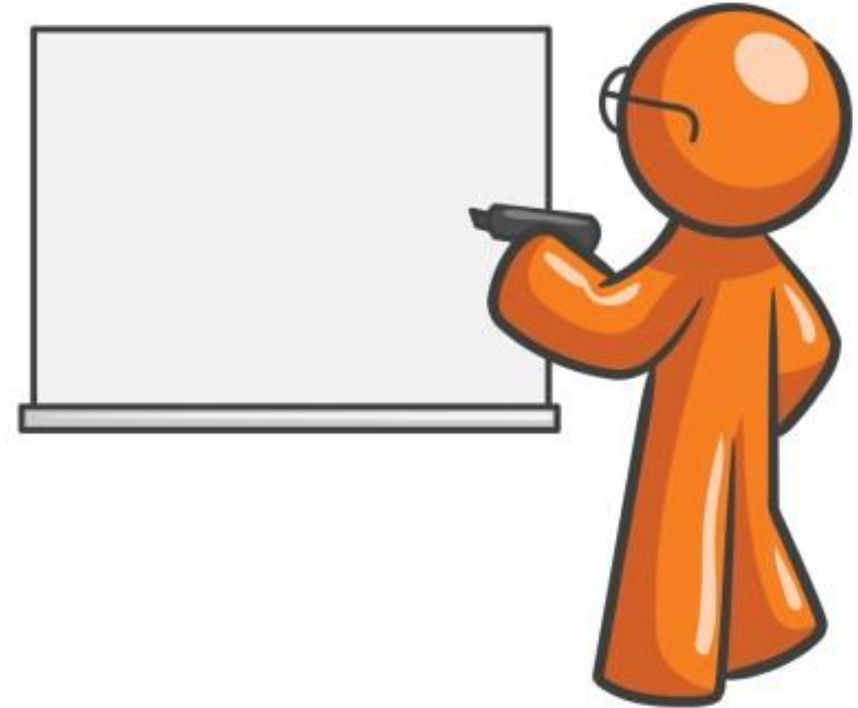
**SSAS**  
MAESTRO  
by Microsoft

**MVP** **Microsoft**  
Most Valuable  
Professional

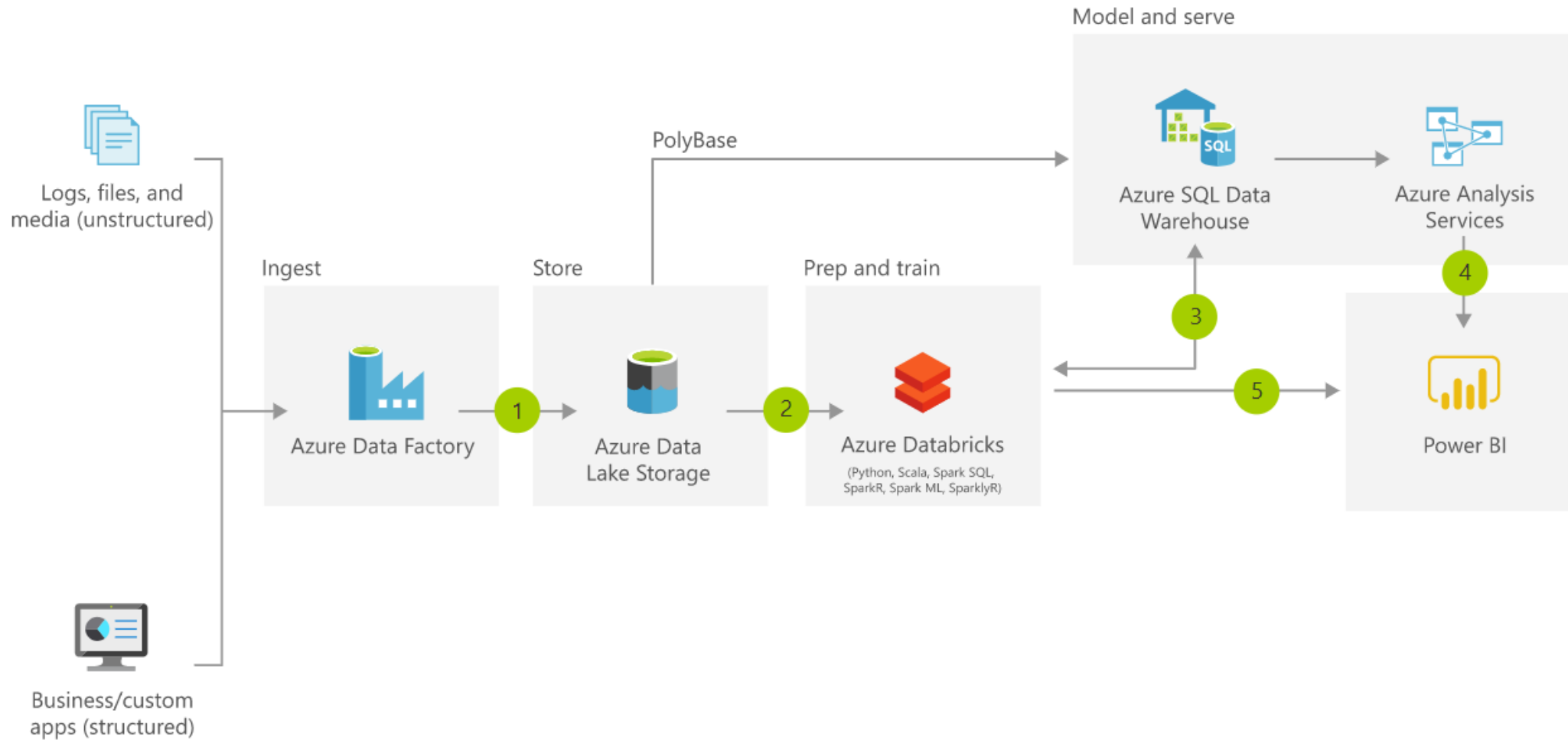
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# Agenda

