



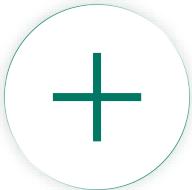
# Microsoft Fabric Roadshow

Ottawa | 27/11/2025



# Fabric + Databricks

Integrating Microsoft Fabric and Azure Databricks



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**Alaa Eddin (Aladdin) Alchalabi, PhD.**

Sr. Solution Engineer – Cloud & AI

# Data is the fuel that powers AI

72%

of CIOs report data is  
the biggest challenge  
for AI implementation<sup>1</sup>

\$3.7x

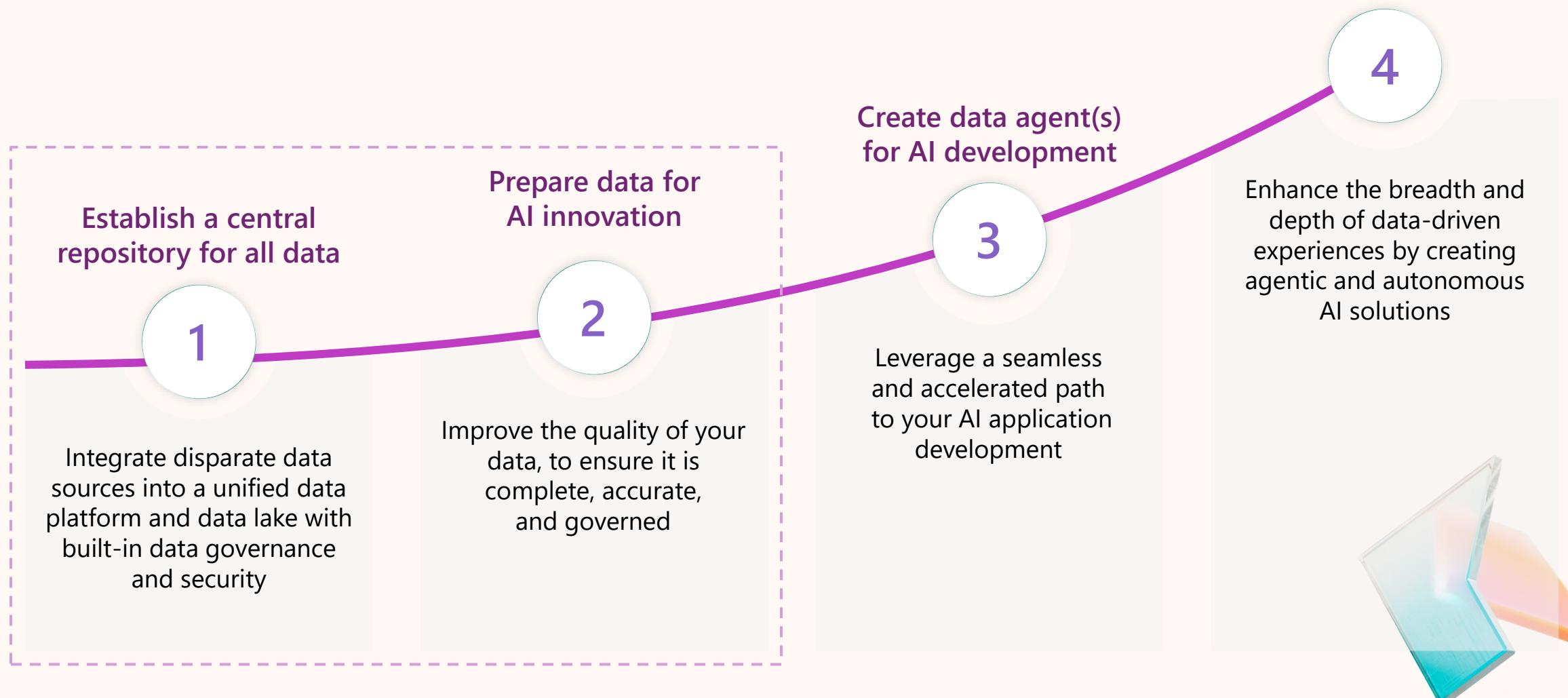
Is the return of  
investment for every \$1  
invested in Gen AI<sup>2</sup>

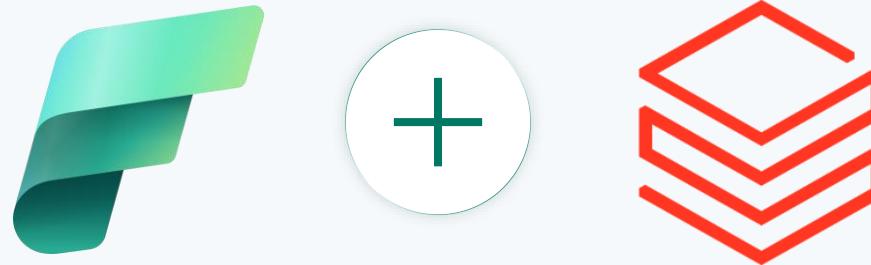
<sup>1</sup> MIT Technology Review Insights, 2023

