



Era of AI - Microsoft Fabric

Microsoft Innovation Hub – St. Louis

09:00 AM - 09:15 AM

Introductions

09:15 AM - 10:15 AM

What's New in AI in Power BI and Microsoft Fabric

10:15 AM - 12:00 PM

Build a Data Agent and Design Your Report with Copilot in Power BI

12:00 PM - 12:30 PM

Lunch

12:30 PM - 02:30 PM

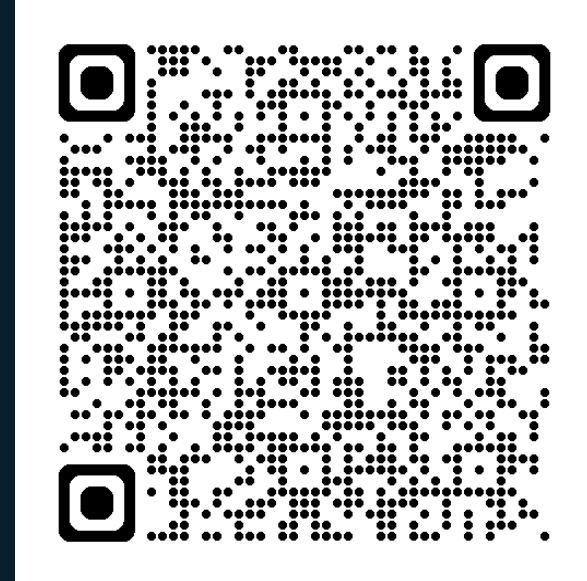
Breakout sessions with Microsoft Architects on topics of your interest (Optional)



St. Louis Microsoft Fabric/PowerBI Meetup

Join the meetup group!