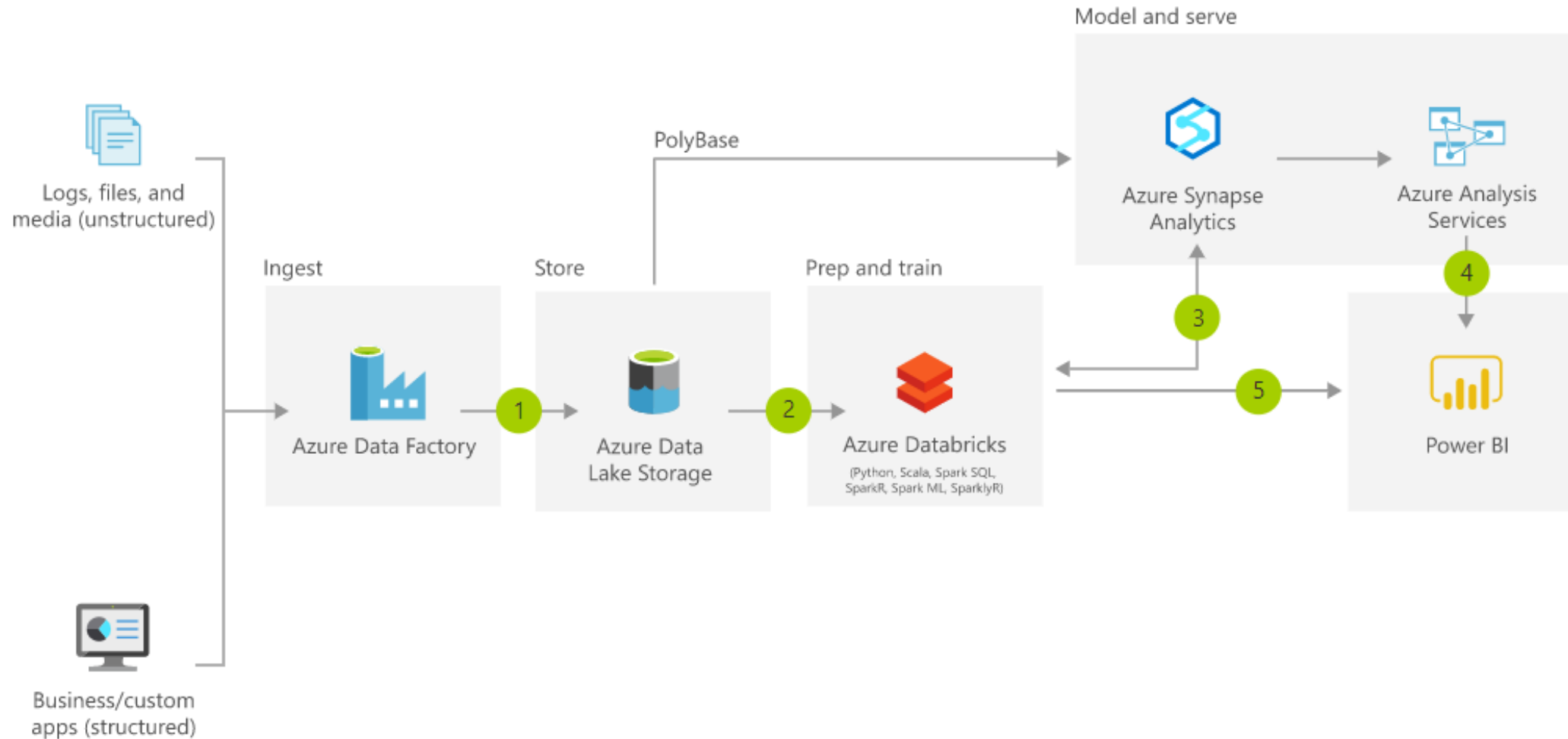
- ▶ Big data, big data, big data
  - Modern Data Warehouse
  - Synapse Analytics
- ▶ Small data – SMB market
  - ?
- ▶ Components
- ▶ Pricing estimate



