

Analytics in the era of AI

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Sponsors & Organizers



**LOGICAL
SYSTEM**

Part of Lodestar



Dev>Marche

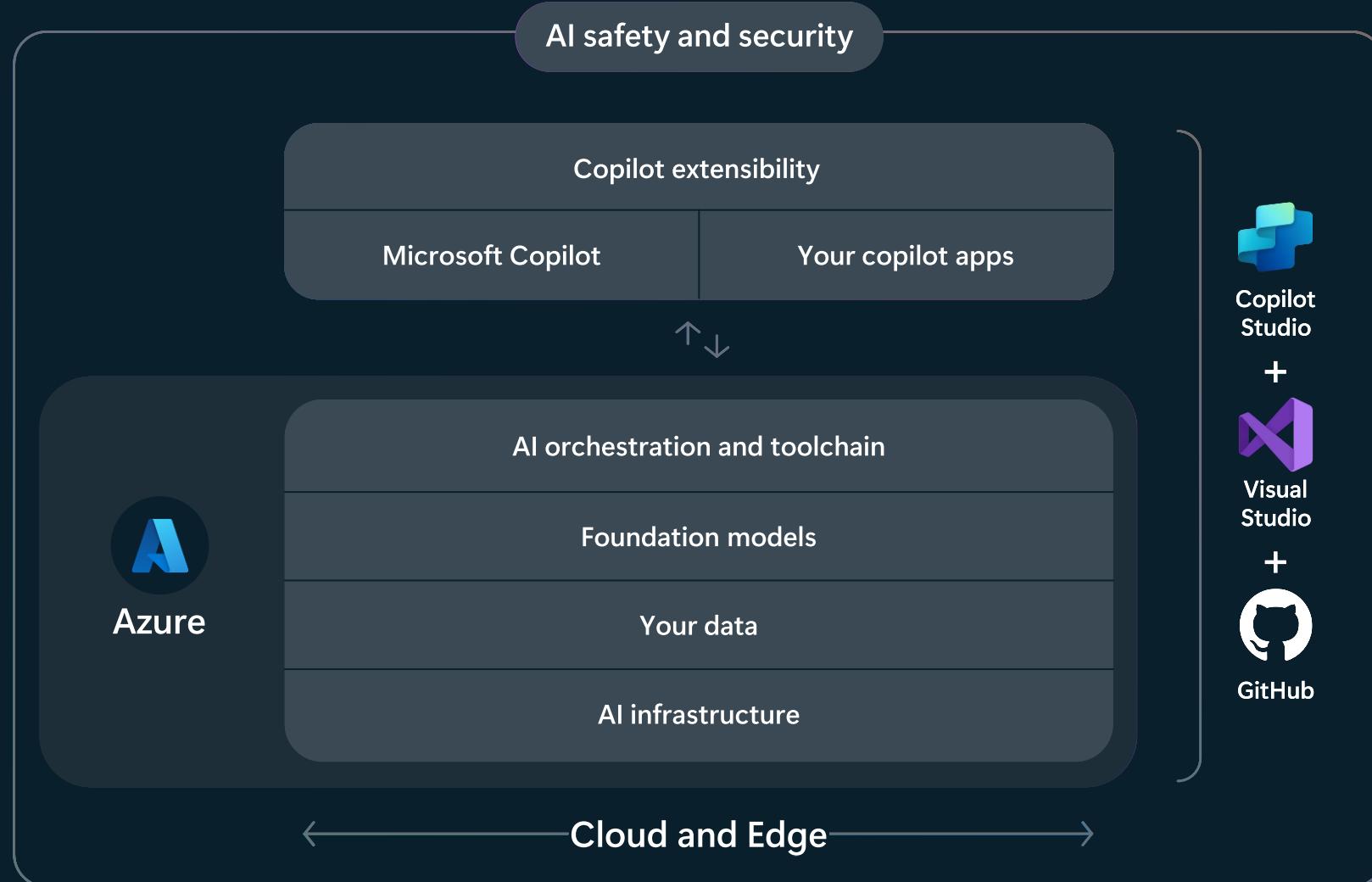


UNIVERSITÀ
POLITECNICA
DELLE MARCHE

50+

new updates

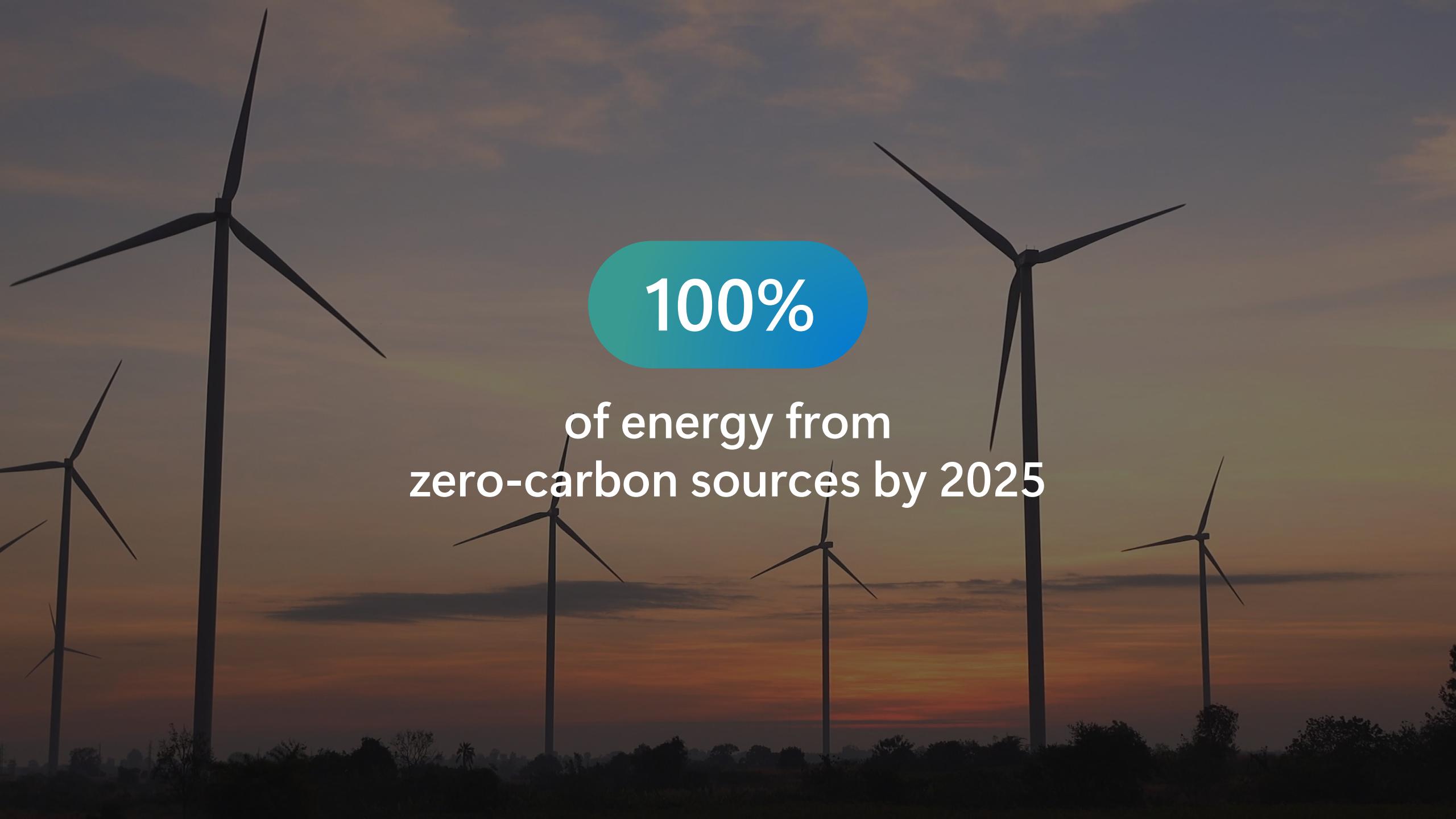
Copilot stack



A semi-transparent globe is centered on Earth, showing landmasses in shades of brown and green. Overlaid on the globe are numerous cyan-colored dots of varying sizes, representing Azure data centers or regions. A prominent cluster of dots is visible in North America, with smaller clusters in Europe, Asia, and Australia. A network of thin cyan lines connects many of these dots, forming a global mesh.