<https://www.meetup.com/saint-louis-microsoft-fabric-power-bi-meetup-group/>





Microsoft Fabric

The unified data platform for AI transformation



Data
Factory



Analytics



Databases



Real-Time
Intelligence



Power BI



Industry
Solutions



Partner
Workloads




AI





OneLake

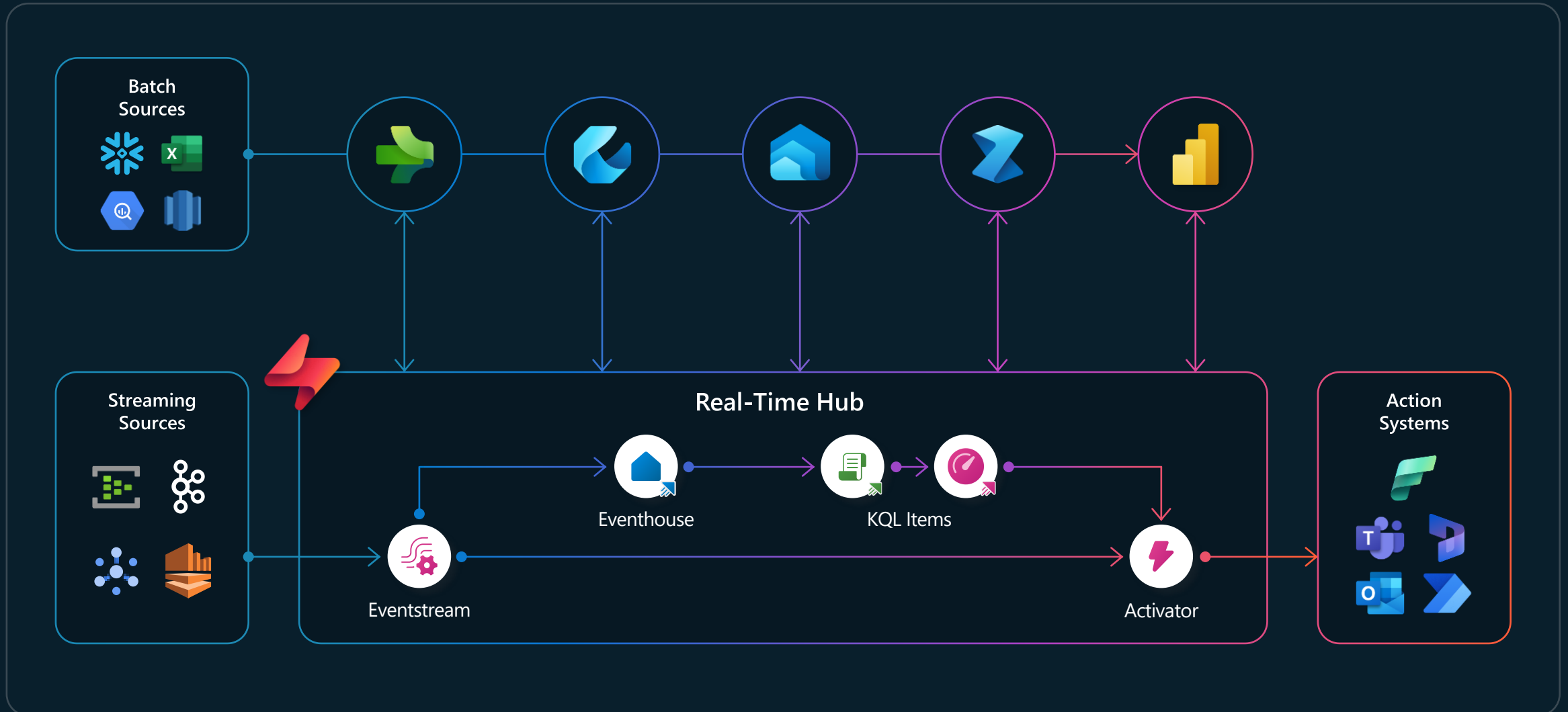


Purview

 Developers & Data Engineers

 Data Scientists

 Analysts



Stream
IoT devices, sensors,
gadgets (loosely typed)

Not structured
.pdf, .docx, .jpeg, etc.
- knowledge mining,
etc.

Semi-structured
CSV, logs, JSON, XML
(loosely typed)

Relational databases
(strongly typed,
structured)

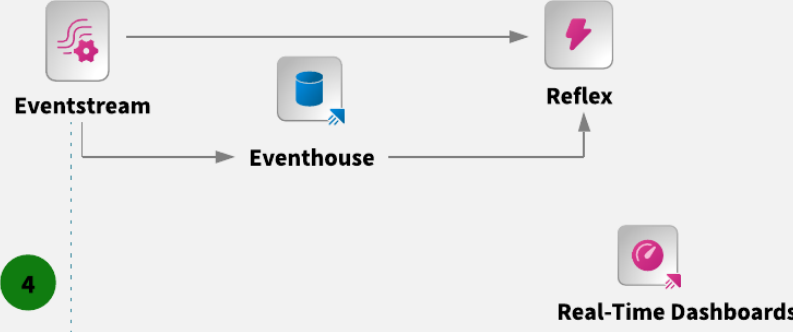
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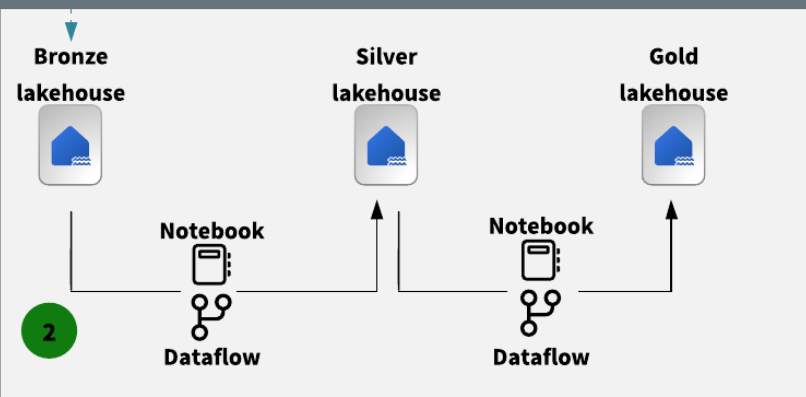