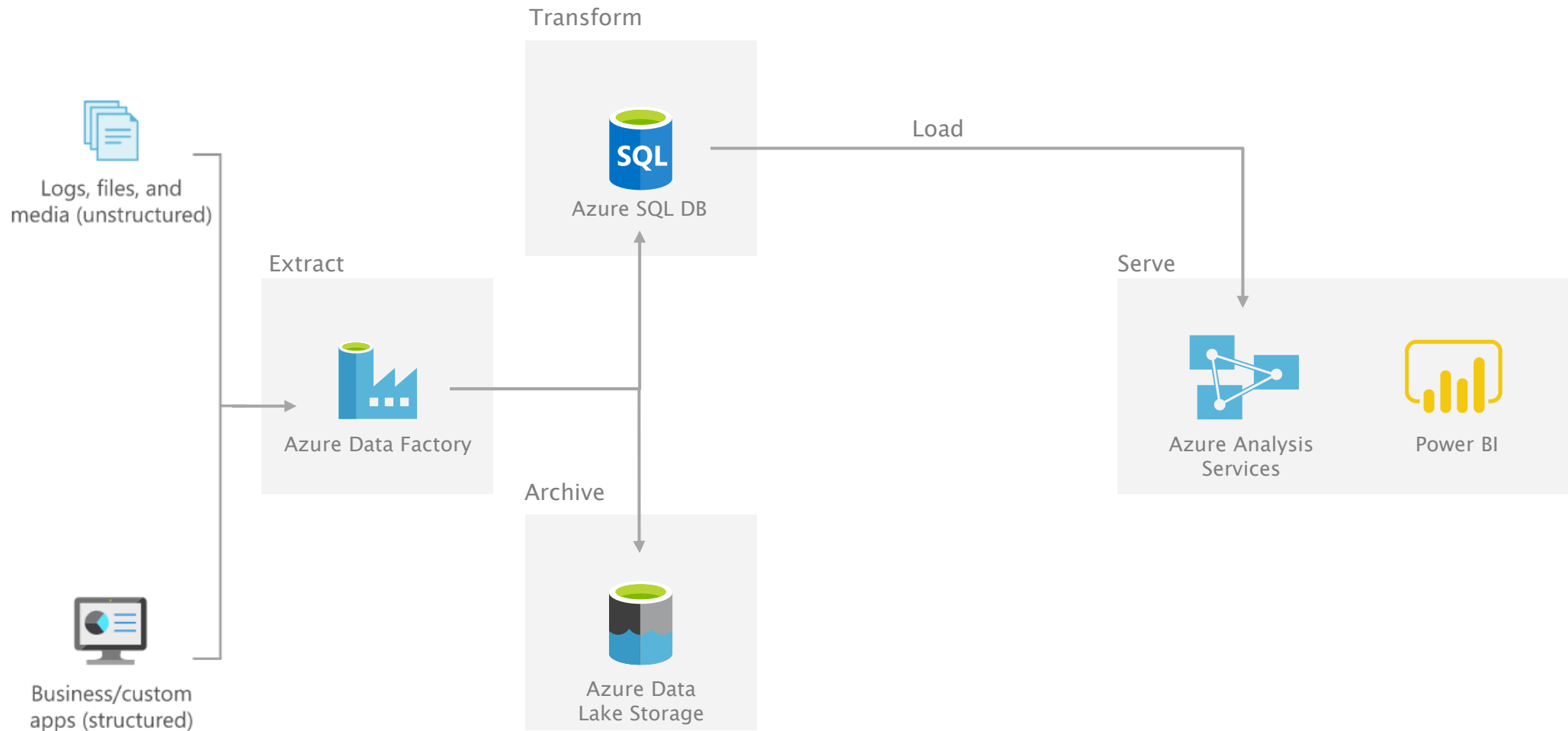
# Modern Data Warehouse in Azure



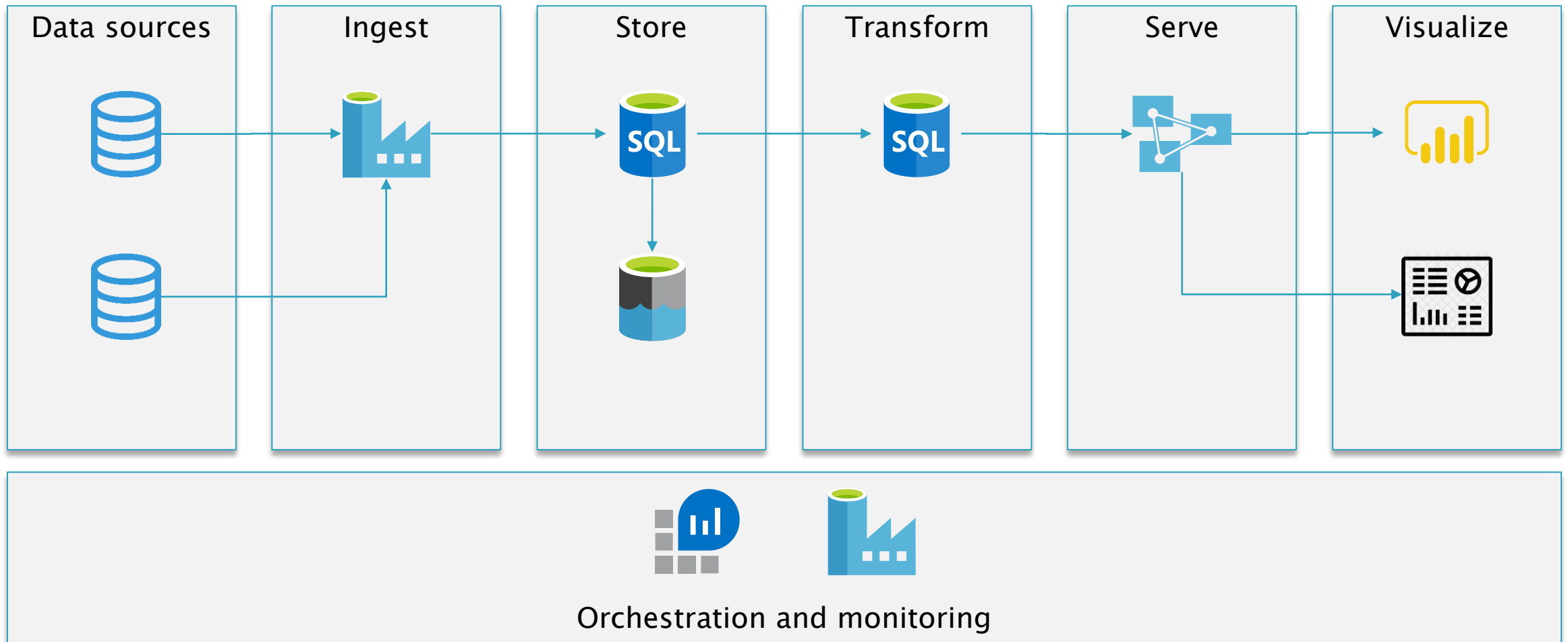
# Modern Data Warehouse in Azure



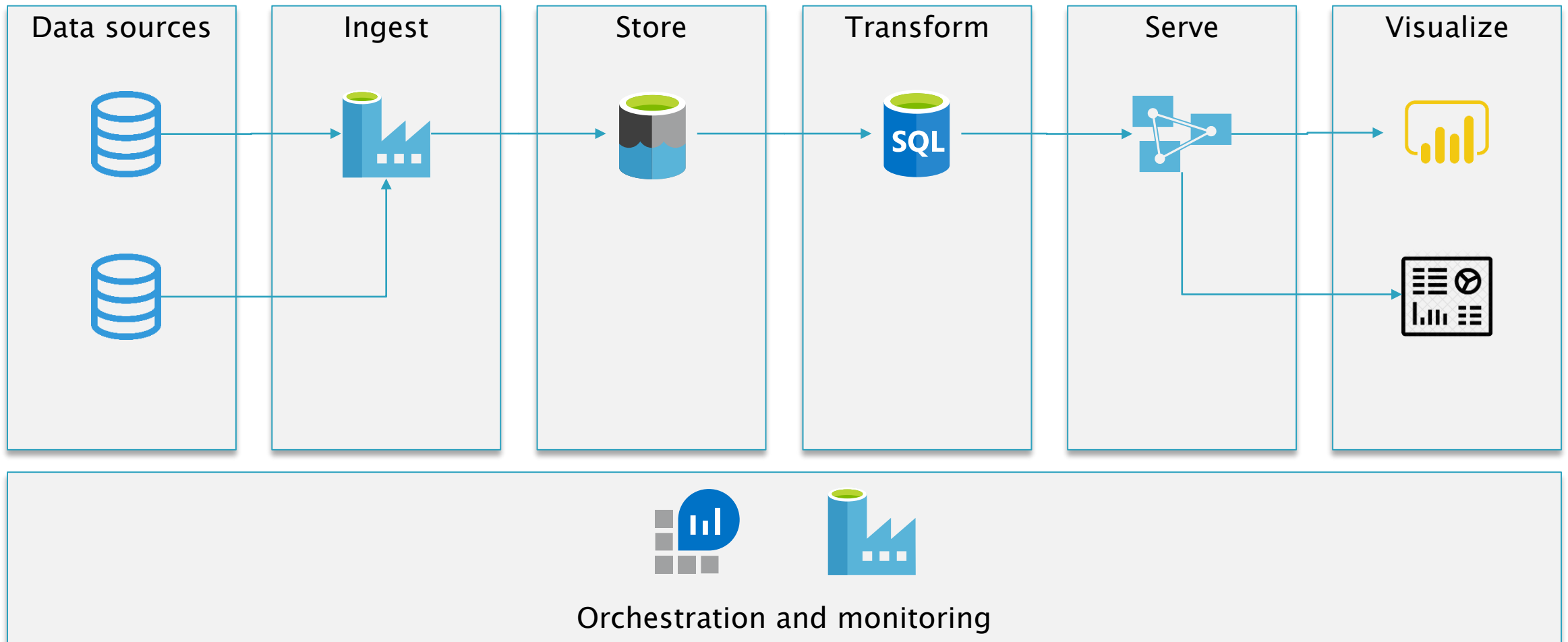
