



Microsoft

Microsoft Fabric

FABRIC-WORKSHOP HANDS-ON EXPERIENCE

Agenda

- Welcome
- Intro to Fabric + Lab 0

Break

- Labs continued
- Lunch at 13:00
- Labs, Q&A

About Lars



- Joined Microsoft in January 2014
- 7.5 years at Microsoft Denmark
- Part of Fabric (Power BI) CAT since September 2021

About Dibakar



- Sr. Solution Engineer, Microsoft Norway
- ~10 years in Microsoft, 19 years in IT
- 8 years in Microsoft Norway



Microsoft

Microsoft Fabric

Introduction to Fabric

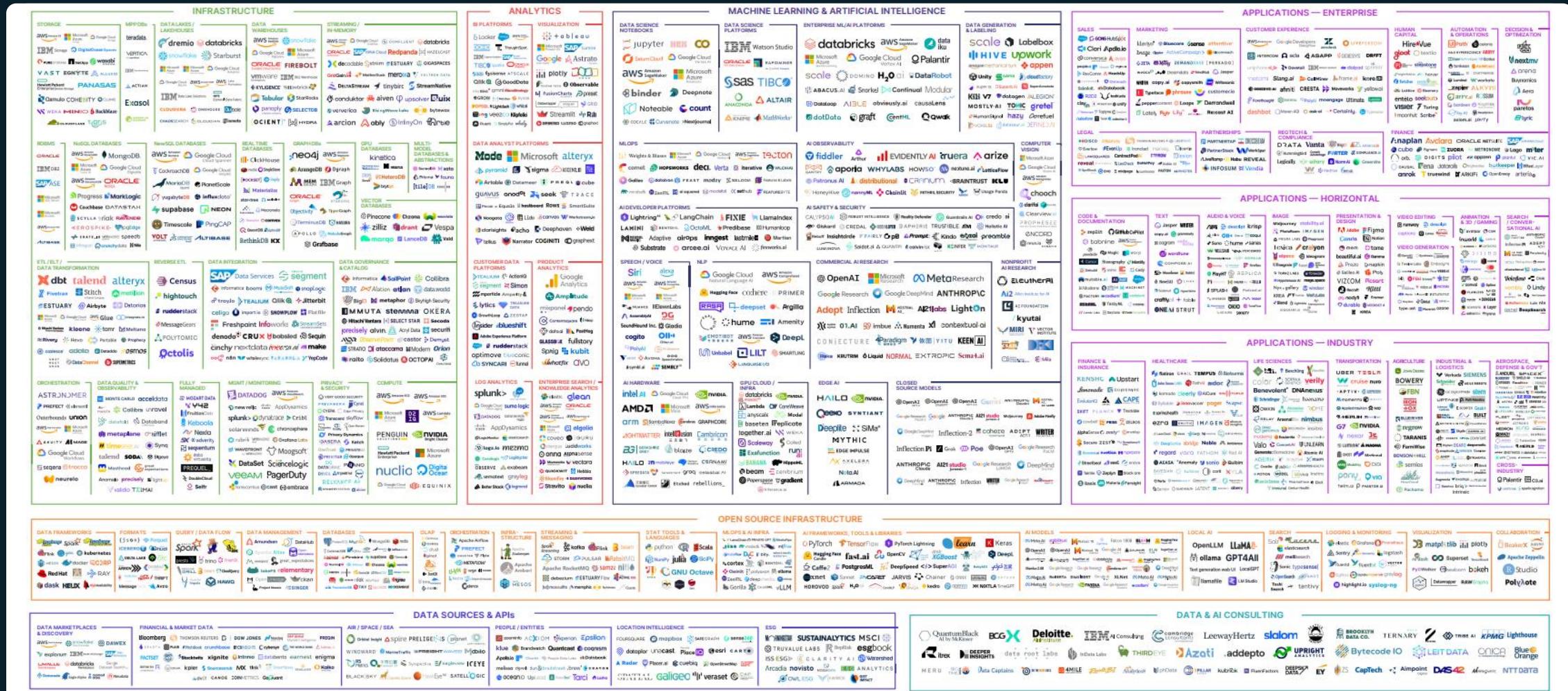
What do you prefer?





CIOs are accelerating their efforts
to bring AI to their data estate

Customers enhancing their data estate face immense complexity





Microsoft Fabric

The unified data platform for AI transformation



Data
Factory



Analytics



Databases



Real-Time
Intelligence



Power BI



Copilot



OneLake



Governance

Fabric Capacities



Microsoft Fabric

The unified data platform for AI transformation



Data
Factory



Analytics



Databases



Real-Time
Intelligence



IQ



Power BI



Copilot



OneLake



Governance

Fabric Capacities

Microsoft Fabric is a unified product for all your data and analytics workloads. Rather than provisioning and managing separate compute for each workload, with Microsoft Fabric, your bill is determined by two variables: the amount of compute you provision and the amount of storage you use.



COMPUTE

A shared pool of capacity that powers all capabilities in Microsoft Fabric.

Pay-as-you-go and 1-year Reservation.



STORAGE

A single place to store all data.

Pay-as-you-go (\$ per GB/month).

Microsoft Fabric

The unified data platform for AI transformation



AI-powered
data platform

Open and AI-ready
data lake

AI-enabled
business users

Microsoft Fabric

The unified data platform for AI transformation



AI-powered
data platform

Complete data platform

Unified, SaaS-ified

Secured and governed

Open and AI-ready
data lake

OneLake

Multi-cloud

Open at every tier

AI-enabled
business users

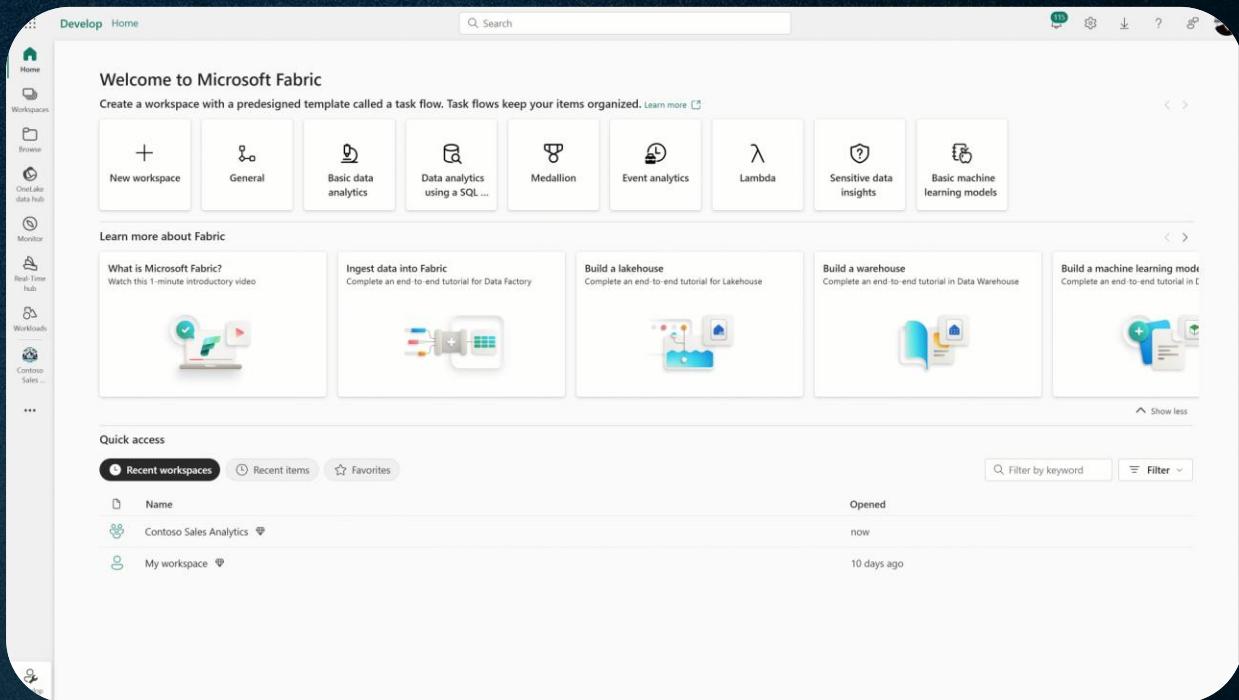
For every business user

Built into Microsoft 365

M365 Copilot Integrated

Unified project-centric development environment

Your one-stop shop for SQL, NoSQL, and analytics



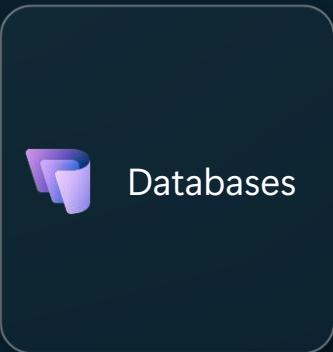
Unified experience with common project workspaces for end-to-end solutions