Data Factory

Real-Time Intelligence – Stream processing



Batch processing



OneLake



Purview



AI

Consume / Serve



Microsoft 365



Power
Automate



Custom API



Power BI



SQL endpoint



Notebooks

5

AI Experiences in Fabric

Gen AI accelerates
your data journey
in Fabric



Copilot accelerated
experiences

Generally available



Chat with
your data

Public preview

AI Experiences in Fabric

Gen AI accelerates
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Copilot accelerated
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Generally available



Chat with
your data

Public preview

Copilot built into every workload

GA



Data
Factory

Create or update transformation steps and data pipelines using natural language. Summarize existing items. Easily identify and fix issues

Public preview



Data
Warehouse

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

Public preview



Data Engineering
& Data Science

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

Public preview



Databases

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

GA



Real-Time
Intelligence

Translate questions into KQL queries that you can execute.

GA



Power BI

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

AI Experiences in Fabric

Gen AI accelerates
your data journey
in Fabric



Copilot accelerated
experiences

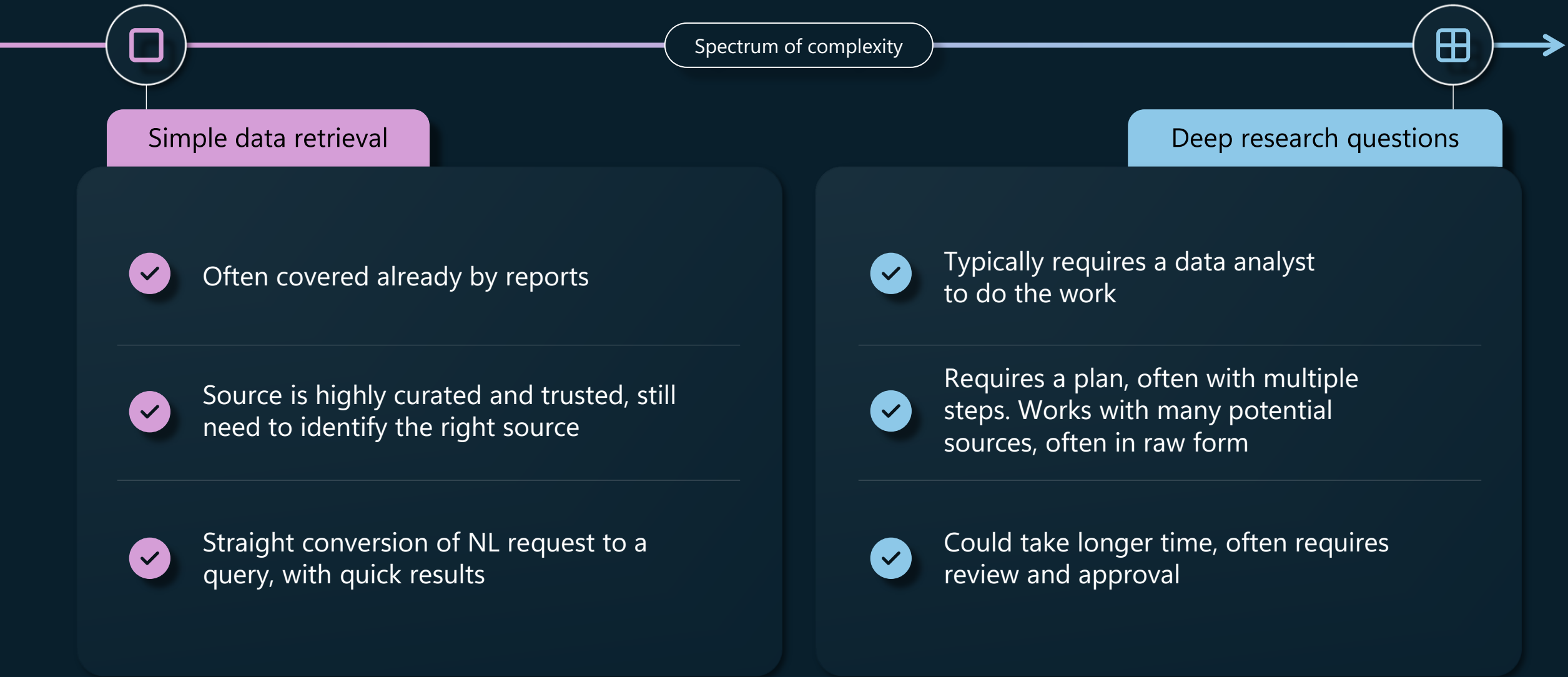
Generally available



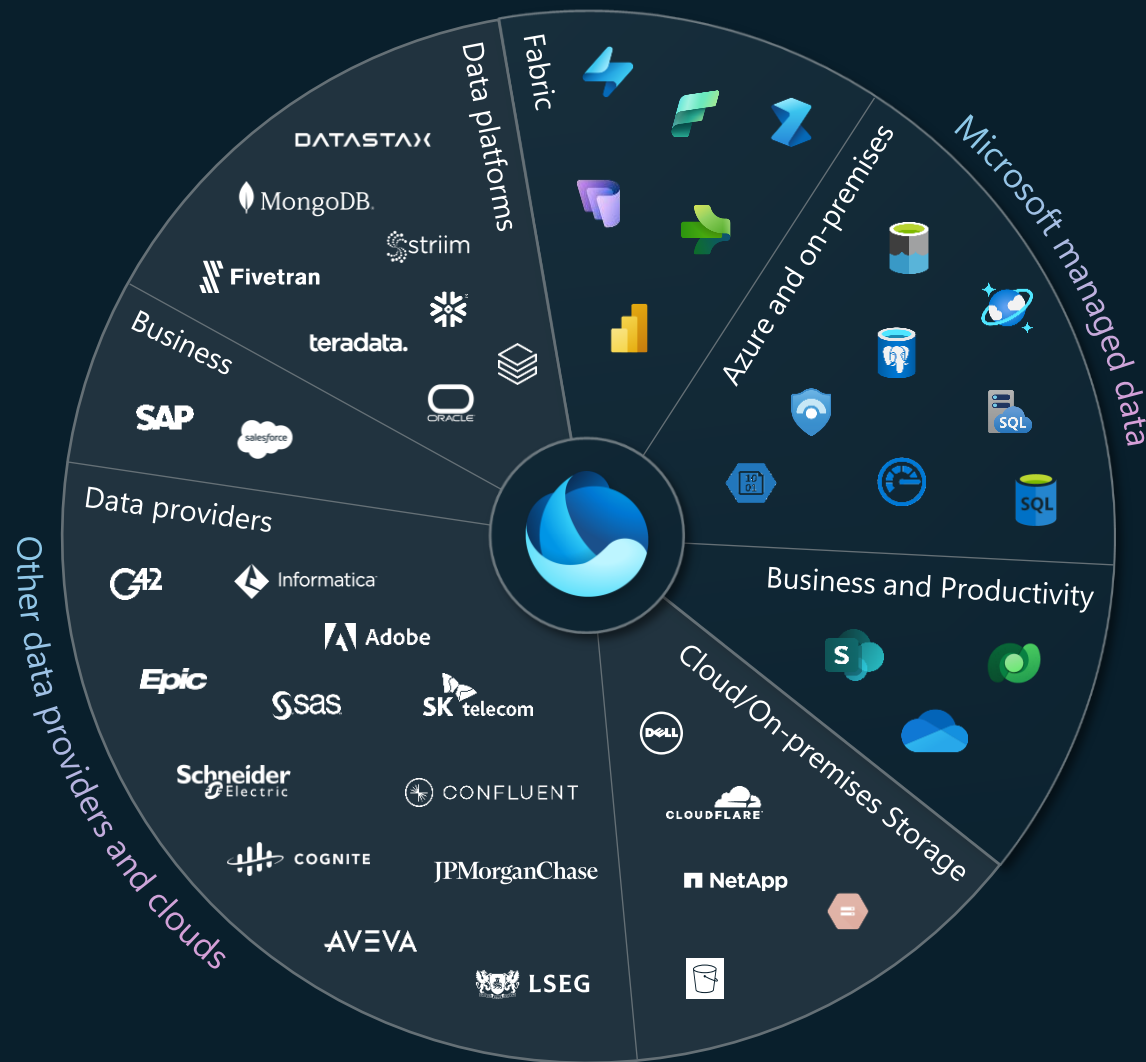
Chat with
your data

Public preview

A mix of data questions from a sea of data



A mix of data questions from a sea of data



Multiple systems and databases,
on multiple clouds

Different log-ins, APIs,
and query languages

Different user access
rights to the data

All needed to serve business
users with no understanding