60+

Azure regions



100%

of energy from
zero-carbon sources by 2025

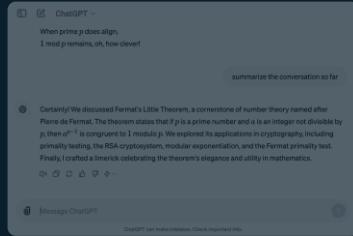


November 2022



● March 2023

● November 2022



ChatGPT



ChatGPT



Message ChatGPT



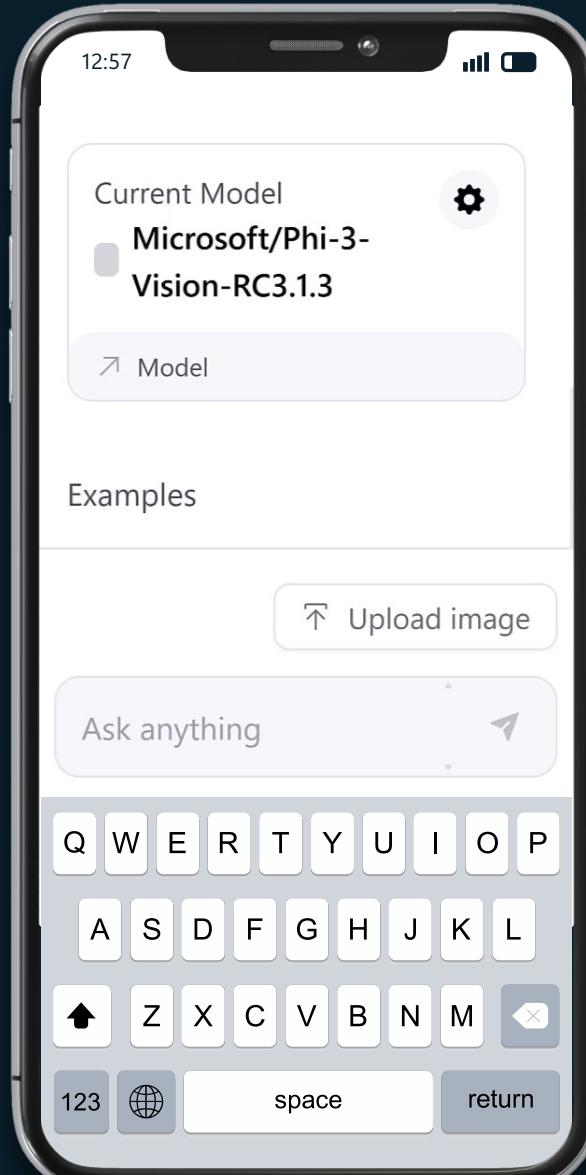
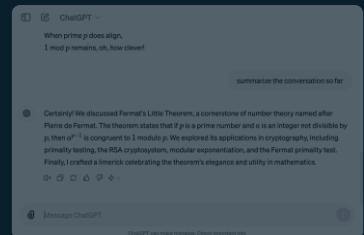
ChatGPT can make mistakes. Check important info.

May 2024

March 2023



November 2022



Impossible

Impossible

Difficult

Preview
-to-speech
models

Generally available

GPT-4o

Multimodal
input and output

Real-time
response

Safe
by design

aka.ms/AOAIUpdates

GPT-4

GPT-4 Turbo

GPT-4o

Cost

Speed

March 2023

November 2023

May 2024

2x

$\frac{1}{6}$

6x

$\frac{1}{12}$

Azure AI model breadth

Offering a wide collection of frontier and open models

Azure OpenAI Service

GPT-4o
GPT-4-Turbo with Vision, GPT-4, GPT-3.5
Embeddings
DALL-E
Whisper, Text to speech