Fully integrated application lifecycle management streamlining development and operations

Copilot in every experience to boost productivity and uplevel skillsets

Microsoft Fabric

The unified data platform for AI transformation



Fabric Platform



AI



OneLake



Governance

Serverless compute



Single SaaS lake for the whole organization

Single open format used by all workloads to store and query data

Automatically indexed for discovery, MIP labels, lineage, PII scans, sharing, governance and compliance

Microsoft Fabric

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data platform

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OneLake

Multi-cloud

Open at every tier

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business users

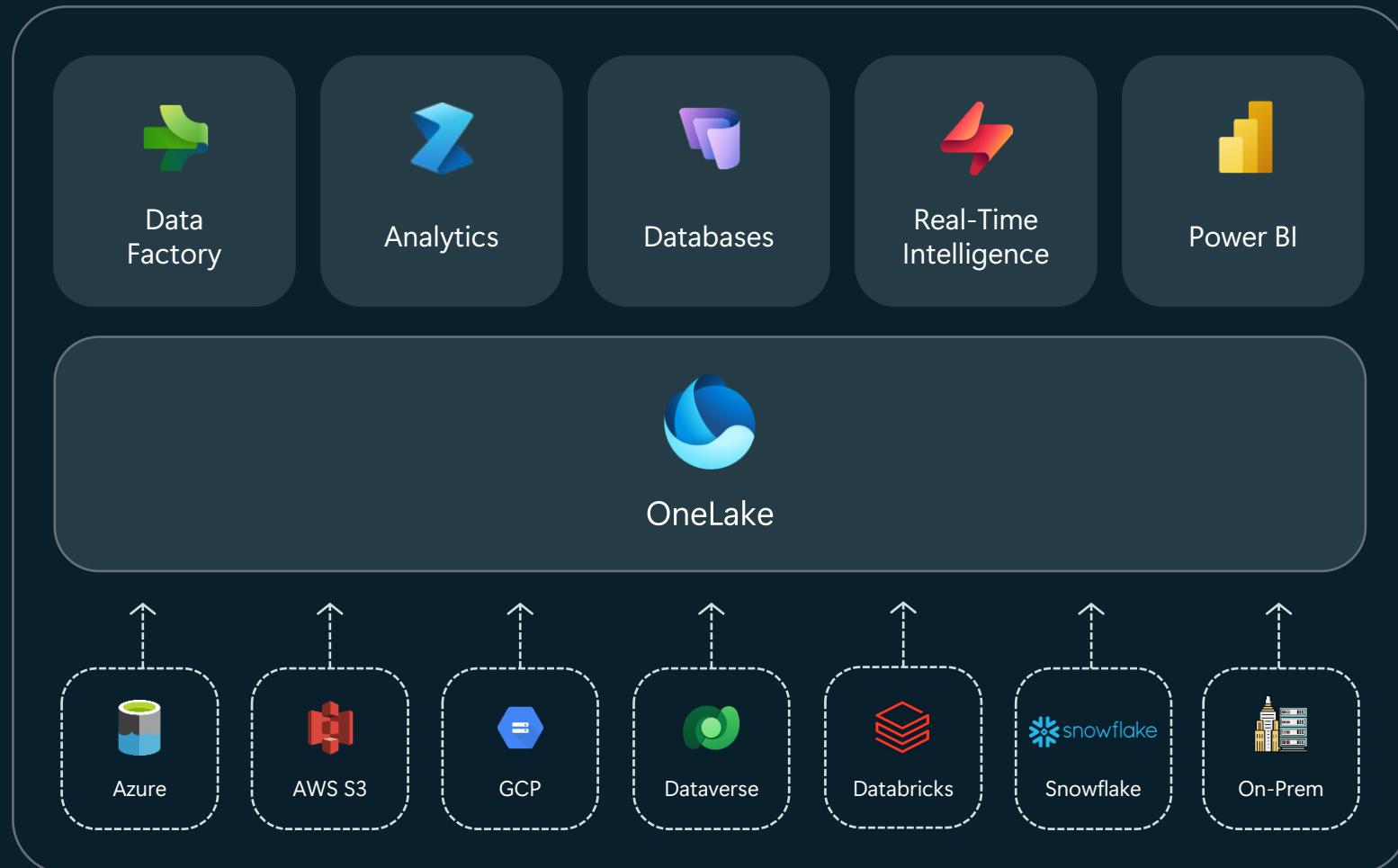
For every business user

Built into Microsoft 365

M365 Copilot Integrated

Unifying data in OneLake

Cross-cloud shortcuts and mirroring



First multi-cloud SaaS data lake

Shortcuts connect data across clouds and on-premises

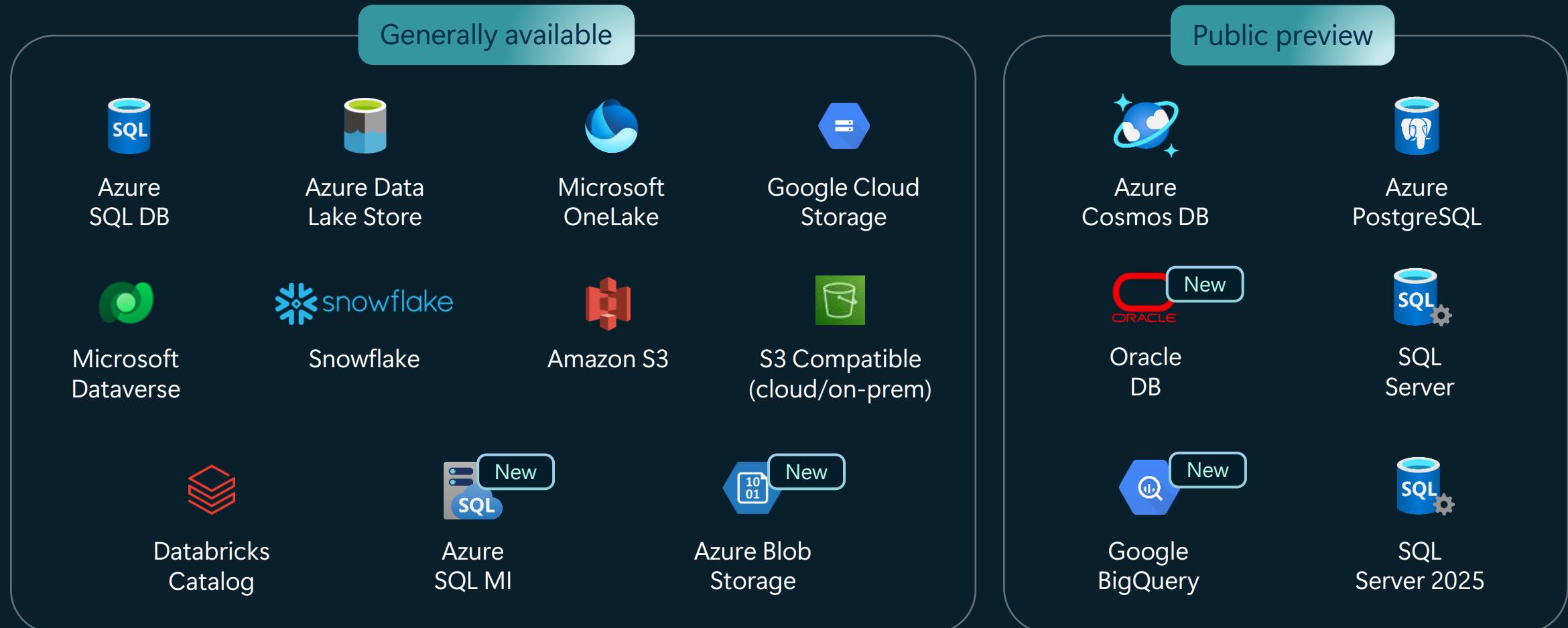
Shortcuts are instantaneous:
no data duplication or movement