# Traditional Data Warehouse in Azure



# Traditional Data Warehouse in Azure

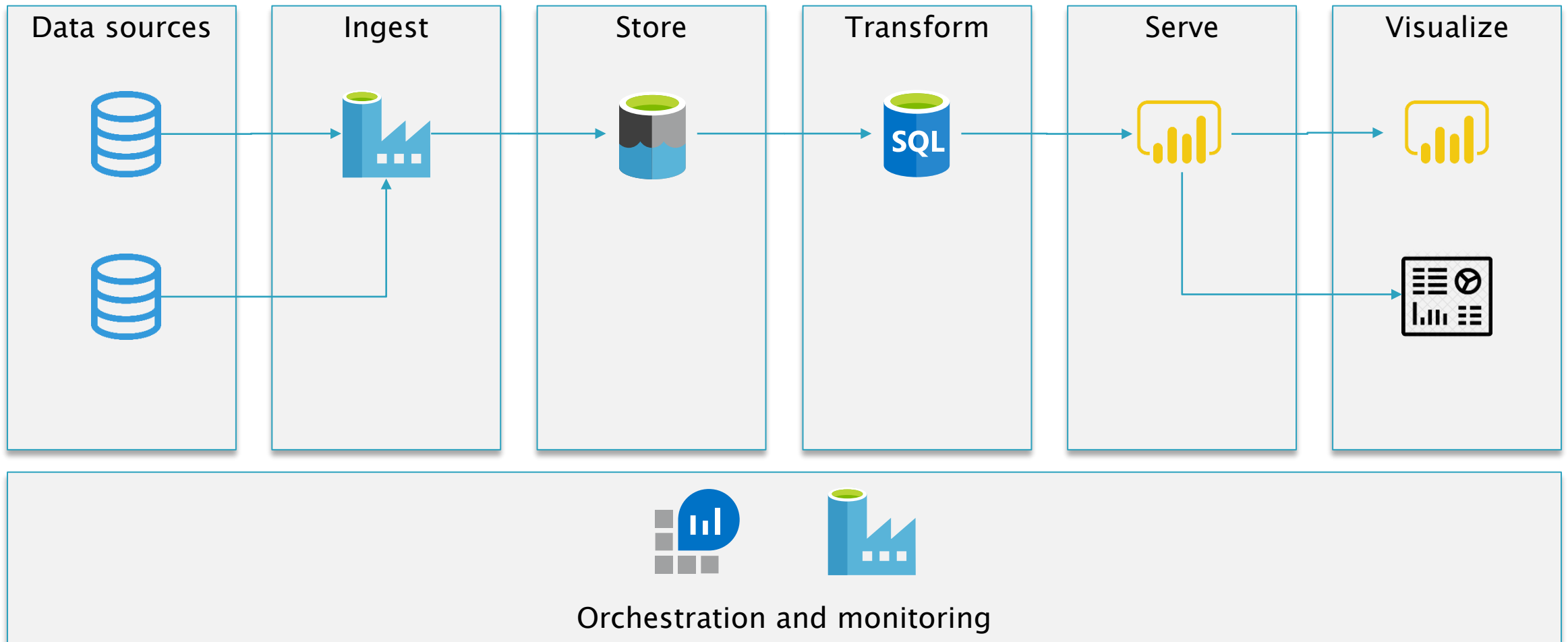


# Traditional Data Warehouse in Azure



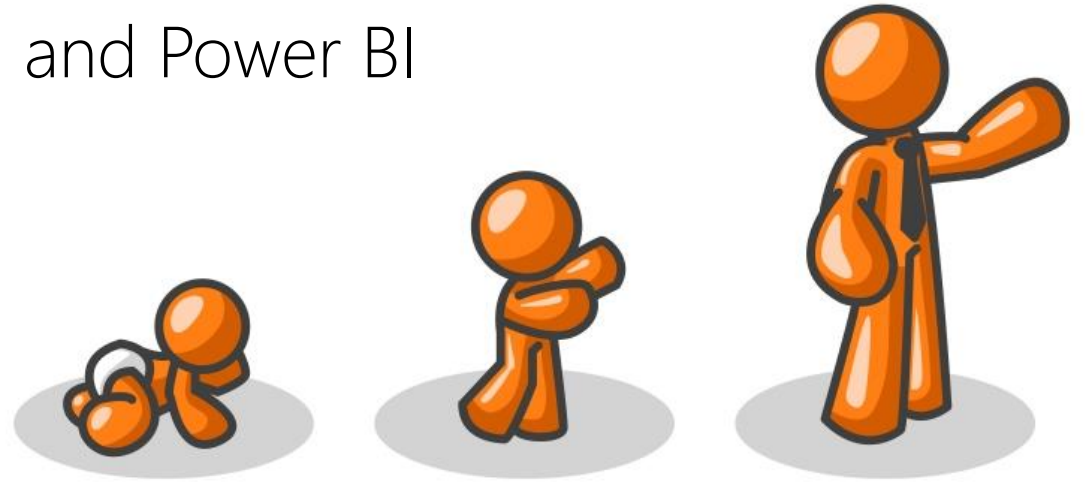


# Traditional Data Warehouse in Azure



# Components