<sup>2</sup> IDC, The Business Opportunity of AI, 2024



# And the path to successful AI application development is grounded with Enterprise data





# Bringing Fabric and Azure Databricks together

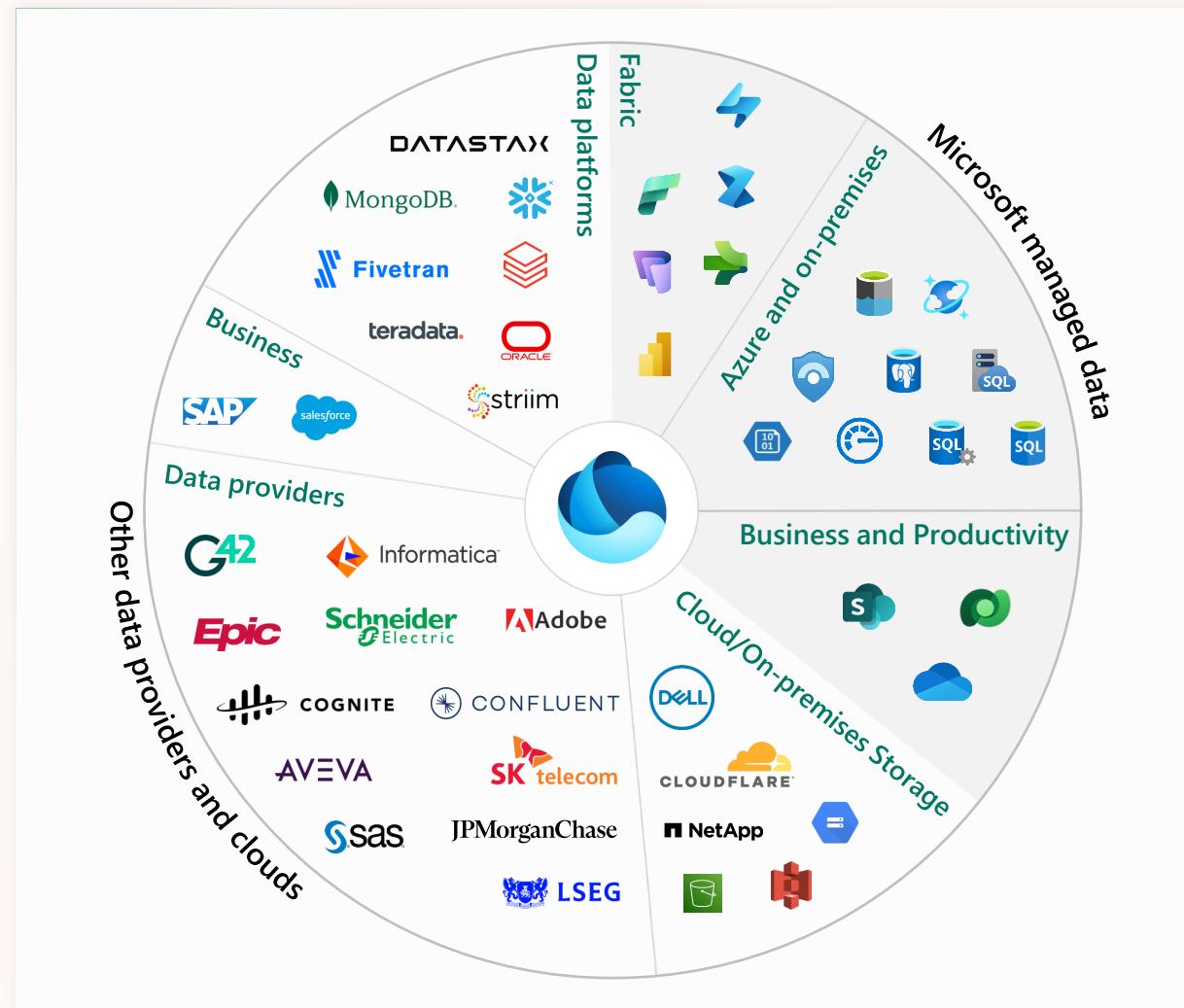


# A vast data landscape

## Data comes from all over



# OneLake Unifies a Complicated Data Landscape



All Fabric data is available in OneLake

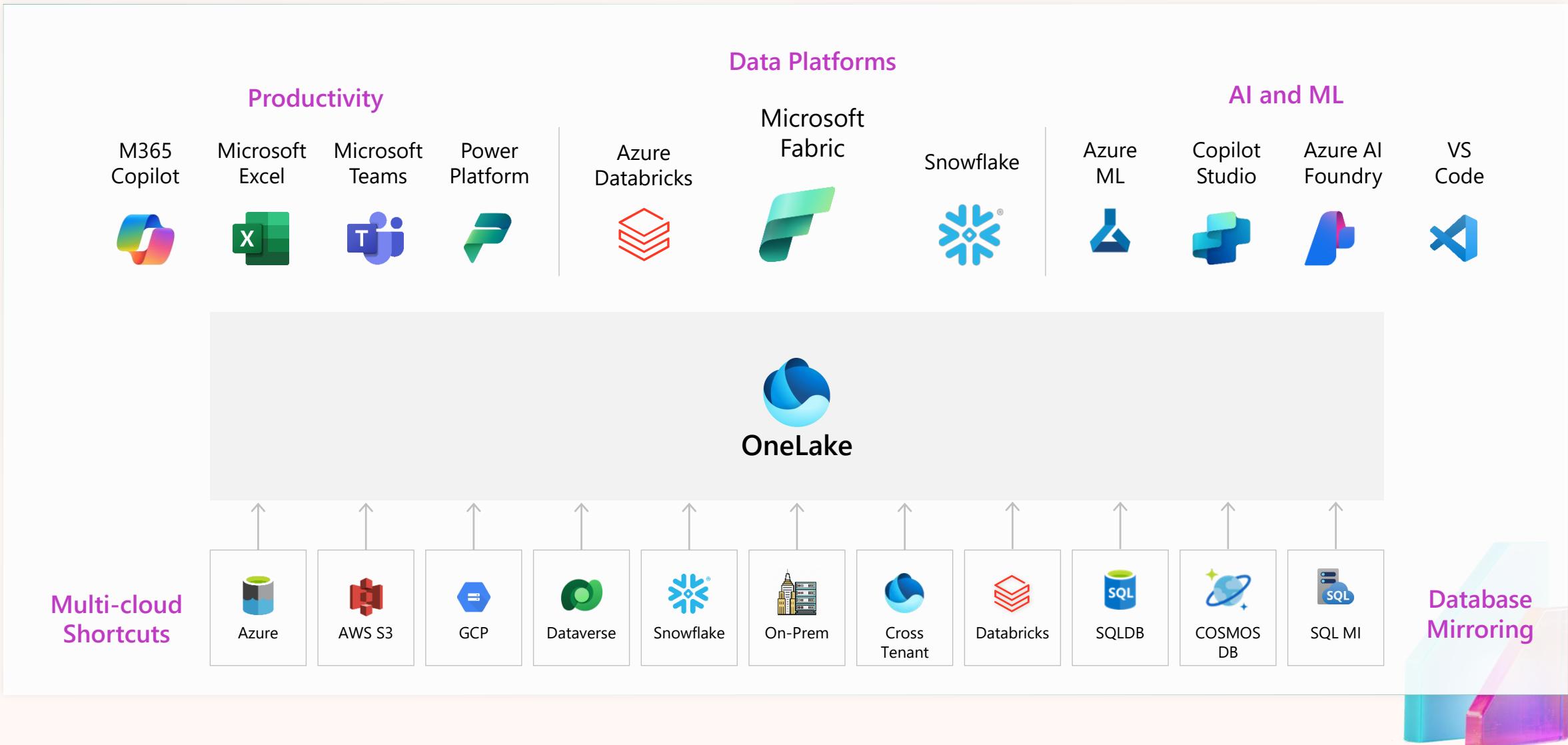
Microsoft data including **Azure Data** and  
**Dynamics 365**