Mirroring creates reflections
of entire databases in OneLake

Mirroring is free

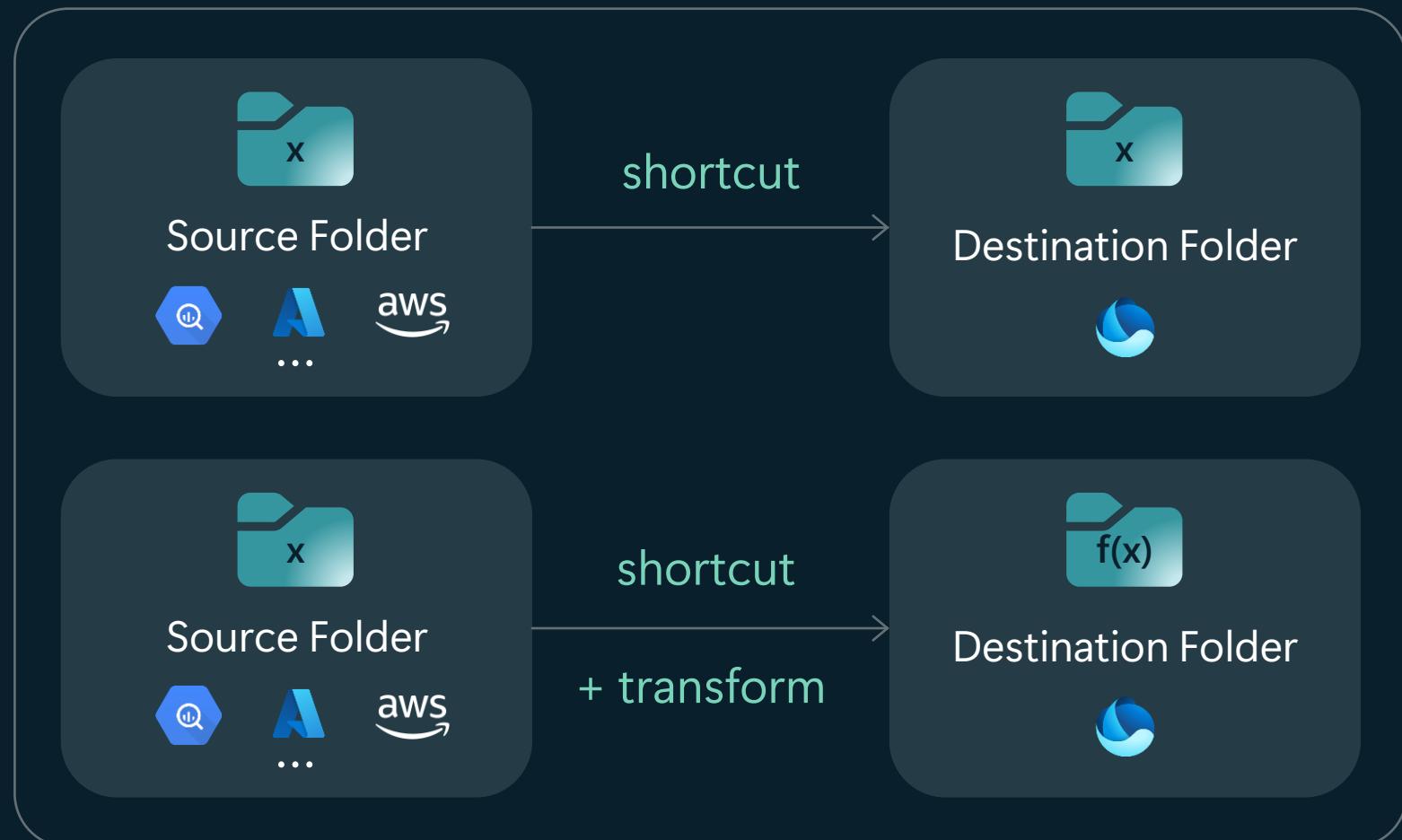
Unify data in OneLake with zero ETL

Shortcut and mirroring sources



Shortcut transformations

Seamless enrichment with AI in OneLake



AI transformations built directly into OneLake

Extend easily by pointing to source folders and adding defined transformations

Right-click operations enabled on all folders across all clouds

Auto track changes in source and sync the destination

Microsoft Fabric

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AI-powered
data platform

Complete data platform

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OneLake

Multi-cloud

Open at every tier

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business users

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Microsoft Fabric

The unified data platform for AI transformation



Power BI



Semantic Models



Exploration



Visualization



AI



OneLake

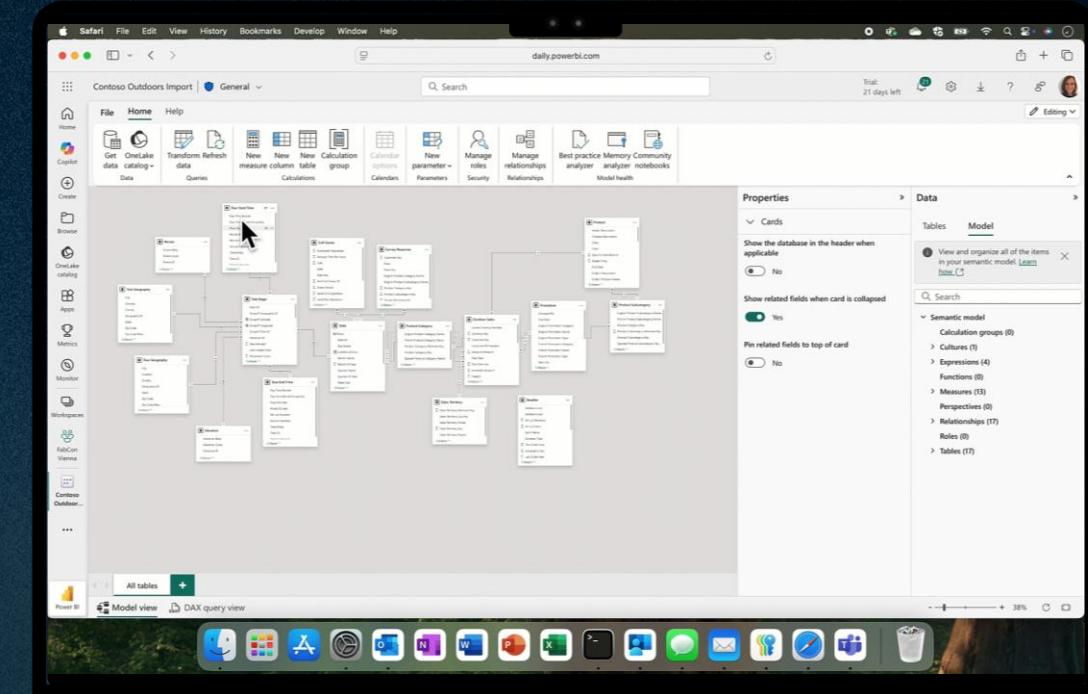


Governance

Fabric Platform

Web Modelling in Power BI

All the capabilities you know and love, now in your browser



Create models and reports from your browser, Mac users included

Combine Direct Lake and Import modes for composite models

Power Query support for Fabric—plus 100s of other sources

Seamless integration with OneLake and all of Fabric



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Factory



Analytics



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Real-Time
Intelligence



IQ



Power BI



Copilot



OneLake



Governance

Fabric Capacities



Microsoft Fabric

The unified data platform for AI transformation



IQ



Ontology
Models



Digital
Twins



Graph



Operations
Agents

Fabric Platform



Copilot



OneLake



Governance

Fabric Roadmap

 Microsoft Fabric Roadmap [Forums](#) [Inspiration](#) [Ideas](#) [Communities](#) [Blogs](#) [Learning](#) [Support](#)

Administration, Governance and Security

[Cosmos DB \(NoSQL\)](#)

[Data Engineering](#)

[Data Factory](#)

[Data Science](#)

[Data Warehouse](#)

[Fabric Developer Experiences](#)

[Fabric Ecosystem](#)

[OneLake](#)

[Power BI](#)

[Real-Time Intelligence](#)

[SQL database](#)

Planned Try Now All
All features planned All features recently released All features planned and released