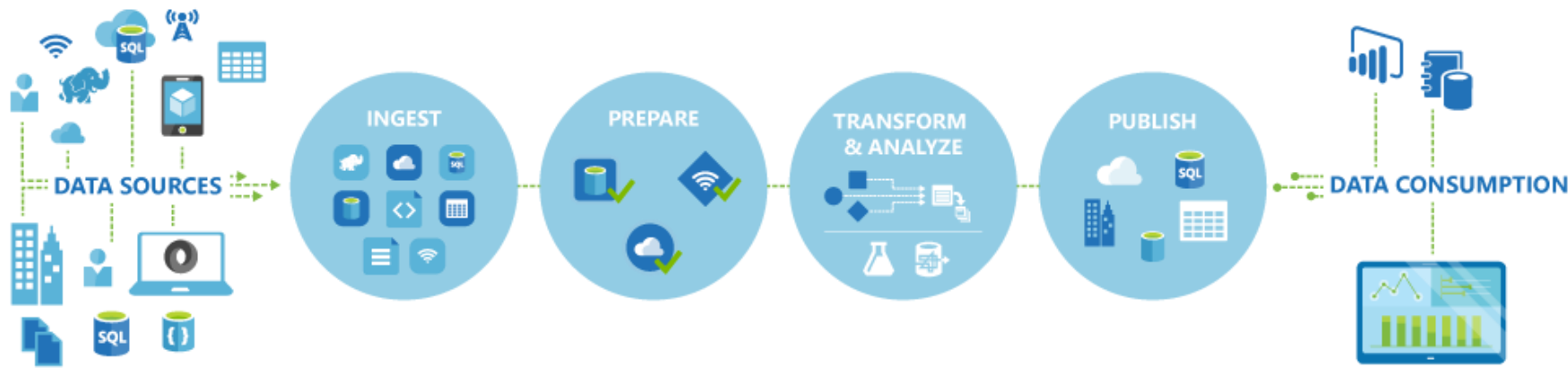
- ▶ Data Factory, Data Lake Store, SQL DB and Power BI



# Azure Data Factory



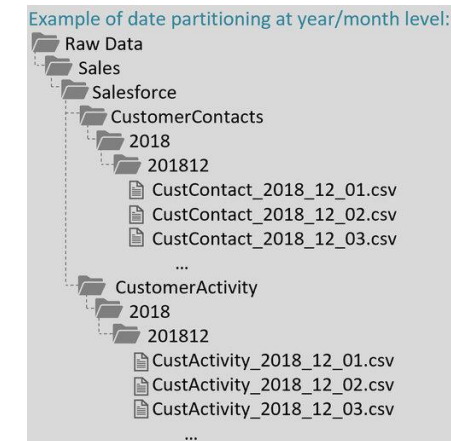
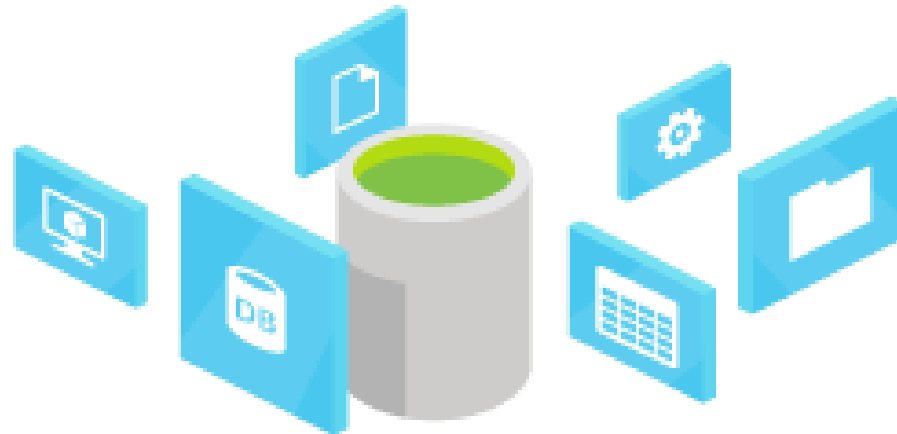
- ▶ Hybrid data integration at scale
- ▶ 80+ connectors provided to Cloud & Hybrid
- ▶ Create, plan, administer and monitor data pipelines
- ▶ Execute activities (copy, transform or orchestration)
- ▶ Parameters, control flow and triggers