Non-Microsoft data platforms and services

Data stored **on-premises** or **cross cloud**. In **open** or **proprietary** storage

## Structured and unstructured data

# OneLake data is available everywhere



# Unify external Catalogs into OneLake

## Mirroring

Connect **external catalogs** (Operational DBs, Lakes, Business platforms)

Metadata is automatically **synchronized** (Tables, columns)

Data connected through **shortcuts** when stored in open storage or CDC replication and landed in open storage formats (storage is free)



## Microsoft OneLake

OneLake security



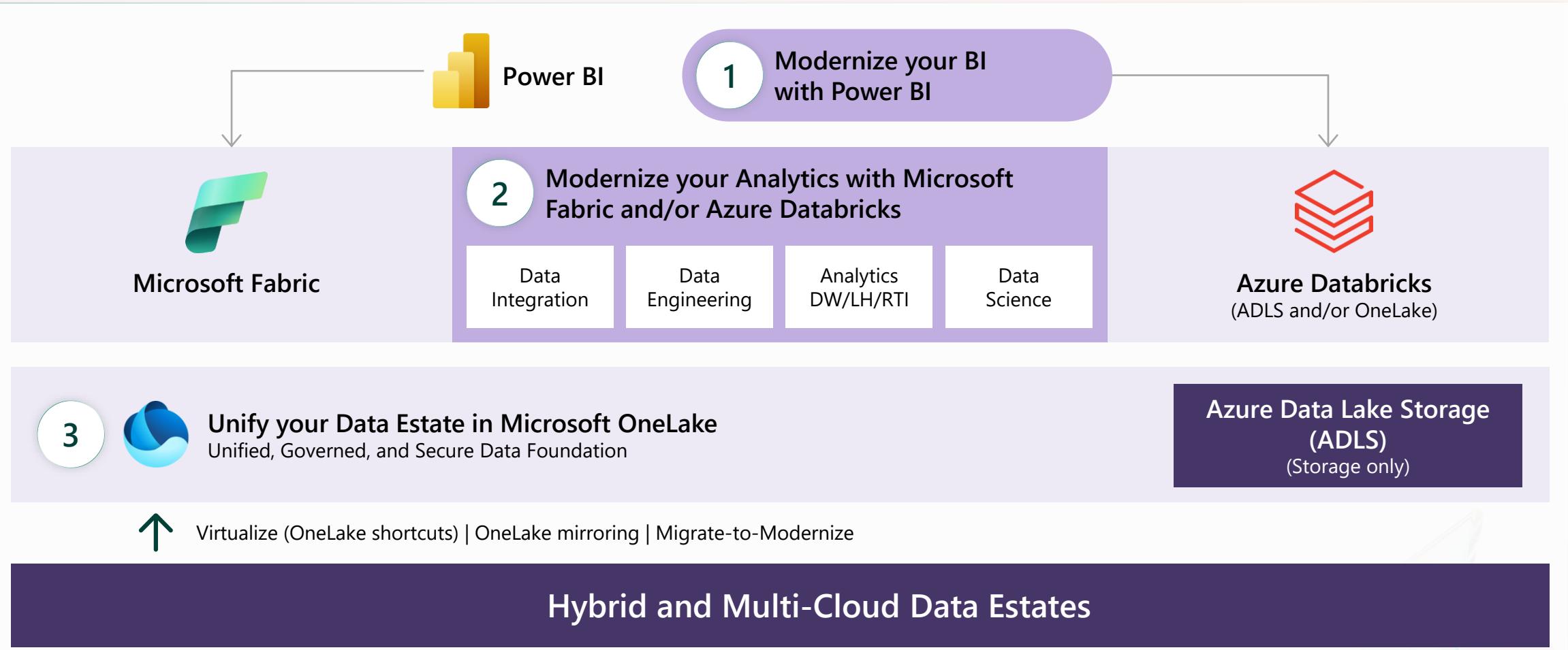
How do we do it?