Feature	Status	Release Date	More
Outbound Access Protection for DI	Planned	Public preview Q4 2025	
OneLake Catalog - Govern Tab For Admins	Planned	Public preview Q4 2025	
Capacity Events in Real-Time Hub (RTH) - Overview Events	Planned	Public preview Q4 2025	
Sensitivity labels in Public APIs	Planned	General availability Q4 2025	
Fabric OneLake catalog - Enhanced Exploration	Planned	General availability Q4 2025	
OneLake catalog - Copilot for Semantic model summary	Planned	Public preview Q4 2025	
Fabric Capacity Metrics App - Chargeback	Planned	General availability Q1 2026	

aka.ms/fabricroadmap





Microsoft

Microsoft Fabric

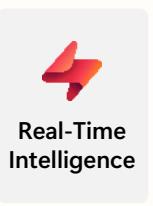
Workloads in Fabric

Data Factory workload

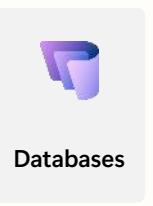
Dataflows and data pipelines bring together low-code, AI-based experiences, multi-cloud connectivity, and persistent data security and governance to help solve complex ETL scenarios for all developers



Data Factory



Real-Time
Intelligence



Databases



Data
Engineering



Data
Warehouse



Data
Science



Power
BI



Copilot in Microsoft
Fabric



OneLake



Security, Governance and Administration with
Purview



170+ native data source connectors



300+ data transformations in dataflows
designer to transform data more easily



Cloud-scale data movement with Data
Factory



Low-code interface for ingesting data
from hundreds of data sources using
Dataflows Gen2



Out-of-the-box rich data orchestration
capabilities to compose flexible workflows



Powerful, enterprise-grade Data Factory
workload with the best of ADF and Power
Query together





Data Factory

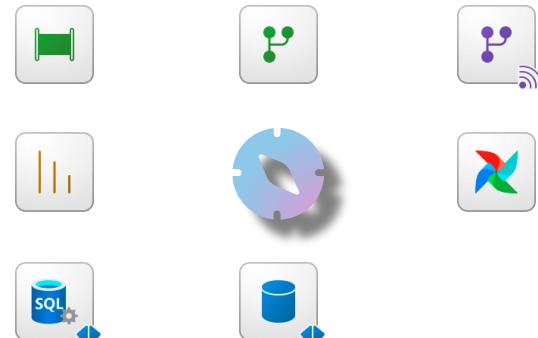


Best-in-class connectivity

Data Movement

Orchestration

Transformation



Deployment & observability



OneLake

AI-powered intelligence

Real-Time Intelligence workload

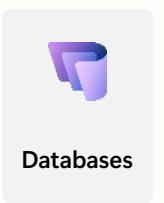
Explore data and turn insights into actions by performing real-time analysis across telemetry data to better predict, optimize, and improve data applications



Data
Factory



Real-Time
Intelligence



Databases



Data
Engineering



Data
Warehouse



Data
Science



Power
BI



Copilot in Microsoft
Fabric



OneLake



Security, Governance and Administration with
Purview



Ingest, transform, query, visualize, and act on data in real time.



Simple ingestion, curation and processing of streaming data in the Real-Time Hub, a single data estate for data in motion.



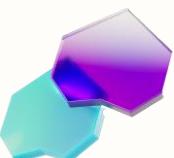
No-, low-, and pro-code experiences for everything from business insight discovery to complex stream processing.



Create triggers on changing data to act automatically when conditions are met.

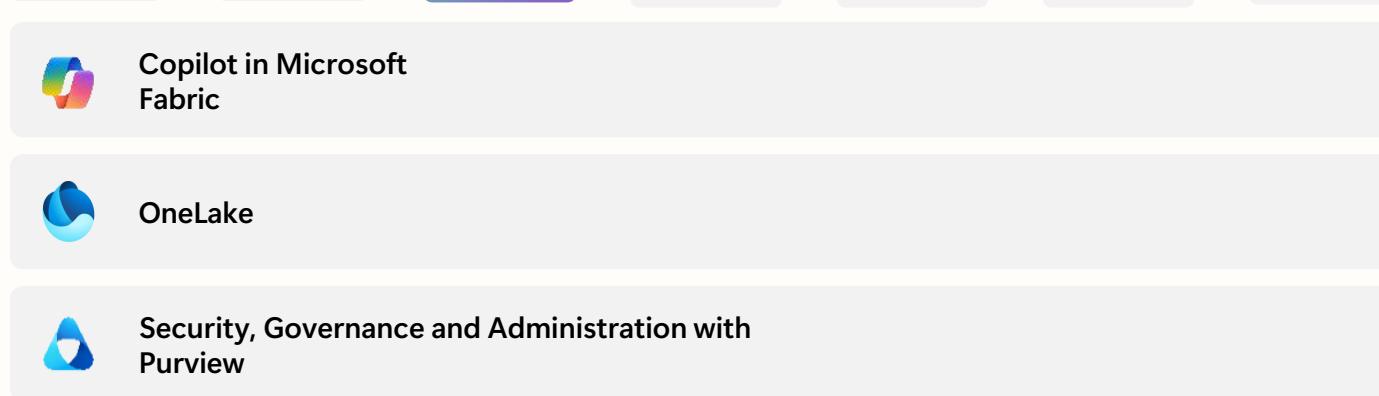


Streamline analysis of event streaming data with Copilot in Fabric.



Databases workload

Unite transactional, analytical, and AI workloads with Fabric Databases to streamline AI application development and build reliable, highly scalable applications and unlock AI transformation



- ❯ Leverage a SQL database where cloud authentication and encryption are on by default
- ❯ Increase analytical agility, design tables, view and edit data, and create T-SQL queries with our Copilot support
- ❯ Spend less time planning for spiky workloads with serverless, auto-scaled compute and storage
- ❯ Get fast and consistent app performance with resource optimization and intelligent auto-indexing
- ❯ Use chat-based natural language to SQL queries and database administration





Microsoft Fabric

The unified data platform for the AI Frontier



Data
Factory



Analytics



Databases



Real-Time
Intelligence



Power BI



Copilot



OneLake



Governance

Fabric Platform



Microsoft Fabric

The unified data platform for the AI Frontier



Databases



SQL database



Cosmos DB

GA



Copilot



OneLake



Governance

Fabric Platform



Fabric Databases

Accelerate app innovation on an AI-powered data platform

Simplified

VS Code and GitHub integration

Operational and analytical

Secured and governed by default

Autonomous

Best practices, built-in

Auto-managed HADR

Auto-scaling and auto-optimized

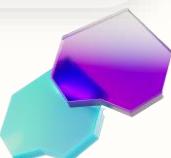
Optimized for AI

Vector and RAG support

Integration with Azure AI

Copilot assistance

Deploy a database in seconds, built upon the familiar engine, in
Microsoft Fabric

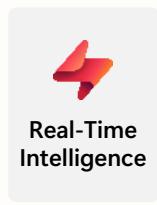


Data Engineering workload

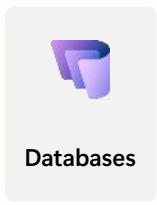
Build your data estate and empower data engineers with a world-class Spark platform, fully integrated with Data Factory, to transform and maintain infrastructures at scale



Data
Factory



Real-Time
Intelligence



Databases



Data
Engineering



Data
Warehouse



Data
Science



Power
BI



Copilot in Microsoft
Fabric



OneLake



Security, Governance and Administration with
Purview



Pro and low-code authoring experience



Schedule and orchestrate data
transformations with notebooks and
Spark jobs



Use notebooks to write code for data
ingestion, preparation, and transformation



Launch clusters on demand and
dynamically scale in, scale out, pause, and
resume



Perform code-free interactive data
exploration and add to your data pipeline

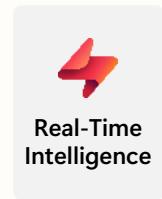


Data Warehouse workload

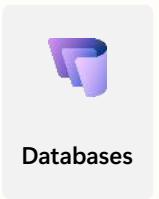
Achieve data platform goals with ease and cost efficiency, while empowering your developers and engineers of any skill level with accelerated reporting and insights



Data
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Intelligence



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Data
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Power
BI



Copilot in Microsoft
Fabric



OneLake



Security, Governance and Administration with
Purview



Industry-leading SQL performance and scale



Fully separate compute storage that can independently scale



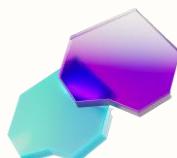
Natively store data in open Parquet/Delta Lake



TLS 1.2 encryption protects connections for granular security across data platform