Phi models

Phi-3-mini
Phi-3-small
Phi-3-medium
Phi-3-vision

Meta

Llama-2-70b/70b-chat
Llama-2-13b/13b-chat
Llama-2-7b/7b-chat
Llama-3
CodeLlama

Mistral AI

Mistral Large
Mistral 7B
Mixtral 8x7B –
Mixture of Experts

Cohere

Cohere R+
Cohere R
Embed v3-Multilingual
Embed v3-English

Hugging Face

Falcon/TII
Stable Diffusion/Stability AI
Dolly/Databricks
CLIP/OpenAI

Databricks

Databricks/dbrx-base
Databricks/dbrx-instruct

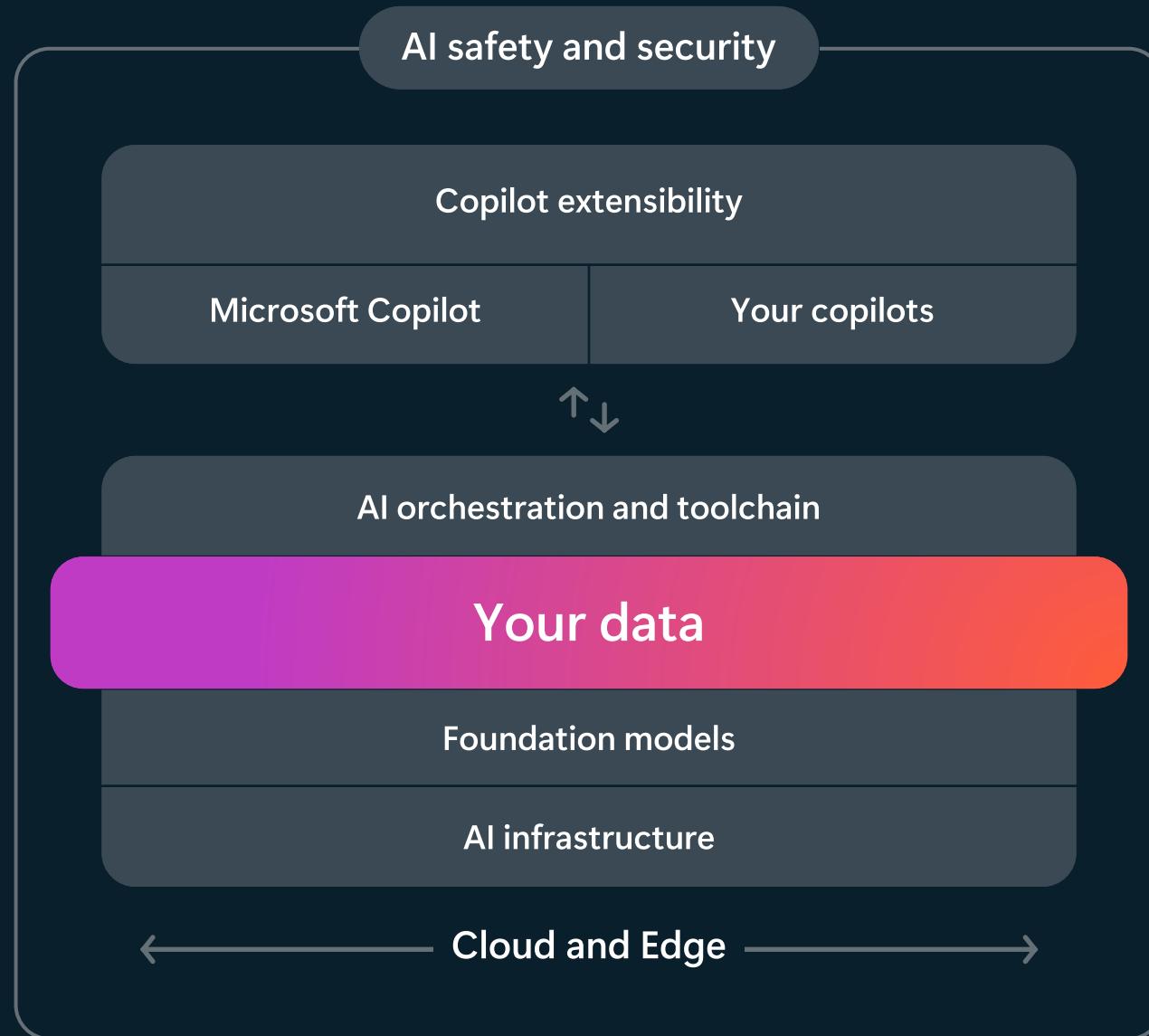
NVIDIA

Nemotron-3-8B-4k
Nemotron-3-8B-Chat-SFT/RLHF/
SteerLM
Nemotron-3-8B-QA

Snowflake

Snowflake/arctic-base
Snowflake/arctic-instruct

AI Demo



Data is the **fuel** that powers AI

Microsoft Intelligent Data Platform

Databases • Analytics • AI • Governance



Azure
SQL DB



Azure
Cosmos DB



Azure for
PostgreSQL



MySQL



Microsoft
Fabric



Azure
Databricks



Azure AI



Microsoft
Purview



Copilot capabilities in Azure Databases

AI-enhanced management and performance

Public preview

Self-help for
managing and operating
Azure SQL database

Public preview

Convert natural language
to Azure SQL Database
T-SQL queries

Public preview

Chat with Azure Database for
MySQL technical documentation
in natural language



Microsoft Fabric

Data platform for the era of AI

Complete
analytics platform

Lake-centric
and open

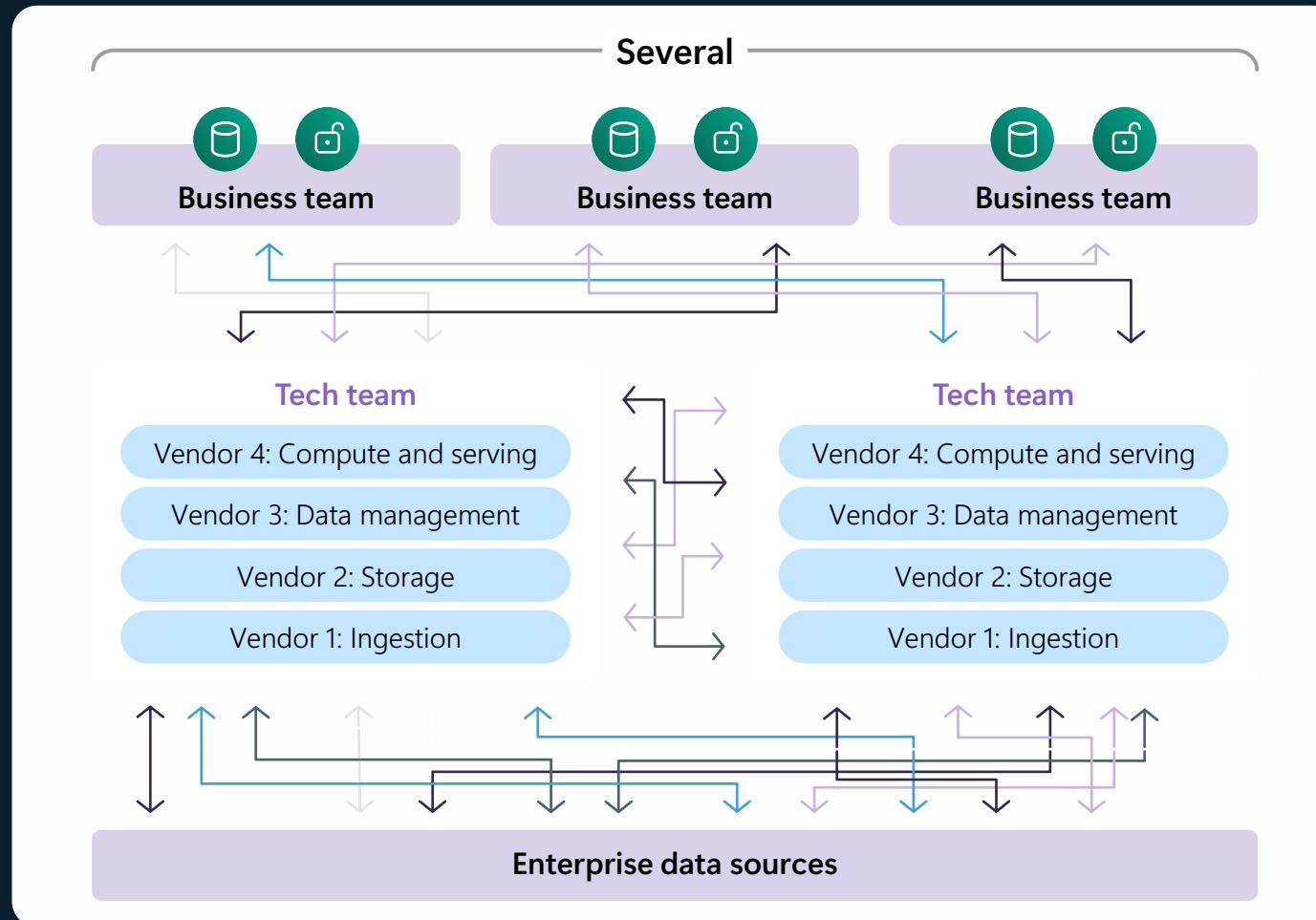
Empower every
business user

AI-powered



The starting line

A complex, organically evolved data estate



- 1 Data copies and infrastructure inefficiencies
- 2 Limited interoperability between vendor services
- 3 Data exposure risks

