2 Batch ETL

Sources	Ingest	Transform	Query / Process	Serve	Analyse	Integrate

ETL

- Files / Logs (semi-structured)
- Sensors and IoT (unstructured)
- RDBMS (structured)
- Business Apps (structured)
- Media (unstructured)
- Other clouds

Federation

- Synapse
- SQL Server
- ...

Data Intelligence Platform

Automation & Orchestration

- Workflows
- CI/CD tools
- DataOps

Apps

Batch & Streaming

Data Science & Machine Learning (Mosaic AI)

Data Analysis

① Auto Loader

Lakeflow Connect — *See use case 1*

Date Engineering & Processing

- Delta Live Tables
- Spark / Photon

Data Warehousing

Batch & Streaming

- Azure Data Factory ...
- Fabric Data Factory

Data Intelligence Engine (Databricks IQ)

- Predictive IO
- Predictive optimization
- Assistant

④

Data and AI Governance (Unity Catalog)

③

- Catalog & Lineage
- Access Control

Lakehouse Monitoring

Operat. DBs

- SQL DB
- Cosmos DB

Data Management

- Delta Lake
- UniForm
- bronze → silver → gold

Collaboration

②

ADLS Gen 2

Storage

Integrate

ID Provider
- Entra ID

Governance
- Purview

AI Services
- Hugging Face
- OpenAI
- ...

Orchestration
- External Orchestrator

Key
Domain | Key capability

Legend:

① File ingest
② Batch ingest via partner tools
③ Check permissions and save data
④ Optional: Reverse ETL into OLTP systems