Cross-database querying for fast insights and zero data duplication



Data Science workload

Build, deploy, and operationalize sophisticated AI and ML models with speed and at scale from your Lakehouse

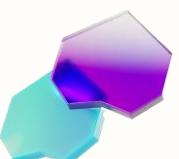


 **Copilot in Microsoft Fabric**

 **OneLake**

 **Security, Governance and Administration with Purview**

- Access data from multiple sources and store data and insights in Lakehouse(s)
- Leverage data science capabilities for model prediction at scale
- Perform exploration, experimentation, modeling, featurization and serving of predictive insights by leveraging built-in experiences, including AI functions
- Collaborate with others via Notebook, Power BI, and Lakehouses in real-time
- Use Data Agents to curate and configure a 'data expert' on data domains, influencing the behavior of conversational Q&A systems on Fabric using GenAI

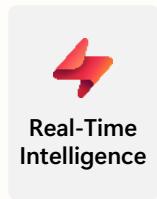


Power BI workload

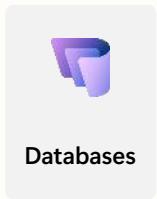
Uncover powerful insights with intelligence visuals, leverage data quickly and intuitively, and help achieve faster and better, data-based decisions with the industry-leading Power BI platform



Data
Factory



Real-Time
Intelligence



Databases



Data
Engineering



Data
Warehouse



Data
Science



Power
BI

- Copilot in Microsoft Fabric
- OneLake
- Security, Governance and Administration with Purview



Easy-to-use drag and drop canvas and visualizations for insightful and engaging report-building in seconds



Native Integration with Microsoft 365



Built-in AI capabilities and visuals illuminate hidden patterns, opportunities and anomalies with the click of a button



Connect to, index, and certify datasets in the Power BI data hub

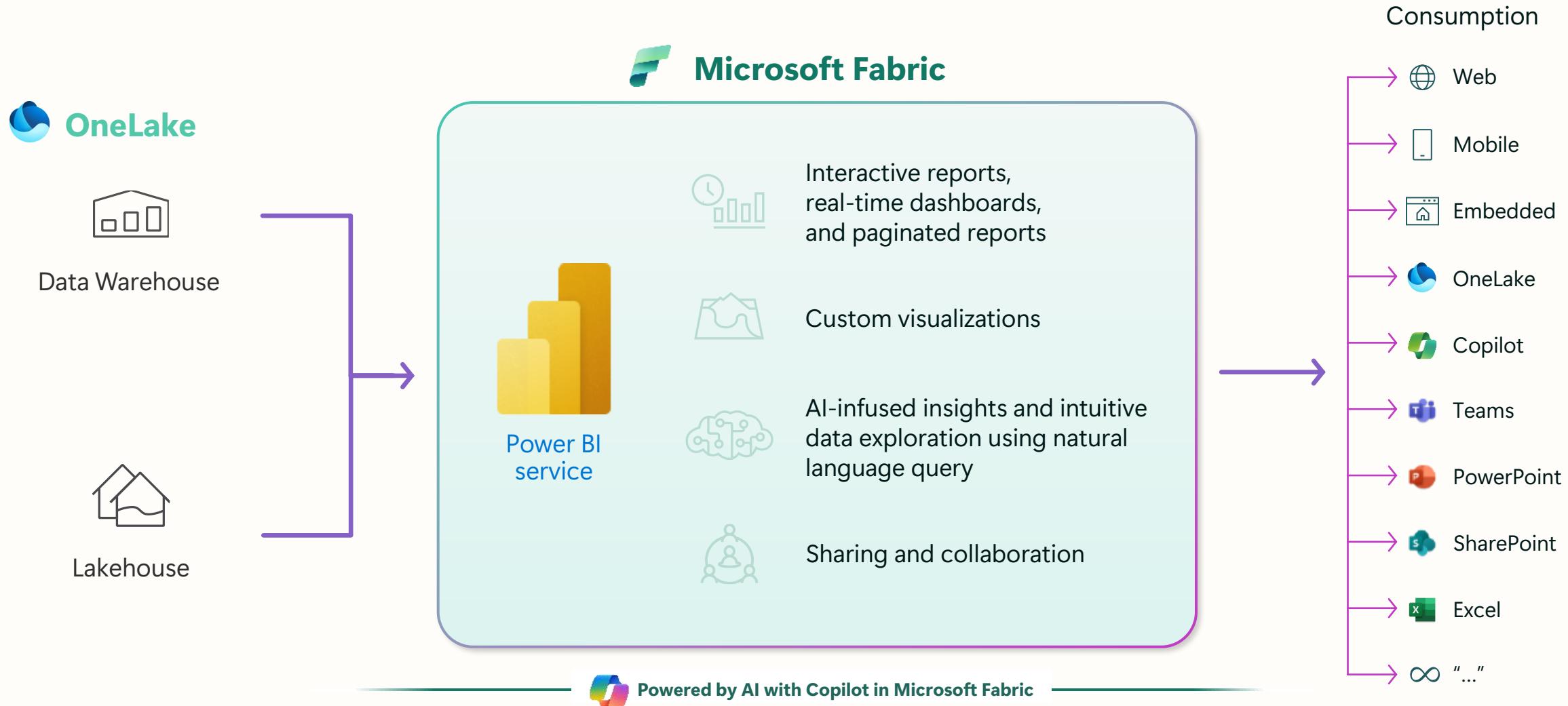


Build governed databases, like data models or data marts, in a trusted and secure hub





Power BI: The bridge between data and decisions

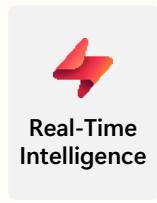


Copilot in Microsoft Fabric

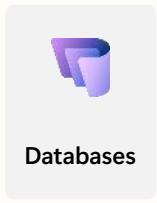
Use conversational language with Copilot in Fabric to create dataflows and pipelines, write SQL statements, build reports, and even build machine learning models



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OneLake



Security, Governance and Administration with
Purview



Chat with AI assistant and request help handling data analysis



Code more efficiently with intelligent code completion and generated code explanations



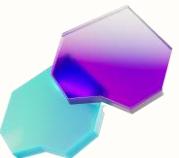
More quickly enrich, model, analyze, and explore data all through natural languages



Create Power BI reports automatically and summarize your insights for streamlined productivity



Access industry-standard code templates to facilitate building robust data pipelines





Copilot in Microsoft Fabric



Data Factory

Get intelligent code generation to transform data with ease and code explanations to help you better understand complex tasks



Real-Time Intelligence

Translate questions into KQL queries that you can execute



Databases

Streamline AI application development with simple, intuitive, and autonomous databases that provision in seconds



Data Engineering

Quickly generate code in Notebooks to help work with Lakehouse data and get insights



Data Science



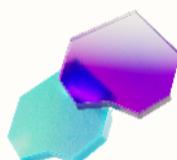
Data Warehouse

Write and explain T-SQL queries, or even make intelligent suggestions and fixes while you are coding



Power BI

Quickly create report pages, natural language summaries, and generate synonyms





Copilot in Fabric

Contoso Daily Sales | Data updated 1/12/23

Sales Overview

Revenue Won: \$7,720,093 | Close %: 28.3% | AVG Days to Close: 84 | Opportunities Won: 334

Date: 06/01/2022 - 01/12/2023

Revenue Won by Month

Month	Revenue Won (\$)
June 2022	~\$200K
Jul 2022	~\$100K
Aug 2022	~\$500K
Sep 2022	~\$300K
Oct 2022	~\$500K
Nov 2022	~\$1M
Dec 2022	~\$1.8M
Jan 2023	~\$1.5M

Close % by Month

Month	Close %
May	23%
Jun	32%
Jul	26%
Aug	37%
Sep	37%
Oct	38%
Nov	51%
Dec	47%
Jan	37%

Close % by Region

AVG Days to Close by Month

Month	Avg Days to Close
May	116
Jun	117
Jul	117
Aug	121
Sep	114
Oct	112
Nov	109
Dec	102
Jan	96

Copilot Preview

Create a report with Copilot

Describe the report you want, in your own words, and Copilot will create it quickly.