# Connecting Databricks to OneLake



# Create a unified data foundation with Fabric and Azure Databricks



# Simple OneLake Narrative

Use the right tool for the job



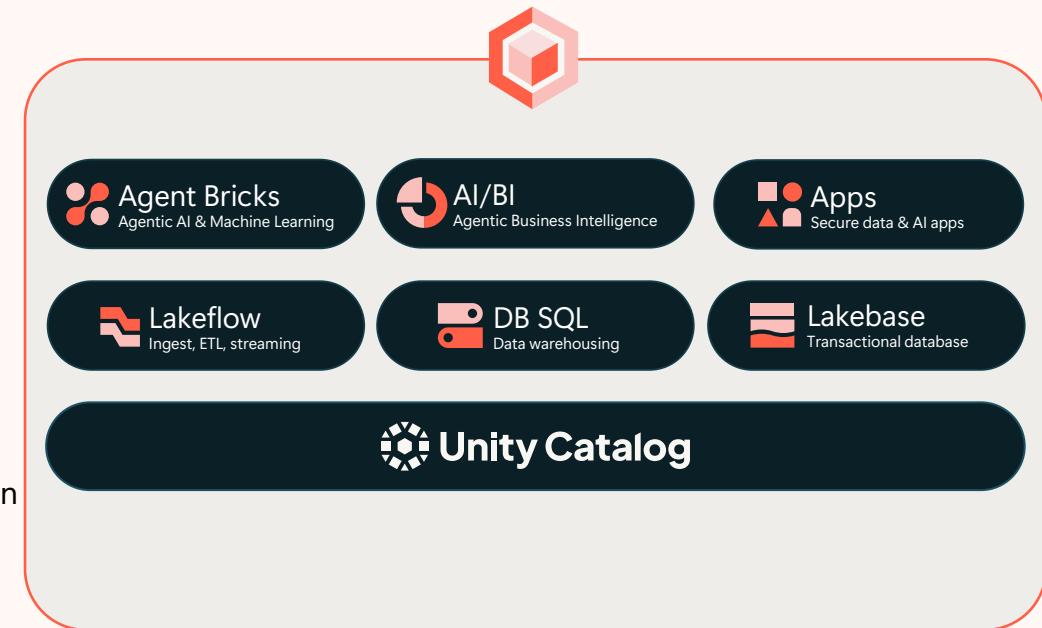
## Microsoft Fabric



All Azure Databricks data  
available in OneLake



## Azure Databricks



All Fabric/OneLake data  
available in UC

\*via OneLake Cat Federation

# Integrating Fabric and Azure Databricks together

Today's focus



1



Mirror your Azure Databricks data to OneLake with just a few clicks, allowing you to access the data and keep it in sync in near-real time—and then apply OneLake security to securely share, use it to support Fabric Data Agents, real-time Power BI reports, and so much more



2



Use Fabric Data Factory to **orchestrate Azure Databricks transforms** and to ingest and load data from 100s of other sources for transformation in Azure Databricks