350K+

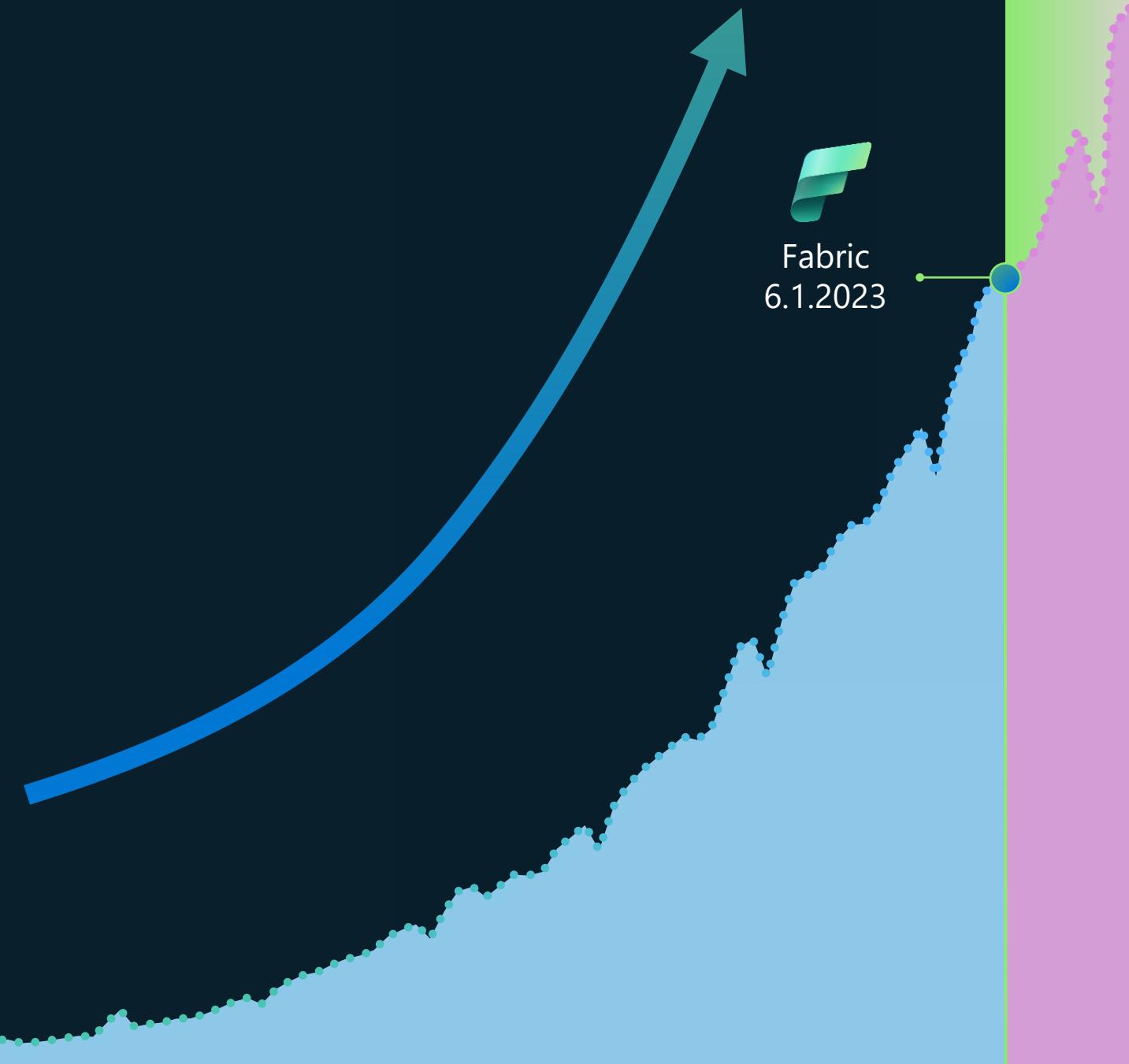
Power BI
Customers

97%

Fortune 500 Companies
Use Power BI

6.5M+

Power BI
Developers



Rapid pace of innovation

aka.ms/FabricRoadmap





Microsoft Fabric

The unified data platform for the era of AI

From

Isolated components

Single database

Gen AI bolted-on

To

Unified stack

All the data

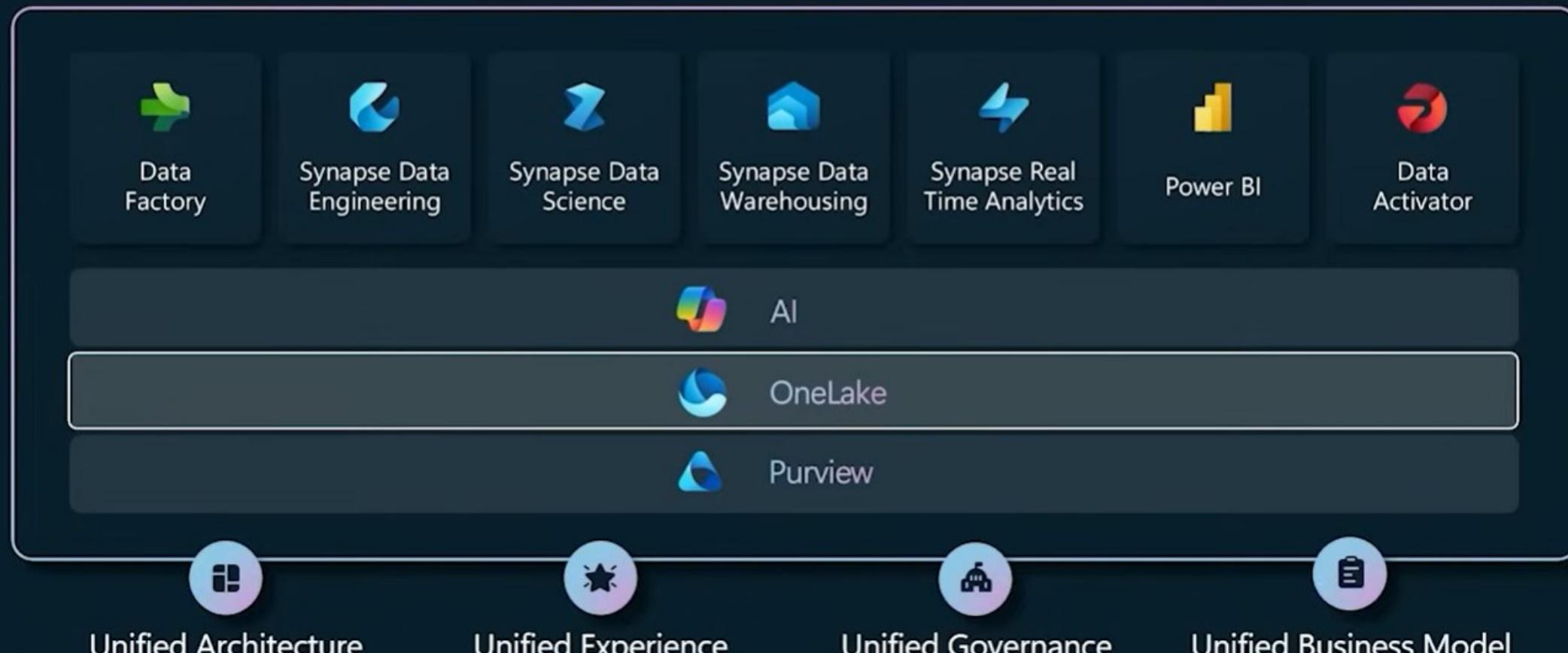
Gen AI built-in





Microsoft Fabric

The unified data platform for the era of AI





Microsoft Fabric

The unified data platform for the era of AI



- A **unified platform** to handle your whole data lifecycle
- A **flexible platform** that can accommodate a broad range of data scenarios for different industries, needs and use cases



Microsoft Fabric

The unified data platform for the era of AI

The screenshot shows the Microsoft Power BI Home interface. At the top, there's a banner with a Seattle skyline at night. Below it, the 'Recommended' section displays five items: 'FabCon Report 2024', 'Azure Data LT Dashboard', 'COVID Bakeroff', 'Arun LT Report', and 'Fabric Customer Analytics'. Each item has a small thumbnail, a title, a brief description, and an 'Open' button. The main content area shows a list of workspaces and reports. The list includes:

Name	Type	Last activity	Location	Endorsement	Sensitivity	
Contoso Outdoor Sales	Workspace	2 hours ago	Workspaces	—	—	
MovieAPICalls	Workspace	3 hours ago	Workspaces	—	—	
FabCon Report 2024	Report	4 hours ago	FabCon 2024	Confidential/Microsoft Extended	○	
FabCon 2024	Workspace	4 hours ago	Workspaces	—	—	
FabconMirrorTest	Workspace	22 hours ago	Workspaces	—	—	
My workspace	Workspace	22 hours ago	Workspaces	—	—	
Fabric Customer Analytics	Report	23 hours ago	—	Confidential/Microsoft Extended	○	
FabKeynoteReport	Workspace	a day ago	Workspaces	—	—	
Contoso Sales Profitability Report	Report	a day ago	FabKeynoteReport	—	Confidential/Microsoft Extended	○



Microsoft Fabric

Common misconceptions about Microsoft Fabric



- Fabric as a **mere rebranding**
(is not just a change of name)
- Fabric is only suitable **for large organizations**
(is not only appropriate for big businesses / big projects)



Microsoft Fabric

The unified data platform for the era of AI

Complete Analytics Platform

Everything, unified

SaaS-ified

Secured and governed

Lake Centric and Open

OneLake

One copy

Open at every tier

Empower Every Business User

Familiar and intuitive

Built into Microsoft 365

Insight to action

AI Powered

Copilot accelerated

AI-driven insights

Gen AI on your data



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Scales to the most demanding projects

The screenshot shows the Microsoft Data Lake studio interface. On the left, there's a sidebar with icons for Home, Create, Browse, OneLake data hub, Monitoring hub, Deployment pipelines, and a circular profile picture of a woman with pink hair. The main area is titled "Contoso Sales Excellence" and displays a list of data assets:

	Name	Type	Owner	Refreshed	Next refresh	Endorsement	Sensitivity
1	ContosoOutdoors	Lakehouse	Patrick Baumgartn...	—	—	—	Confidential
2	ContosoOutdoors	Semantic model (...)	Contoso Sales Exc...	10/18/23, 2:11:33 PM	N/A	—	Confidential
3	ContosoOutdoors	SQL analytics end...	Contoso Sales Exc...	10/27/23, 12:55:04 PM	N/A	—	Confidential
4	ContosoOutdoorsDW1	Warehouse	Patrick Baumgartn...	—	N/A	—	Confidential
5	ContosoOutdoorsDW1	Semantic model (...)	Contoso Sales Exc...	10/26/23, 3:08:04 PM	N/A	—	Confidential
6	ContosoSalesKPLakehouse	Lakehouse	Patrick Baumgartn...	—	—	—	Confidential
7	ContosoSalesKPLakehouse	Semantic model (...)	Contoso Sales Exc...	7/17/23, 11:41:40 AM	N/A	—	Confidential
8	ContosoSalesKPLakehouse	SQL analytics end...	Contoso Sales Exc...	—	N/A	—	Confidential
9	Customer Loyalty New Member Update	Dataflow Gen2	Patrick Baumgartn...	—	N/A	—	Confidential
10	Dataflow CustomerLakehouse1	Lakehouse	Patrick Baumgartn...	—	—	—	Confidential
11	Dataflow CustomerLakehouse1	Semantic model (...)	Contoso Sales Exc...	7/21/23, 11:32:37 AM	—	—	Confidential

SQL Developer



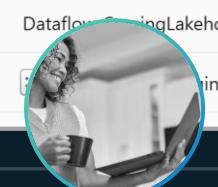
Data Engineer

Business Analyst



Data Scientist

Database Admin



Developer



Project Manager



Fabric stakeholders

- Data Movers → Data Architects, Data Engineers, Developers
- Data Users → Data Scientists, Analysts, BI Developers
- Business Leaders → Executives and Leaders, Business Managers
- IT Leaders → IT Managers and CTOs, DevOps and DataOps Teams, Cloud Solution Architects, Compliance Officers, Data Stewards and Governance Professionals



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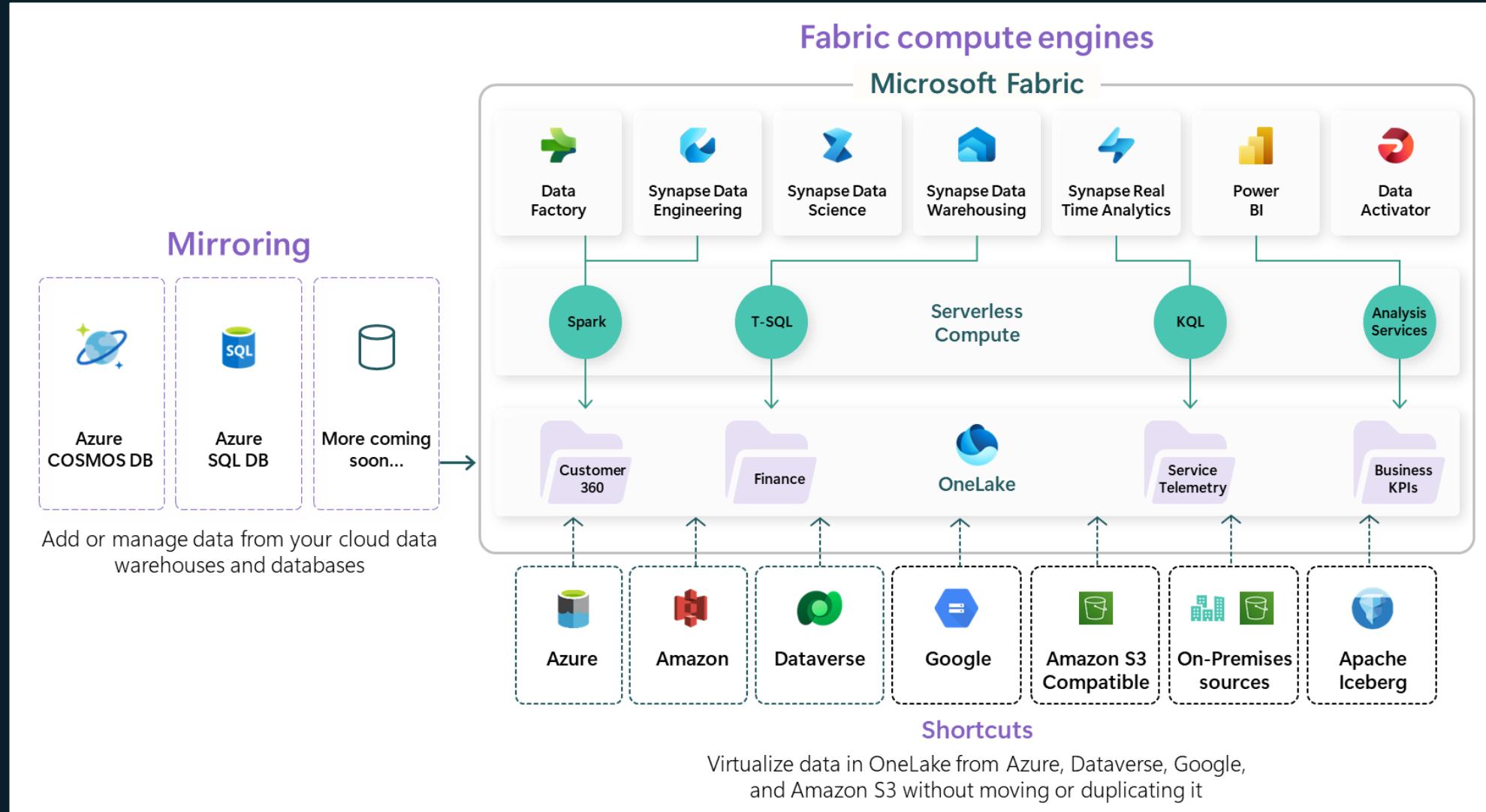
**“The OneDrive
for Data”**



OneLake

Unifying data in OneLake

Bring in data from anywhere



One Copy for all
computes



OneLake

Free Mirroring Storage for Replicas



OneLake

Unified Data Estate in OneLake



OneLake

Synapse Data Engineering

https://dxt.powerbi.com/home?experience=data-engineering

Microsoft DXT | Synapse Data Engineering Home

Search

Trial:
59 days left

63

?