Help me build a sales report summarizing our key metrics and trends

Sales overview page added

Ask a question or type / for suggestions

AI-generated content can have mistakes. Make sure it's accurate and appropriate before using it. [Read preview terms](#)

to finding insights and creating reports,

Use Generative AI on your data with Fabric Data Agents

Deliver custom generative AI experiences for your data

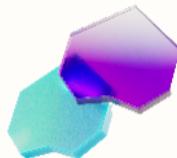
Key capabilities:

- Enable custom conversational Q&A on your data in Fabric
- Define custom business semantics and grounding unique to your organization
- Support multiple data sources (lakehouse and warehouse tables, mirrored DB and shortcut data, Semantic models, Eventhouse KQL DB)
- Scale the custom experiences to Agent Service from Azure AI Foundry and Copilot Studio

The screenshot shows the Microsoft Fabric Data Agent interface. On the left, the Explorer sidebar lists tables such as CustomerLoyaltyProgramD, CustomerLoyalty..., CustomerSupp..., DIM_Customer, Sales_Customer..., Sales_InvoiceLin..., Sales_Invoices, Sales_Orders, and Sales_SpecialDe... The main area displays a conversational AI interface. A question is asked: "How many calls have we had from loyalty members by the source they joined from?". Below the question, a SQL query is shown:

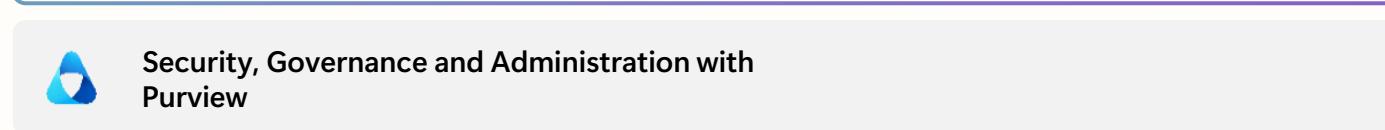
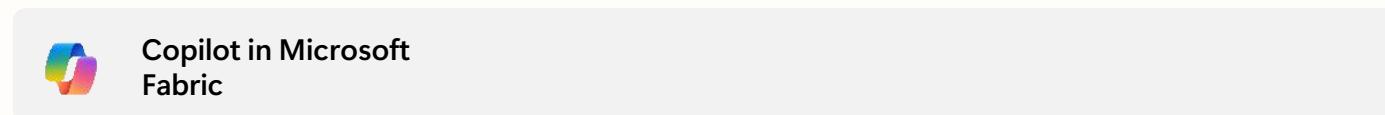
```
SELECT COUNT(*) AS CallCount, clp.Source  
FROM [dbo].[CustomerSupportCalls_1] csc  
JOIN [dbo].[CustomerLoyaltyProgram_Final_1] clp ON csc.CustomerID = clp.CustomerID  
GROUP BY clp.Source;
```

 At the bottom, there is a text input field with placeholder text "Enter a question or request to test the model's response." and a note: "Conversation history is off. The model does not retain context from previous queries. Note that AI-generated content can have mistakes: [Review terms](#)". The right side of the screen shows the "Model behavior" section with options for "SQL query variations" (set to 3) and "Show executed SQL query" (set to Yes). It also includes a "Notes for model" section with a note about Sales.SummedRevenue.



Unified data foundation with OneLake

Manage and analyze all your data across your organization in a unified, secure, and centralized SaaS data lake for everyone with OneLake—the “OneDrive” for data

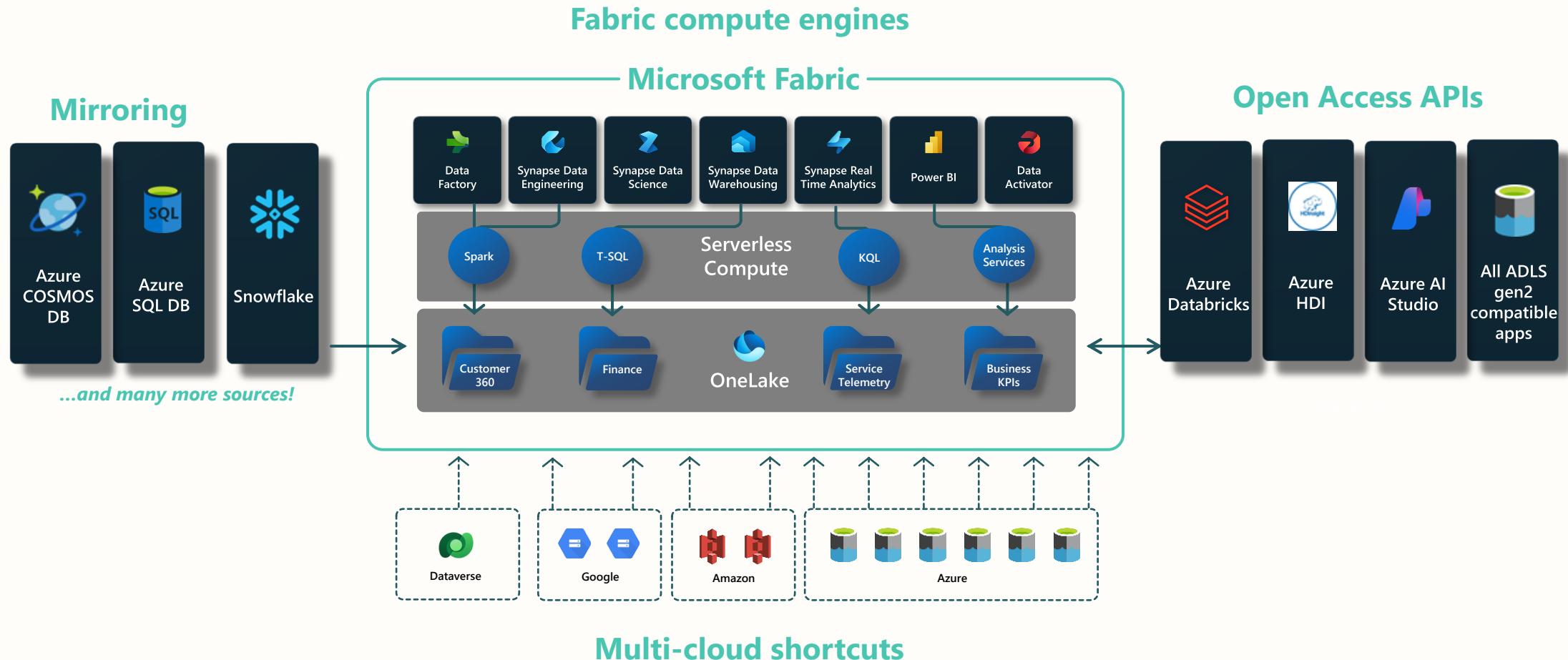


- A single and open, logical SaaS lake for the whole organization
- OneLake supports any type of file, structured or unstructured
- One copy of data for use with multiple analytical engines
- Enable virtualization of data without duplication using shortcuts
- All workloads automatically store their data in OneLake in Delta Parquet format
- Data in OneLake is automatically indexed for discovery, sharing, governance, and compliance



Unifying databases and data warehouses in OneLake

Creating Data Gravity in OneLake

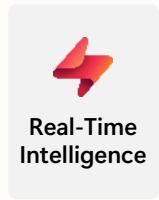


Security, Governance and Admin in Microsoft Fabric

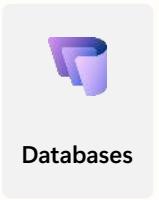
Manage, secure, and govern all your data in Microsoft Fabric and beyond



Data
Factory



Real-Time
Intelligence



Databases



Data
Engineering



Data
Warehouse



Data
Science



Power
BI



Copilot in Microsoft Fabric



OneLake



Security, Governance and Administration with Purview

- Reduce the effort needed to defend and control your entire analytics platform with out-of-the-box security and governance
- Secure your network from any intrusion, ensure only the right people have access to the right data, and maintain compliance with even the strictest requirements
- Enable different parts of the organization to take ownership of their data while still contributing to the same data lake
- Certify datasets to promote usage of the most accurate data across the organization
- Maintain the flexibility to use the partner and third-party solutions you want





Microsoft

Microsoft Fabric

Administration, Governance and Security

Administration

- Tenant administration
 - Admin role required, e.g. Fabric Admin
 - Access to Admin Portal
- Tenant settings
 - Configure what you can do in your tenant
- Access control
 - Entra ID
- Compliance settings
 - Purview integration (sensitivity labels, DLP etc.)
 - Region for capacity

Administration

- Navigation and usability
 - Tags, Domains, Endorsements, "Get Help"
- Monitoring tenant
 - Admin monitoring workspace
 - OneLake catalog, Govern & Secure tabs

Tenant and workspace-level security in Fabric

Tenant-level security



Microsoft Entra



Azure Private Links



Secure by default

Workspace-level security

Outbound trusted workspace access

Generally available

Azure private links

Generally available

Outbound access protection

Generally available

Customer managed keys in OneLake

Generally available

Workspace IP filtering

Planned for CY26

Multiple layers of security and access control



Microsoft Fabric (SaaS tenant)

Domain

Workspace



Artifact



Artifact



Artifact



Artifact



OneLake

Files



Shortcuts



Tables



Tables



Platform level access. Authentication through Entra ID. Inbound through Private Link or Conditional access

Domain specific configuration. By domain admins

Workspace level access. Boundary for managing artifacts. Admin, member, contributor and viewers.