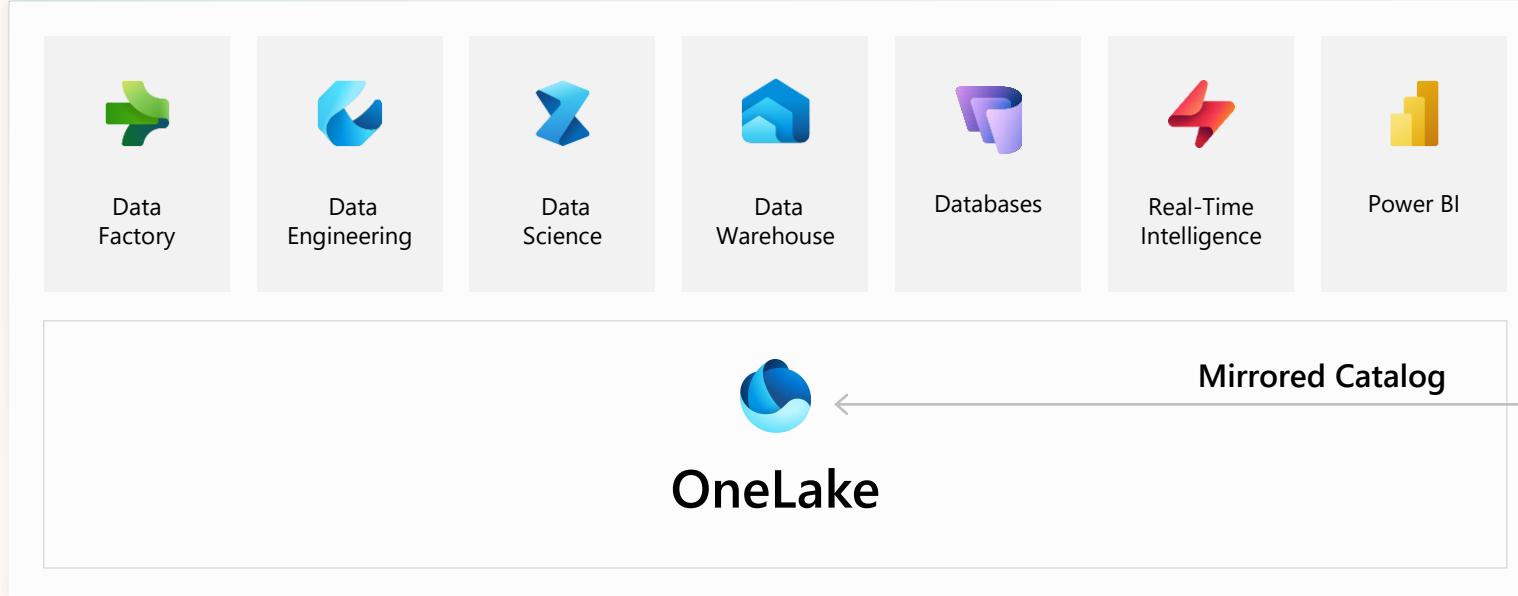


3

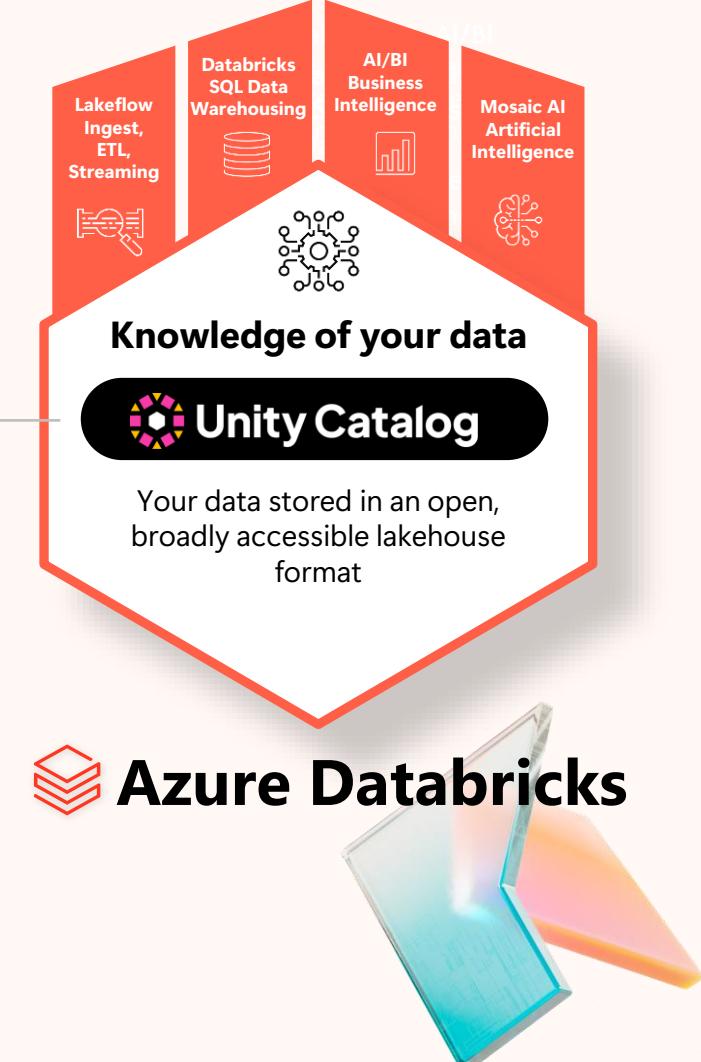


Use mirrored Azure Databricks data to create **Direct Lake Mode semantic models** or create Direct Query semantic models to directly integrate with Azure Databricks

# Connecting Azure Databricks to OneLake



Mirror Azure Databricks data into OneLake to take advantage of all the engines connected to OneLake



# Azure Databricks Mirrored Catalog

🔔 Generally available!



Azure Databricks

The screenshot shows the Azure Databricks Catalog Explorer interface. On the left, the sidebar includes links for New, Workspace, Recents, Catalog, Workflows, Compute, SQL, SQL Editor, Queries, Dashboards, Alerts, Query History, SQL Warehouses, Data Engineering, Job Runs, Data Ingestion, Delta Live Tables, Machine Learning, Playground, Experiments, and Features. The main area displays the Catalog for the Starter Warehouse Pro workspace. Under the sales catalog, the default schema is selected, showing tables like categories, customers, employee\_territories, employees, order\_details, orders, products, regions, shippers, and suppliers. The orders table is currently selected, displaying its schema with columns: orderID (bigint), customerID (string), employeeID (bigint), orderDate (timestamp), requiredDate (timestamp), shippedDate (string), shipVia (bigint), freight (double), shipName (string), shipAddress (string), shipCity (string), shipRegion (string), shipPostalCode (string), and shipCountry (string). A search bar at the top right allows filtering data, notebooks, recents, and more.



Microsoft Fabric

The screenshot shows the Microsoft Fabric Explorer interface. The sidebar includes links for Home, Workspaces, OneLake data hub, Monitor, Real-Time hub, Workloads, and trionData bricksTest. The main area shows the Home page for the sales catalog. The Explorer section displays the sales schema, specifically the default schema which contains tables for categories, customers, employee\_territories, employees, order\_details, orders, products, regions, and shippers. To the right, a detailed view of the orders table is shown, listing 20 rows of data. The columns are orderID, customerID, employeeID, and orderDate. The data shows various order IDs from 10248 to 10267, corresponding customer IDs like VINET, TOMSP, HANAR, etc., employee IDs ranging from 1 to 9, and order dates from 7/4/1996 to 7/29/1996.

	orderID	customerID	employeeID	orderDate
1	10248	VINET	5	7/4/1996
2	10249	TOMSP	6	7/5/1996
3	10250	HANAR	4	7/8/1996
4	10251	VICTE	3	7/8/1996
5	10252	SUPRD	4	7/9/1996
6	10253	HANAR	3	7/10/1996
7	10254	CHOPS	5	7/11/1996
8	10255	RICSU	9	7/12/1996
9	10256	WELLI	3	7/15/1996
10	10257	HILAA	4	7/16/1996
11	10258	ERNSH	1	7/17/1996
12	10259	CENTC	4	7/18/1996
13	10260	OTTIK	4	7/19/1996
14	10261	QUEDDE	4	7/19/1996
15	10262	RATTC	8	7/22/1996
16	10263	ERNSH	9	7/23/1996
17	10264	FOLKO	6	7/24/1996
18	10265	BLONP	2	7/25/1996
19	10266	WARTH	3	7/26/1996
20	10267	FRANK	4	7/29/1996



**Demo:**  
Azure Databricks  
Mirrored Catalog

 New Workspace Recents Catalog Jobs & Pipelines  Compute Marketplace

SQL

 SQL Editor Queries Dashboards Genie Alerts Query History SQL Warehouses

Data Engineering

 Job Runs Data Ingestion

## Catalog

   Serverless Starter Warehouse  Serverless  Type to search... My organization  mirroreddbdemo  system  <testcatalog>  contosoretail consumerinsights customerfeedback inventorylevels marketingcampaigns salestransactions default information\_schema nipuneth performancetest amber-uc hyphenated-catalog testprivateendpoint Delta Shares Received

Catalog Explorer &gt; contosoretail &gt;



## consumerinsights

Use with BI tools



Share



Create

[Overview](#) [Details](#) [Permissions](#)

## Description

[Add description](#) Filter tables

Tables 4

Volumes 0

Models 0

Functions 0

Sort 

Name	Owner	Created at	Popularity
------	-------	------------	------------

 customerfeedback	preshah@microsoft.com	Aug 29, 2025, 01:23:45	...
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 inventorylevels	preshah@microsoft.com	Aug 29, 2025, 01:23:45	...
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 marketingcampaigns	preshah@microsoft.com	Aug 29, 2025, 01:23:45	...
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 salestransactions	preshah@microsoft.com	Aug 29, 2025, 01:23:45	...
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## About this schema

Owner Premal Shah 

# Metadata mirroring Databricks Catalogs

The image shows two side-by-side screenshots. On the left is the Azure Databricks Catalog interface, displaying a tree view of databases like marketing, sales, default, and others. A specific table named 'orders' under the default database is highlighted with a blue selection bar at the bottom. On the right is the Microsoft Fabric Explorer interface, which mirrors the same catalog structure. Two purple arrows point from the 'orders' table in the Databricks catalog to its corresponding location in the Microsoft Fabric Explorer's 'sales' schema. The Microsoft Fabric interface includes icons for 'Manage catalog', 'Explorer', and a search bar.