Home

Create

Browse

Data hub

Monitoring hub

Workspaces

My workspace

Lakehouse

Notebook

Environment (Preview)

Spark Job Definition

Data pipeline

Import notebook

Use a sample

New

Current workspace: My workspace

Items will be saved to this workspace.

Show less ^

You frequently open this

My workspace

Contoso_OutdoorsDataLake

ContosoOutdoorsDataLake

Product Demand and Inventory Forecasting

Contoso Outdoors

Quick access

Recent

Favorites

Filter by keyword

Filter

	Name	Type	Opened	Owner	Endorsement	Sensitivity	Location
	ContosoOutdoors	Workspace	an hour ago	—	—	—	Workspaces
	Contoso Outdoors	Workspace	an hour ago	—	—	—	Workspaces
	Loyalty Program Order and Delivery Status	Report	an hour ago	Contoso Outdoors	—	Confidential\Micro... ⓘ	Contoso Outdoors
	Loyalty Program Order and Delivery Status	Report	an hour ago	ContosoOutdoors	—	Confidential\Micro... ⓘ	ContosoOutdoors



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Insight to action

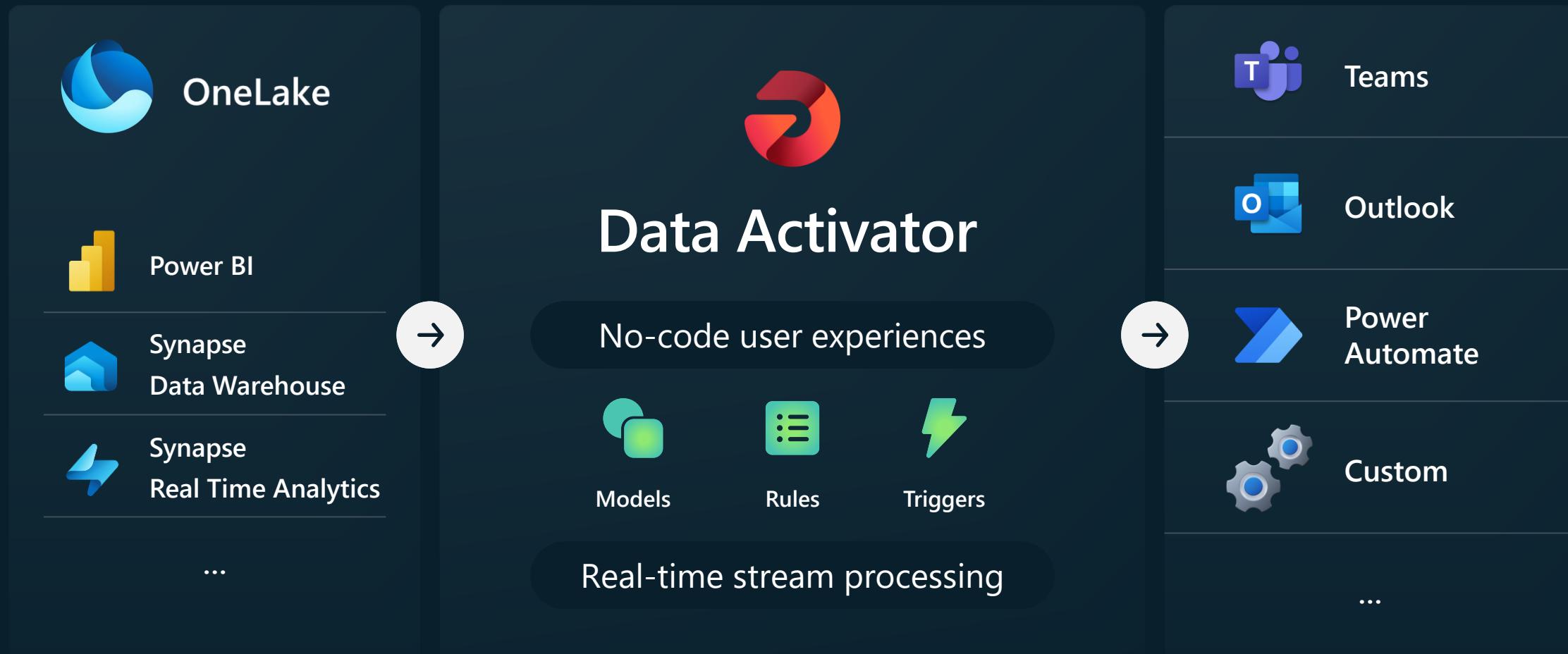
AI Powered

Copilot accelerated

AI-driven insights

Gen AI on your data

Trigger actions on all your data, from one place

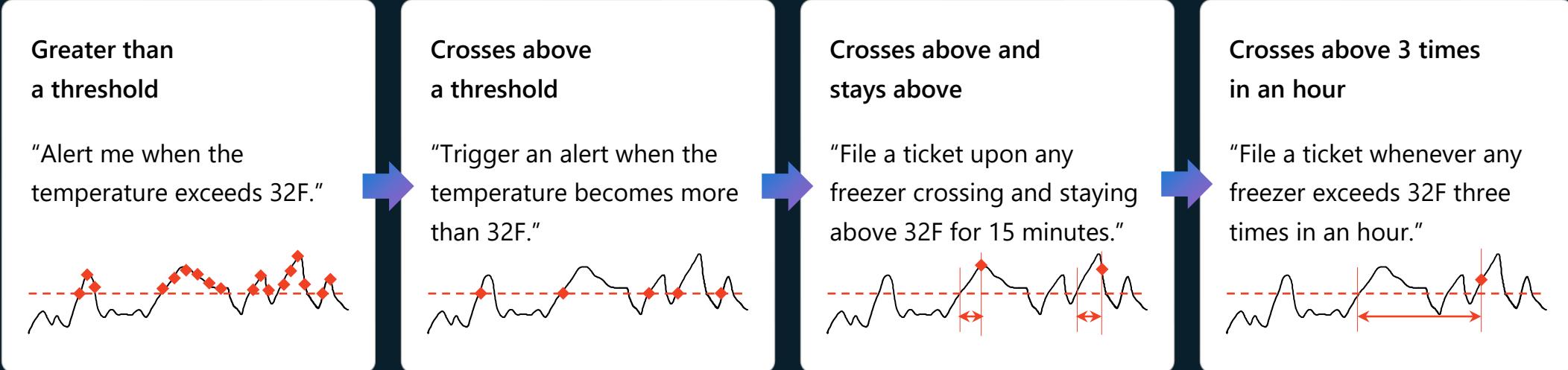


Trigger actions on all your data, from one place

A	B	C	D	E	F
1	Segment	Country	Product	Discount Band	Units Sold
2	Government	Canada	Carretera	None	1618.5 \$ 3.00
3	Government	Germany	Carretera	None	1321 \$ 3.00
4	Midmarket	France	Carretera	None	2178 \$ 3.00
5	Midmarket	Germany	Carretera	None	888 \$ 3.00
6	Midmarket	Mexico	Carretera	None	2470 \$ 3.00
7	Government	Germany	Carretera	None	1513 \$ 3.00
8	Midmarket	Germany	Montana	None	921 \$ 5.00
9	Channel Partners	Canada	Montana	None	2518 \$ 5.00
10	Government	France	Montana	None	1899 \$ 5.00
11	Channel Partners	Germany	Montana	None	500
12	Midmarket	Mexico	Montana	None	500
13	Enterprise	Canada	Montana	None	500
14	Small Business	Mexico	Montana	None	958 \$ 5.00
15	Government	Germany	Montana	None	2146 \$ 5.00
16	Enterprise	Canada	Montana	None	345 \$ 5.00
17	Midmarket	United States of America	Montana	None	615 \$ 5.00
18	Government	Canada	Paseo	None	292 \$ 10.00
19	Midmarket	Mexico	Paseo	None	974 \$ 10.00
20	Channel Partners	Canada	Paseo	None	2518 \$ 10.00
21	Government	Germany	Paseo	None	1006 \$ 10.00

Units Sold is lower than
expected
Do something!

Trigger actions on all your data, from one place



Announcing

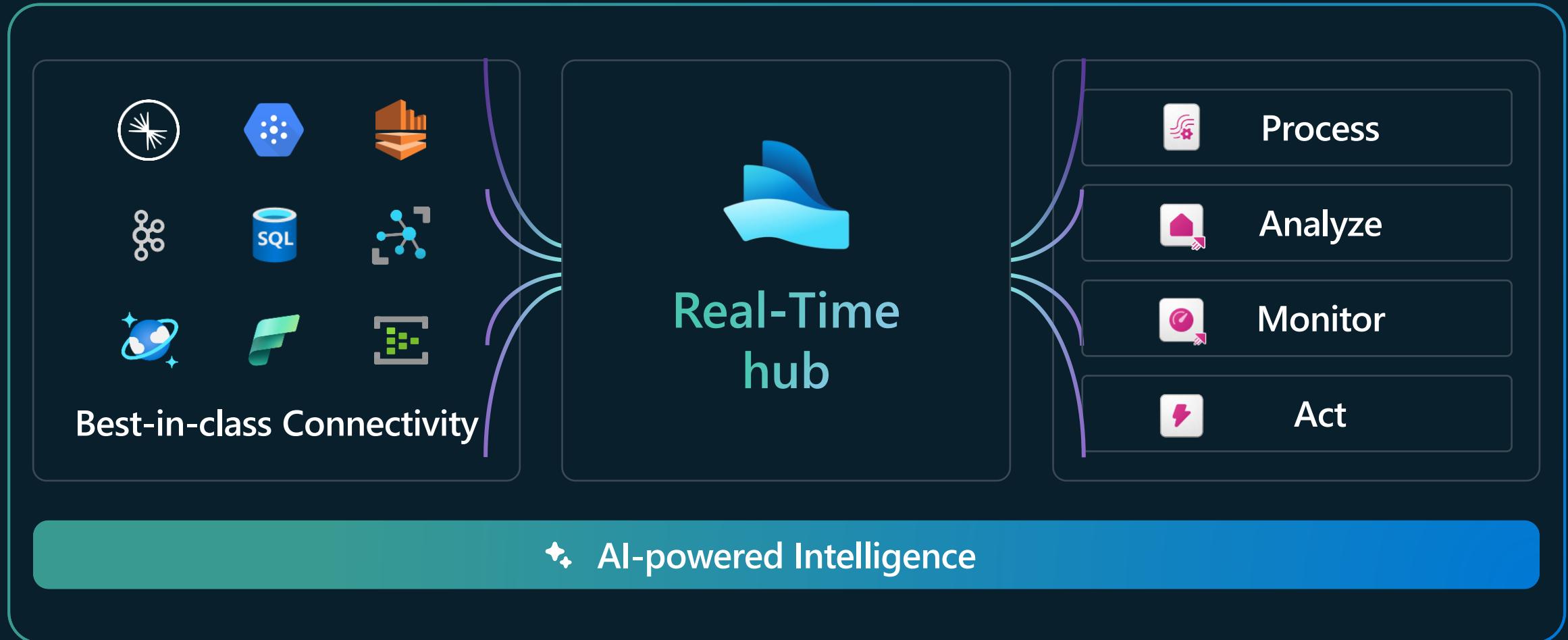


Real-Time Intelligence

at Microsoft Build 2024



Real-Time Intelligence in Microsoft Fabric





Real-Time Intelligence in Microsoft Fabric

Logistics

Delivery tracking and routing

Warehouse management

Supply & demand operations



Finance & Insurance

Finance Automation

Fraud Detection



Operational Efficiency

Manufacturing