# Azure Data Lake Store



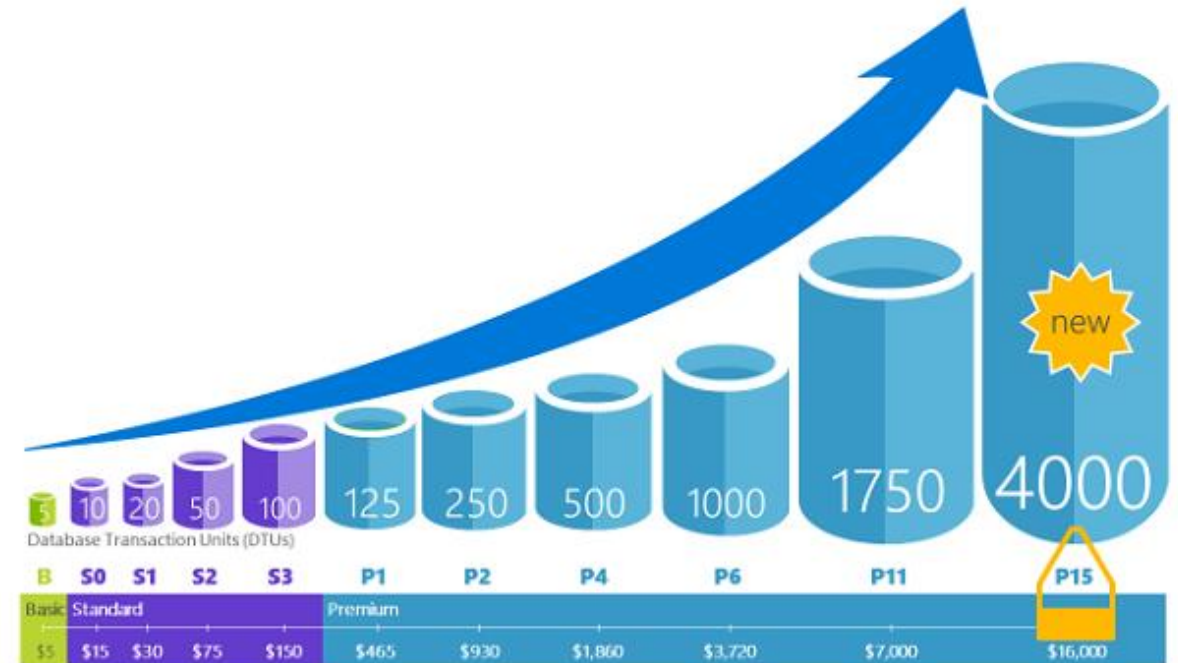
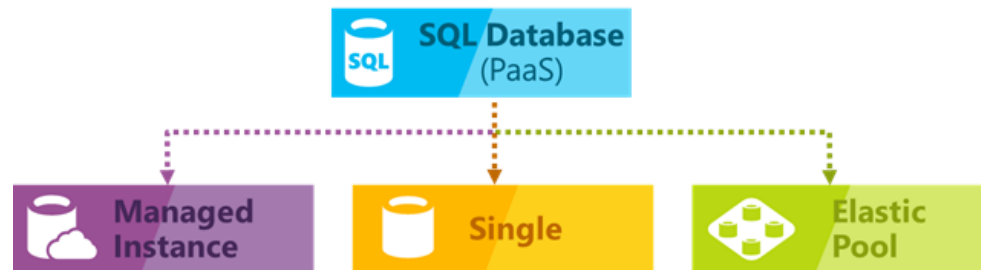
- ▶ Unlimited cheap, cheap, cheap storage
- ▶ Can handle structured, semi-structured, and unstructured data
- ▶ Apache Hadoop file system compatible (HDFS)



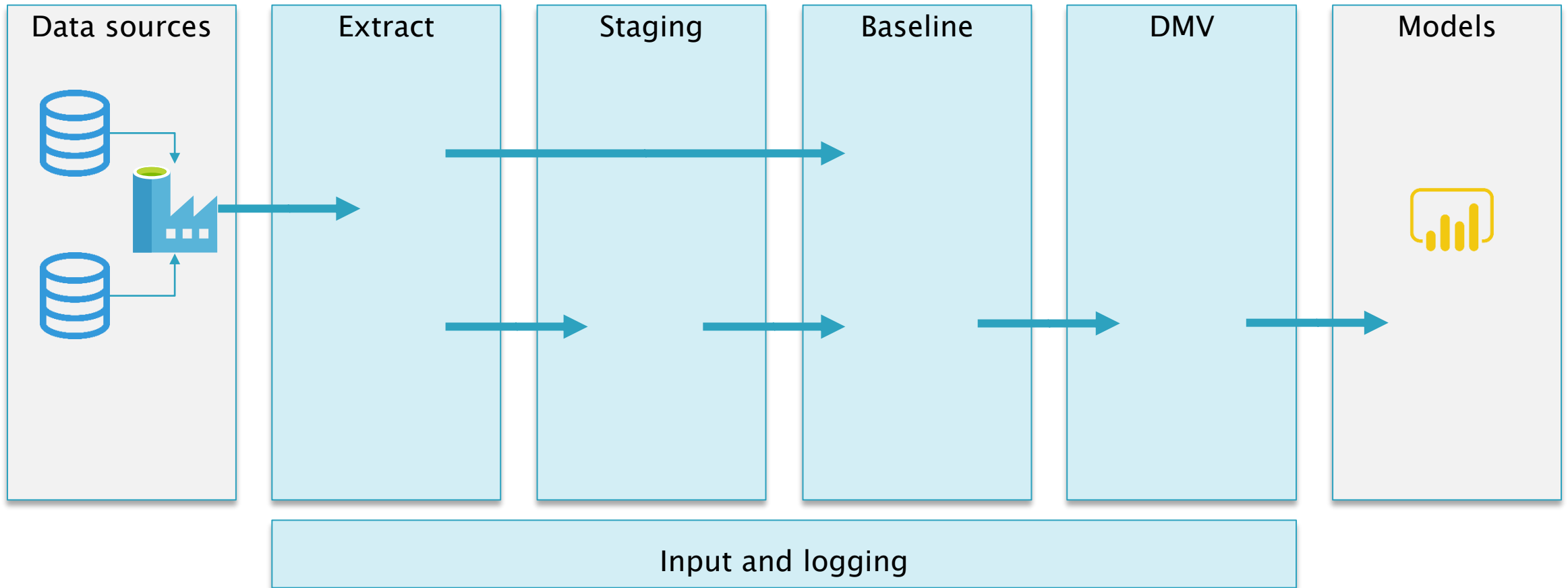
- ▶ Now we have Gen2 – combining Azure Blob Storage

# Azure SQL Database

- ▶ Relational database-as-a service
- ▶ Scale to your needs
- ▶ DTU- and vCore-based models