Only metadata is mirrored. Shortcuts are used to bring the data over

Each Mirrored Azure Databrick Catalog item maps to a single catalog within UC

Catalog structure is replicated. **Data is never copied** yet it is **always in sync**

Mirror the entire catalog or any combination of schemas and tables

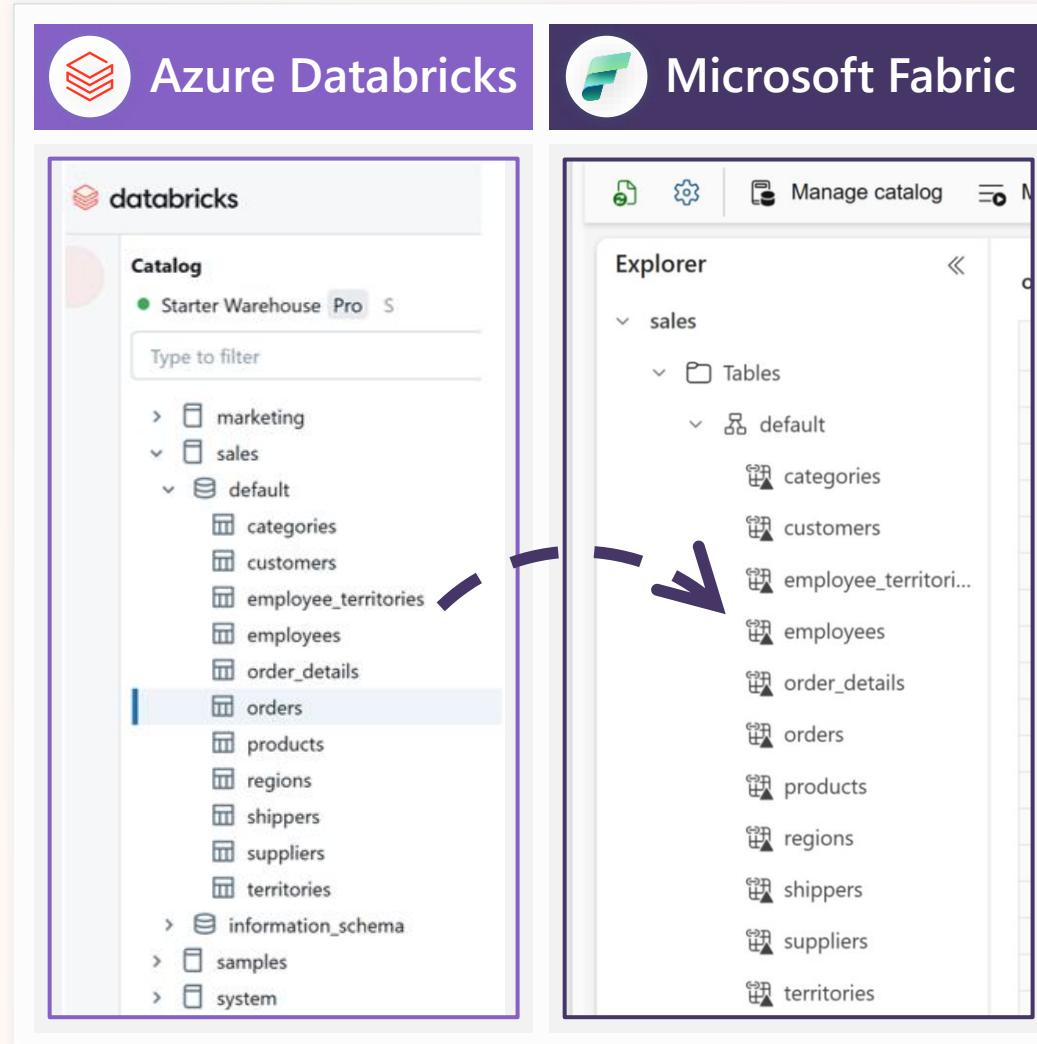
Set static mapping to only mirror a subset of objects

Set dynamic mapping to automatically mirror added and removed schemas and tables

No compute required on Azure Databricks at runtime



# Catalog Sync – Supported Object Types



UC **Managed** and **Unmanaged** delta tables will be mirrored into Fabric



## Unsupported Objects:

- Tables with RLS\CLM policies (coming soon)
- Lakehouse federated tables
- Delta sharing tables
- Steaming tables
- Other non-table object type (volumes, views, models)



# What's new in the GA release?

The image shows two side-by-side screenshots of data catalogs. On the left is the 'Catalog' view in Azure Databricks, displaying a tree structure of databases like 'marketing', 'sales', 'default', and 'information\_schema'. A blue arrow points from the 'sales' node in the Databricks catalog to the 'sales' node in the Microsoft Fabric Explorer on the right. The Microsoft Fabric Explorer shows a similar tree structure with nodes such as 'Tables', 'default', 'categories', 'customers', 'employee\_territori...', 'employees', 'order\_details', 'orders', 'products', 'regions', 'shippers', 'suppliers', and 'territories'. The 'sales' node is expanded, and its children are listed.

**Network security and compliance:** Supports secure access to Azure Data Lake Service (ADLS) with firewalls enabled, letting organizations enforce strict network boundaries without losing functionality.