Compute security. e.g. Warehouse access through GRANT/DENY or Semantic Models & Warehouse RLS/OLS.

Item level access. e.g. read all only via OneLake or read access to only subset of data.
More granular roles for files and folders.

OneLake security (Preview)



Microsoft Fabric (SaaS tenant)

Domain

Workspace

Artifact



Artifact



Artifact



Artifact



OneLake

Files



Shortcuts



Tables



Tables



Compute level

Item level

OneLake

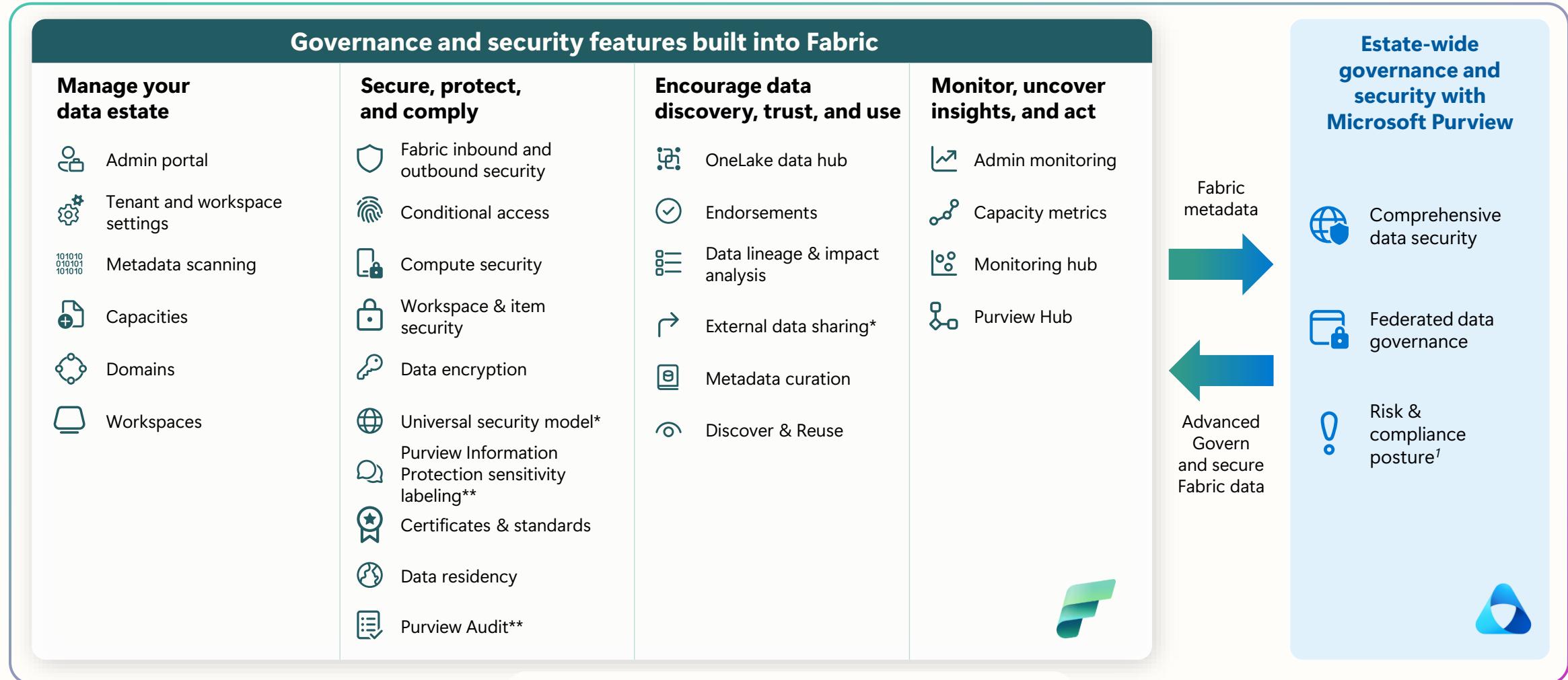
Platform level access. Authentication through Entra ID. Inbound through Private Link or Conditional access

Domain specific configuration. By domain admins

Workspace level access. Boundary for managing artifacts. Admin, member, contributor and viewers.

OneLake security: Define security once and propagated to OneLake and every compute engine for access and OLS \ RLS

Gain full visibility and control with industry-leading features



**Additional Microsoft Purview purchase required



Compliance with Microsoft Fabric

Microsoft Fabric is a core Microsoft online service and supports a wide range of compliance standards including:

- GDPR
- EUDB
- ISO certifications including ISO 27001, 27701, 27017, 27018
- HIPAA, HITRUST compliant
- SOX compliant
- SOC 1, SOC 2, Type 2
- FedRamp HIGH
- PCI DSS



<https://aks.ms/FabricSecurityWhitepaper>



Dataverse

Seamless integration of low-code platforms and analytics



Dataverse

The intelligent, scalable, low-code platform that manages data and business logic across Microsoft Dynamics 365 and Microsoft Power Platform.



Microsoft Fabric

The one-stop-shop for data integration, data engineering, real-time intelligence, data science, and business intelligence across all your organizational data.

Native Integration

Dataverse makes it easier to connect Power Platform and Dynamics 365 to Fabric

- No Copy. No ETL.
- Direct Connection via Dataverse
- Insights democratized to all low code apps and business using Fabrics 7 core workloads
- Makers informed by insights improves quality of applications
- Data is governed