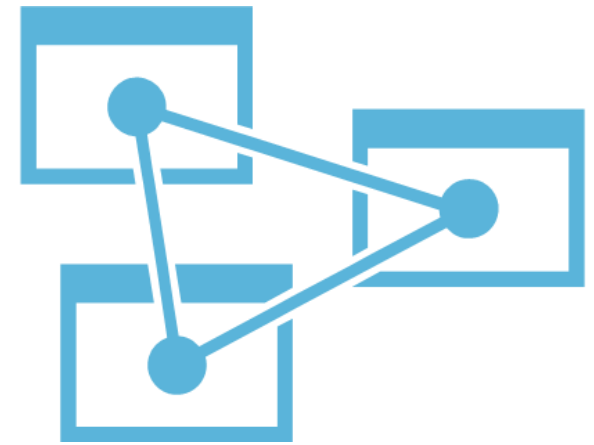


# Transform "framework" in SQL DB



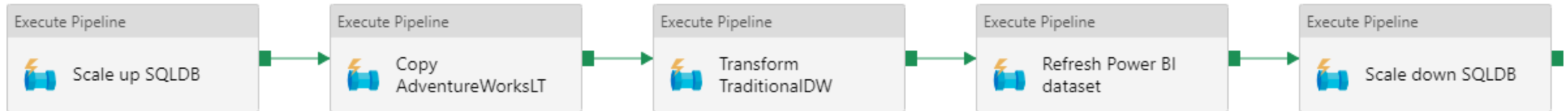
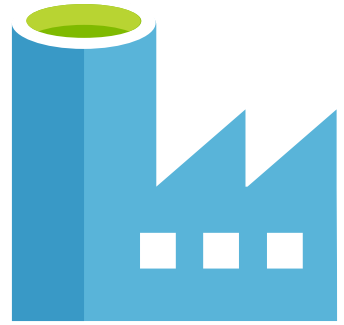
# Power BI

- ▶ Stunning visuals, reports and dashboards
- ▶ Analysis Services engine inside
- ▶ Security handled with RLS
- ▶ XMLA endpoint to manage the Semantic models



# Orchestration

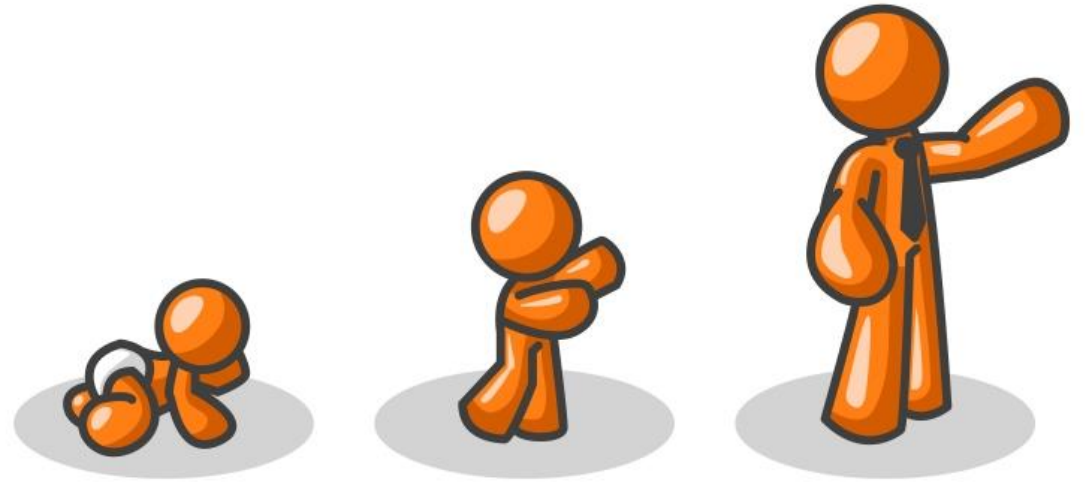
## ► Pipeline in Azure Data Factory





# Pricing

- ▶ Estimate



# Pricing estimate

- ▶ Azure pricing calculator

Service type	Description	Estimated Cost
Storage Accounts	Data Lake Storage Gen2, Standard, LRS Redundancy, Hot Access Tier, Hierarchical Namespace File Structure, 100 GB Capacity	kr. 59,86
Azure SQL Database	Single Database, DTU Purchase Model, Standard Tier, S0: 10 DTUs, 250 GB included storage per DB, 1 Database(s) x 640 Hours, 5 GB Retention	kr. 81,21
Azure SQL Database	Single Database, DTU Purchase Model, Standard Tier, S4: 200 DTUs, 250 GB included storage per DB, 1 Database(s) x 90 Hours, 5 GB Retention	kr. 228,40
Data Factory	Azure Data Factory V2 Type, Data Pipeline Service Type, Azure Integration Runtime: 1 Activity Run(s), 120 Data movement unit(s), 120 Pipeline activities	kr. 203,59
	Monthly Total	kr. 573,07
	Annual Total	kr. 6.876,83

# Questions



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# Usefull ressources

- ▶ Modern Data Warehouse: <https://azure.microsoft.com/en-us/solutions/architecture/modern-data-warehouse/>
- ▶ Data Factory pricing: <https://docs.microsoft.com/en-us/azure/data-factory/pricing-concepts>