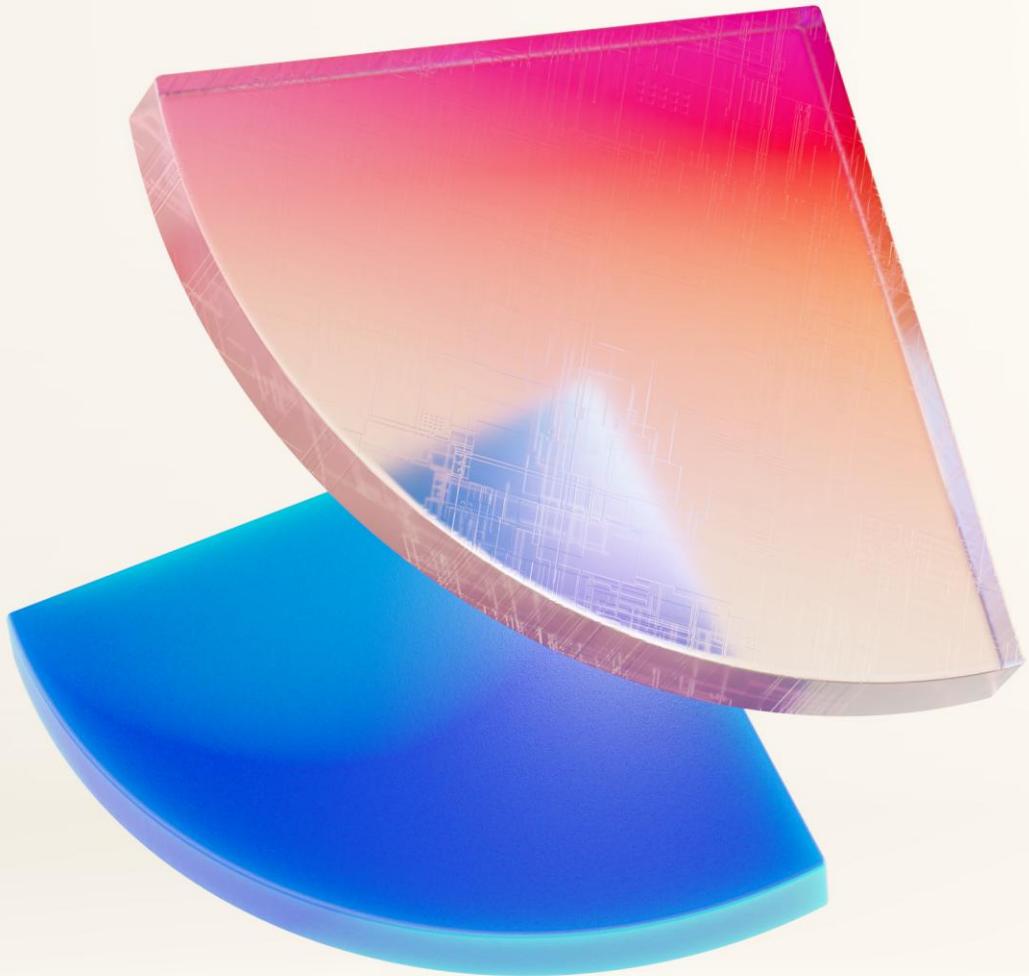


**Public APIs for automation and CI/CD:** Offers public APIs to create, manage, and monitor mirrored catalog items, simplifying integration with enterprise workflows and CI/CD pipelines.



**OneLake security integration:** Fully integrates with OneLake security, allowing workspace admins to enforce fine-grained, enterprise-grade access controls and compliance. Policies in Unity Catalog can be replicated.





New features  
coming soon

# Reading from OneLake in Azure Databricks

– Early 2026

Fabric Mirrored Catalog



Microsoft Fabric

The screenshot shows the Microsoft Fabric Explorer interface. On the left, the sidebar includes 'Home', 'Workspaces', 'OneLake data hub', 'Monitor', 'Real-Time hub', 'Workloads', and 'trolsonData bricksTest'. Under 'OneLake data hub', there is a 'Develop' button. The main area shows the 'sales' catalog with its tables: 'categories', 'customers', 'employee\_territories', 'employees', 'order\_details', 'orders', 'products', 'regions', 'shippers', 'suppliers', and 'territories'. The 'orders' table is selected and displayed as a grid with columns: ABC orderID, ABC customerID, ABC employeeID, ABC orderDate. The data shows rows from 1 to 20.

?