Improving Quality

Predictive Maintenance

Inventory Prediction



Automotive

Connected fleet applications

Autonomous Driving

Manufacturing + R&D



Retail

Inventory tracking

Promotions and buying experiences

Supply chain management



Energy & Utilities

Station monitoring, energy leakage detection



Equipment Maintenance & Monitoring

Failure Monitoring





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Copilot accelerated

AI-driven insights

Gen AI on your data

AI Powered

Gen AI accelerates your data journey in Fabric



Copilot accelerated
experiences



AI-driven
insights



Custom
generative AI
for your data

Copilot Integrated in every Microsoft Fabric Experience



Data Factory



Data Warehouse



Data Science



Real-Time Intelligence



Power BI



Microsoft Fabric Copilot in DataWarehouse

The screenshot shows the Microsoft Fabric Data Explorer interface. The left sidebar includes links for Home, Reporting, Create, Browse, OnLake data hub, Apps, Metrics, Monitoring hub, Deployment pipelines, Learn, Workspaces, Copilot Demo, and Power BI. The main area has tabs for Data, Query, and Model. The Data tab is active, showing the 'Data preview' section for a 'Demo' warehouse. The preview table has columns: 123 DateID, Date, ABC DateBKey, ABC DayOfMonth, ABC DaySuffix, ABC DayName, ABC DayOfWeek, ABC DayOfWeekInMonth, ABC DayOfWeekInYear, ABC DayOfQuarter. A message at the top states: 'This warehouse automatically adds new objects to its default Power BI semantic model. Don't want to sync? Go to settings to turn this off. [Learn more](#)'.



Microsoft Fabric

Copilot for Power BI Consumption

The screenshot shows the Microsoft DXT | Power BI Home interface. On the left, a vertical sidebar contains icons for Home, Create, Browse, OneLake data hub, Apps, Metrics, Monitoring hub, Deployment pipelines, Learn, Workspaces, and specific dashboards like Contoso Sales and Power BI. The main area features a "Recommended" section with four cards: "Feature Usage app" (You frequently open this), "Customer Loyalty Program Analytics" (You favorited this), "testForMaxim app" (Merav Lahav featured this), and another "Feature Usage app" (Mohammad Ali opened this). Below this is a "Recent" section with three items: "Contoso Customer Loyalty Program" (Report, 9 minutes ago, Location: Contoso Sales Excellence, Endorsement: —, Sensitivity: Confidential). The second item is "Customer Loyalty Program Analytics" (App, an hour ago, Location: Apps, Endorsement: —, Sensitivity: —). The third item is "Contoso Sales Excellence" (Workspace, an hour ago, Location: Workspaces, Endorsement: —, Sensitivity: —). A search bar at the top right includes a "Trial: 59 days left" message and a notification count of 26.