Microsoft Power Platform



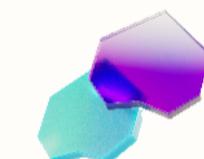
Microsoft Dataverse



Microsoft Dynamics 365

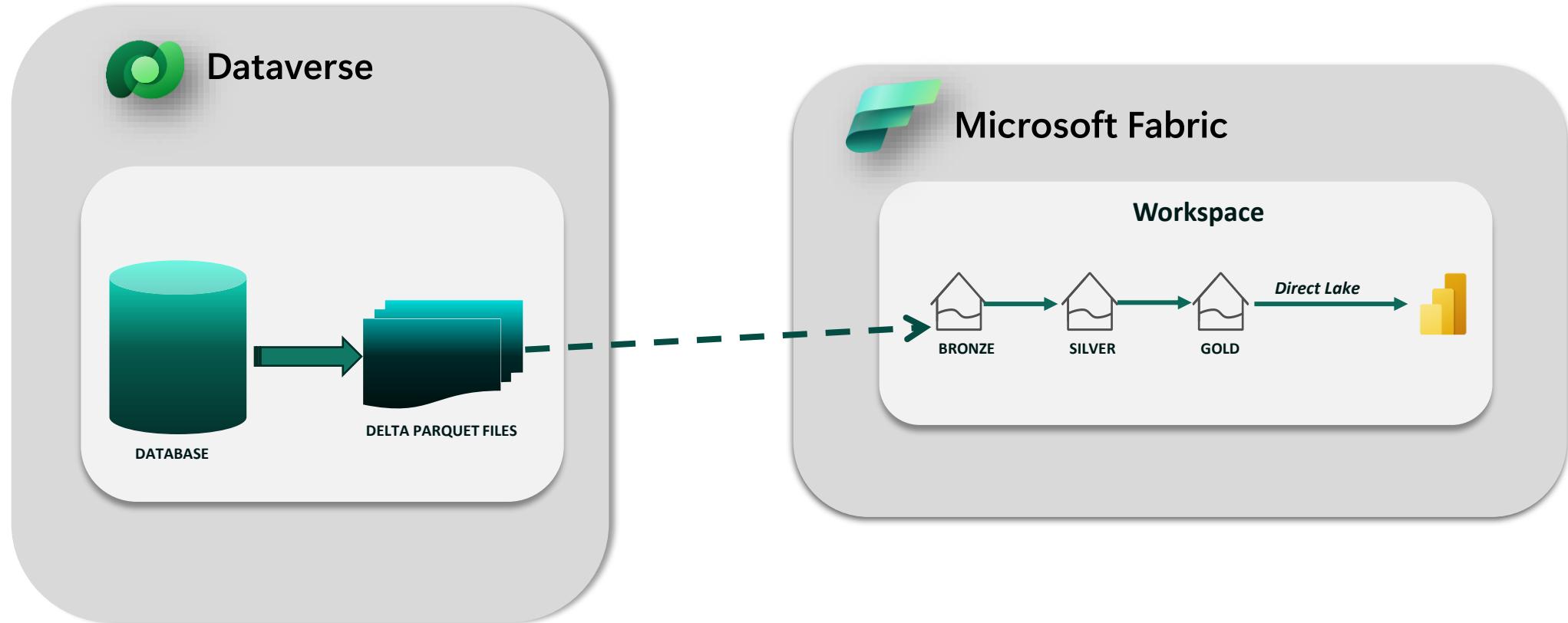


Microsoft Fabric



Microsoft Fabric

Link to Fabric





Microsoft

Microsoft Fabric

A collection of abstract, translucent 3D geometric shapes, including cubes, spheres, and hexagonal prisms, rendered in a color gradient from blue to yellow. They are scattered across the left side of the slide, overlapping each other.

Getting started with Fabric as a Power BI user

Join us at FabCon Atlanta from March 16 to March 20, 2026, for the biggest Fabric, Power BI, SQL, and AI community-led learning event. Save \$200 with code FABNOTEIMSF.

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Intro—What is Power BI?

Getting started with Power BI



Open

Introducing the new Fabric view

Switch and take the tour

Fabric

Develop new data, analytics, and end-to-end solutions.

Power BI

Find frequently used data, discover new data, and uncover insights—all built in Fabric.

My apps

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Fabric

Search

Home Workspaces Copilot OneLake catalog Monitor Real-Time Workloads My workspace ...

Welcome to Fabric

Create a workspace with a predesigned template called a task flow. Task flows keep your items organized. [Learn more](#)

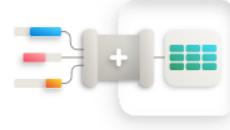
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Learn more about Fabric

Free Fabric Hands-On Workshop
Learn how to analyze data, build reports, using Fabric



Ingest data into Fabric
Complete an end-to-end tutorial for Data Factory



Build a lakehouse
Complete an end-to-end tutorial for Lakehouse



Build a warehouse
Complete an end-to-end tutorial in Data Warehouse



Show less

Quick access

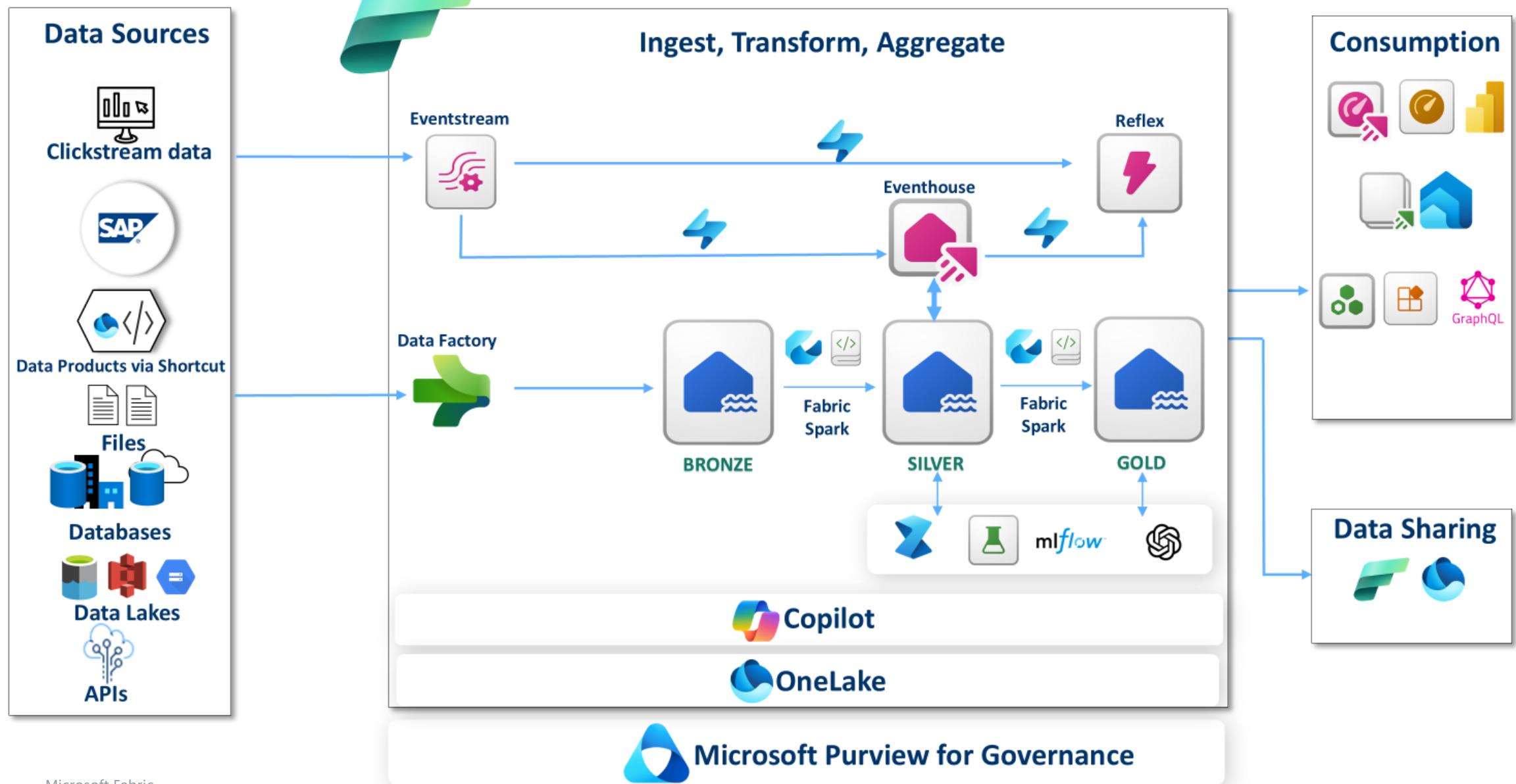
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Architecture pattern I





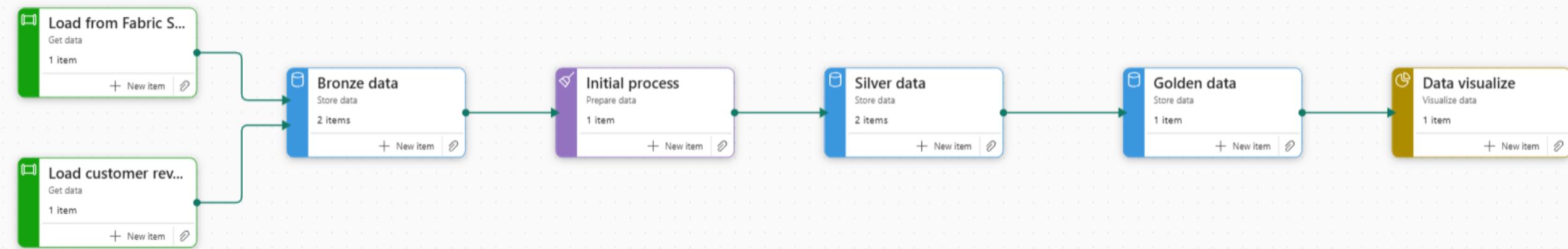
Microsoft

Microsoft Fabric

A collection of abstract, translucent 3D geometric shapes, including cubes, spheres, and hexagons, in shades of blue, purple, and yellow, floating against a white background.

Labs

Lab outline



Lab outline

- Two sources:
 - **Fabric SQL database** with sales data and dimensions
 - **Excel** with customer reviews
- Structure content using Task flows
- Load data to Lakehouses in a medallion architecture
- Create sentiment score of customer reviews
- Create semantic model and Power BI report

Labs

<https://aka.ms/DynUG>