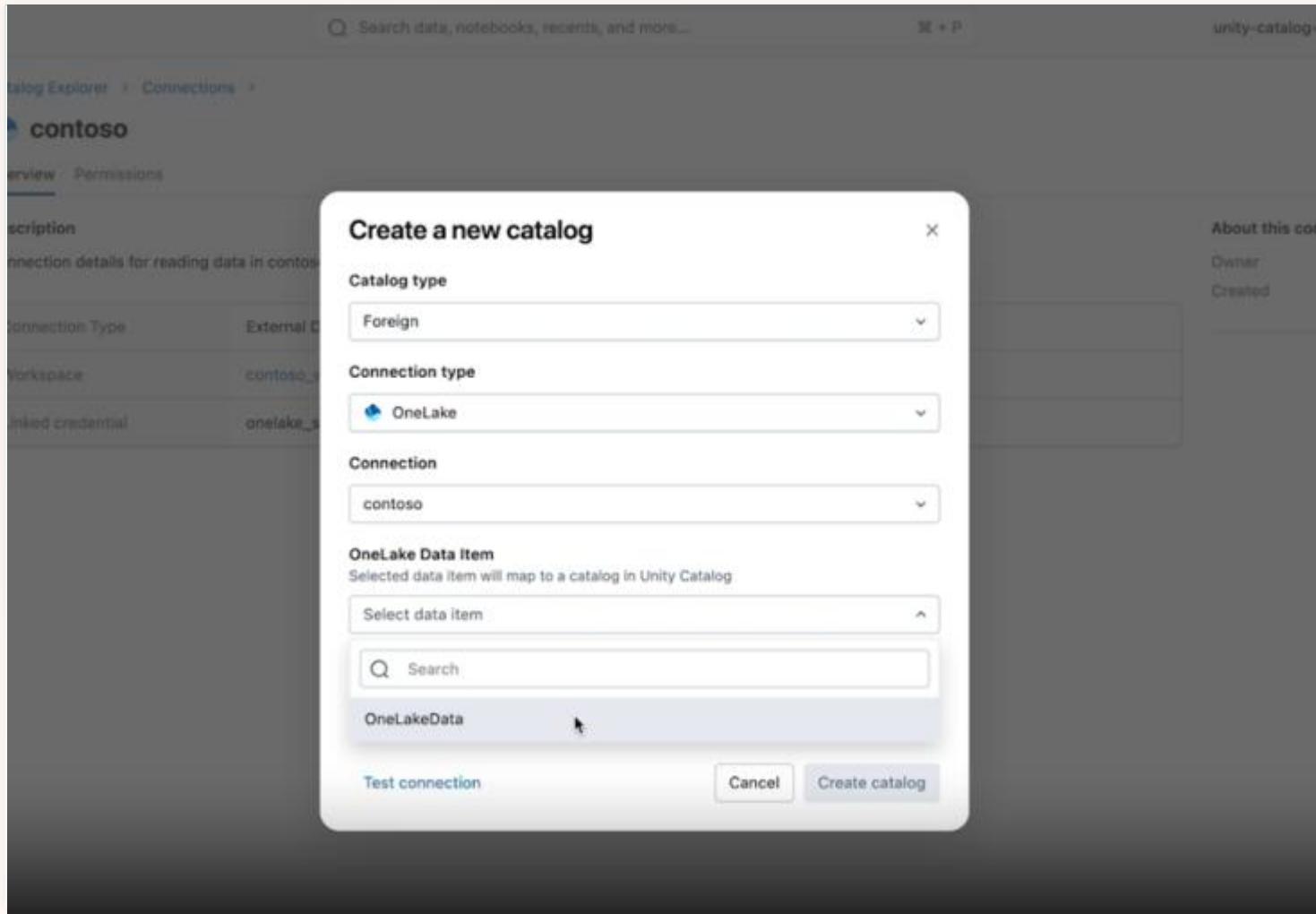
Azure Databricks

The screenshot shows the Azure Databricks Catalog Explorer. The sidebar lists 'New', 'Workspace', 'Recents', 'Catalog', 'Workflows', 'Compute', 'SQL', 'SQL Editor', 'Queries', 'Dashboards', 'Alerts', 'Query History', 'SQL Warehouses', 'Data Engineering', 'Job Runs', 'Data Ingestion', 'Delta Live Tables', 'Machine Learning', 'Playground', 'Experiments', and 'Features'. The 'Catalog' section shows the 'sales' catalog under 'default', which contains tables like 'categories', 'customers', 'employee\_territories', 'employees', 'order\_details', 'orders', 'products', 'regions', 'shippers', 'suppliers', 'information\_schema', 'samples', and 'system'. The 'orders' table is selected and shown in the details pane on the right, with columns: orderID, customerID, employeeID, orderDate, requiredShippingAddress, shippedVia, freight, shipName, shipAddress, shipCity, shipRegion, shipPostalCode, and shipCountry. A large purple arrow points from the Microsoft Fabric 'orders' table towards the Azure Databricks 'orders' table.

# Reading from OneLake in Azure Databricks

– Early 2026

Fabric Mirrored Catalog



This new capability, enables Azure Databricks to read data from OneLake via their Unity Catalog Open APIs and allows all of your **OneLake data to be leveraged seamlessly in Databricks.**

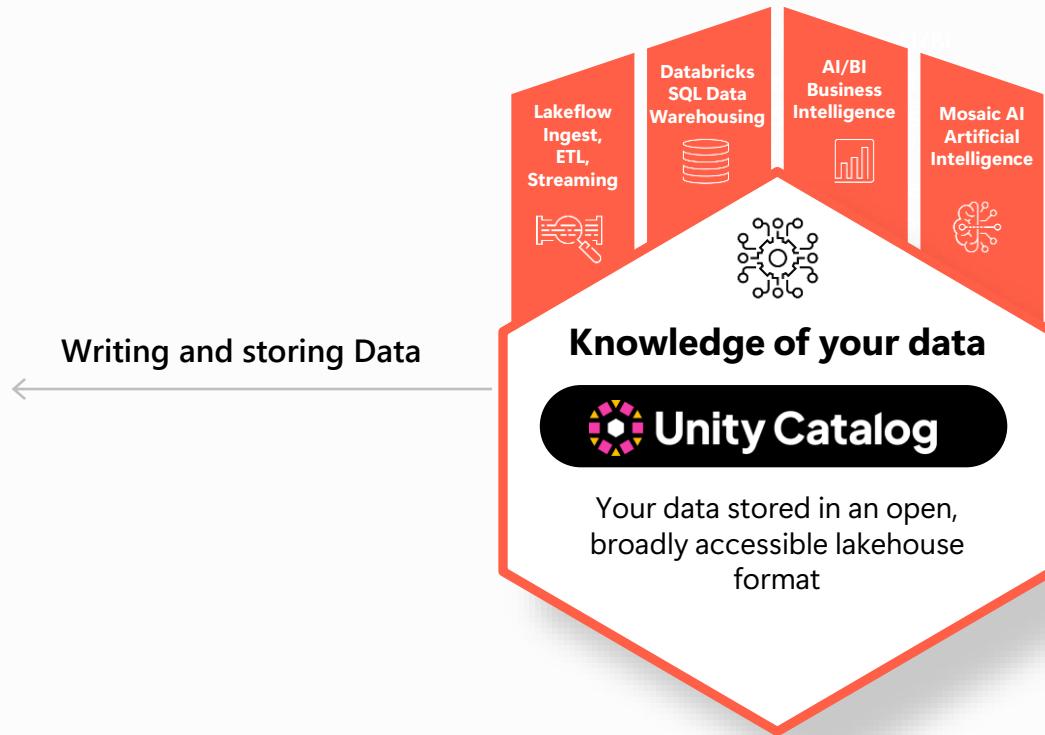


Customers can create Unity Catalog Connections to OneLake based on Managed Identities from **EntralID**, and can seamlessly mount data items from any Fabric workspace, directly as a catalog in Unity.

# Writing and storing data natively in OneLake



OneLake



Looking ahead, Azure Databricks will support **writing and storing data directly in OneLake**, without any additional storage resources to manage.



This will deliver additional simplicity and interoperability for customers building on the lakehouse architecture. **Timelines for this capability will be shared at FabCon in March 2026.**





# Q&A

# Thank you!

Microsoft Fabric + Databricks

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**Microsoft Fabric Roadshow**