Name	Type	Opened	Location	Endorsement	Sensitivity
Contoso Customer Loyalty Program	Report	9 minutes ago	Contoso Sales Excellence	—	Confidential
Customer Loyalty Program Analytics	App	an hour ago	Apps	—	—
Contoso Sales Excellence	Workspace	an hour ago	Workspaces	—	—

Demo

AI Skills



AI Powered



Generative AI on your data

Announcing Public Preview

Deliver custom
generative AI experiences
for **your data**



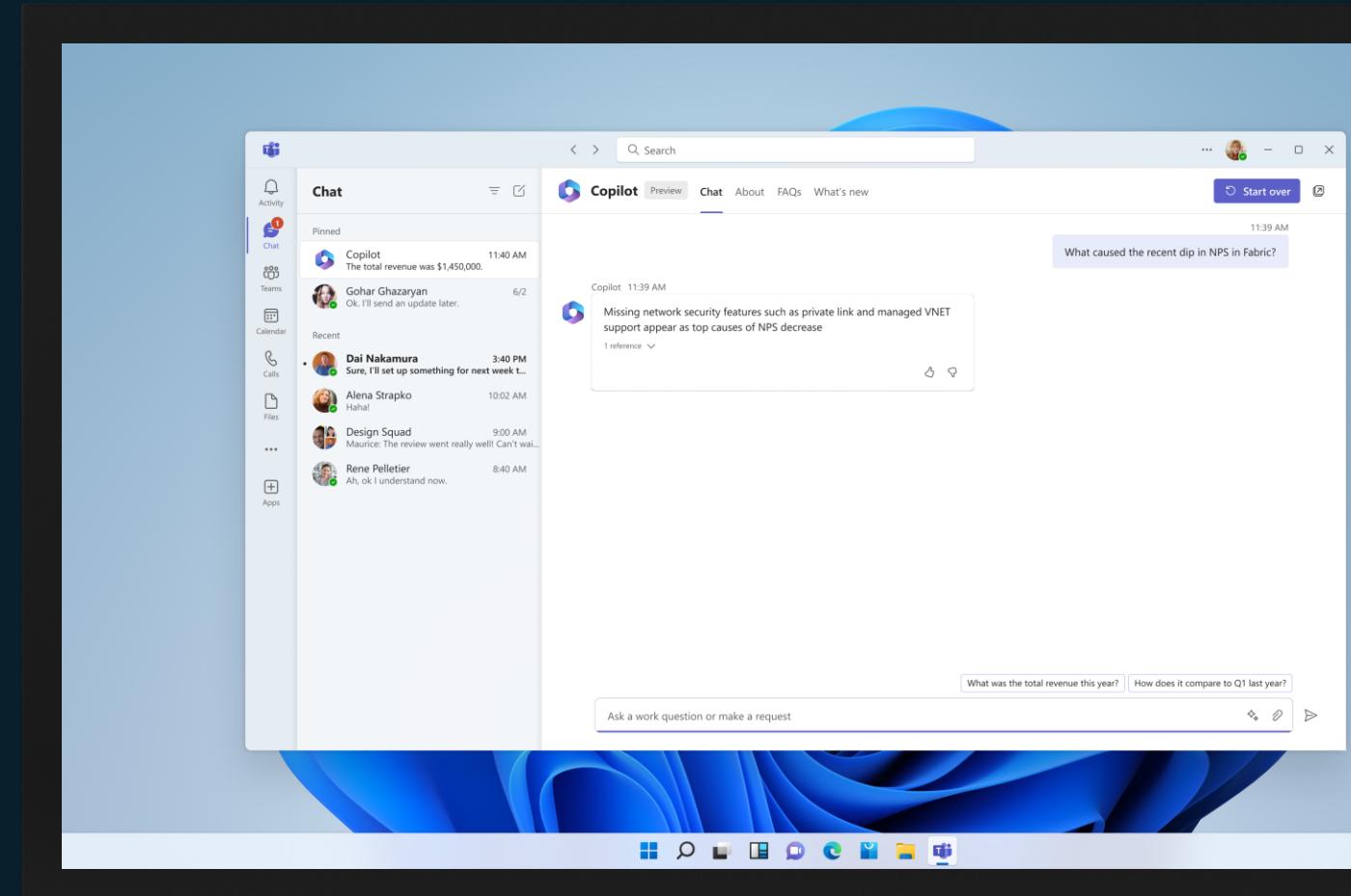
Enable custom Q&A on your
data in Fabric



Define custom business semantics
and grounding **unique to your org**



Scale the custom experiences to
M365 Chat, Copilot Studio, and
Azure AI Studio



Home

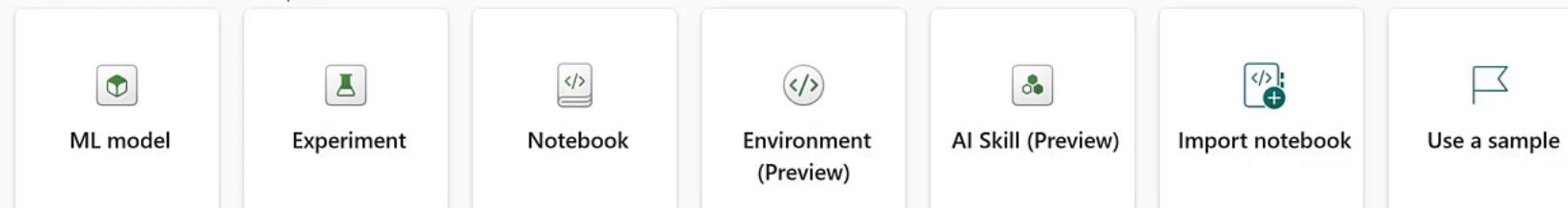


New

Current workspace: Contoso Outdoors Sales

Items will be saved to this workspace.

Show less ^



Recommended



My workspace
You frequently open this

[Open](#)

Notebook 6
You frequently open this

[Open](#)

Contoso Sales Excellence
You frequently open this

[Open](#)

Copilot Demo
You frequently open this

[Open](#)

Quick access

Recent

Favorites

Filter by keyword

Filter ▾

File	Name	Type	Opened	Owner	Endorsement	Sensitivity	Location
	Contoso Outdoors Sales	Workspace	now	—	—	—	Workspaces
	Contoso Sales Excellence	Workspace	now	—	—	—	Workspaces

Public preview

Microsoft Fabric Workload Development kit

Acquire new customers with your own Fabric workload

Seamless user
experience

OneLake
integration

Enhanced customer
discoverability

Marketplace-based
monetization



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Data
Factory



Data
Engineering



Data
Warehouse



Data
Science



Real-Time
Intelligence



Power BI



AI



OneLake



Purview



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Data
Factory



Data
Engineering



Data
Warehouse



Data
Science



Real-Time
Intelligence



Power BI



Partner
workloads



AI



OneLake



Purview



Microsoft Fabric

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Announcing



Microsoft Fabric

Community Conference 2024



4 days of Microsoft Fabric Learning, Connection and Inspiration

24-27 September 2024

Stockholm, Sweden

Learn more:
<https://aka.ms/FabCon-Europe>





Thank YOU

Andrea Benedetti
 /in/abenedetti