of the data topology and no
ability or audit for correctness

Foundation: OneLake unifies the data estate



Lakehouses

Databases

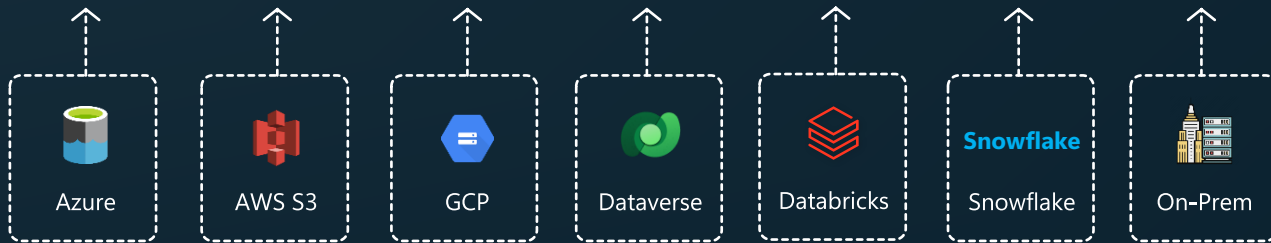
Warehouses

Eventhouses

The first step in creating a comprehensive AI-driven analytics system is to bring all the data together

OneLake unifies all data, structured and unstructured, across all clouds and databases, providing a layer of curation

OneLake provides a single pane of glass for data access, governance and security



Foundation: Define Business Semantics



Semantic Models

Lakehouses

Databases

Warehouses

Eventhouses

Semantic models are expertly curated repositories of business data and corporate metrics

Industry rush towards semantic models as key AI enablers

 Looker

 cube

 snowflake

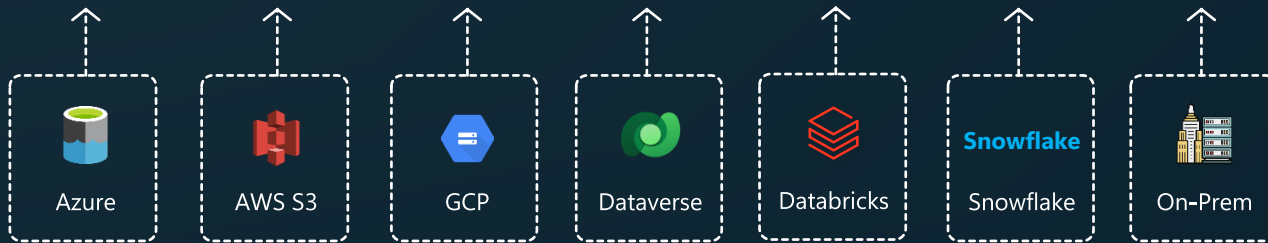
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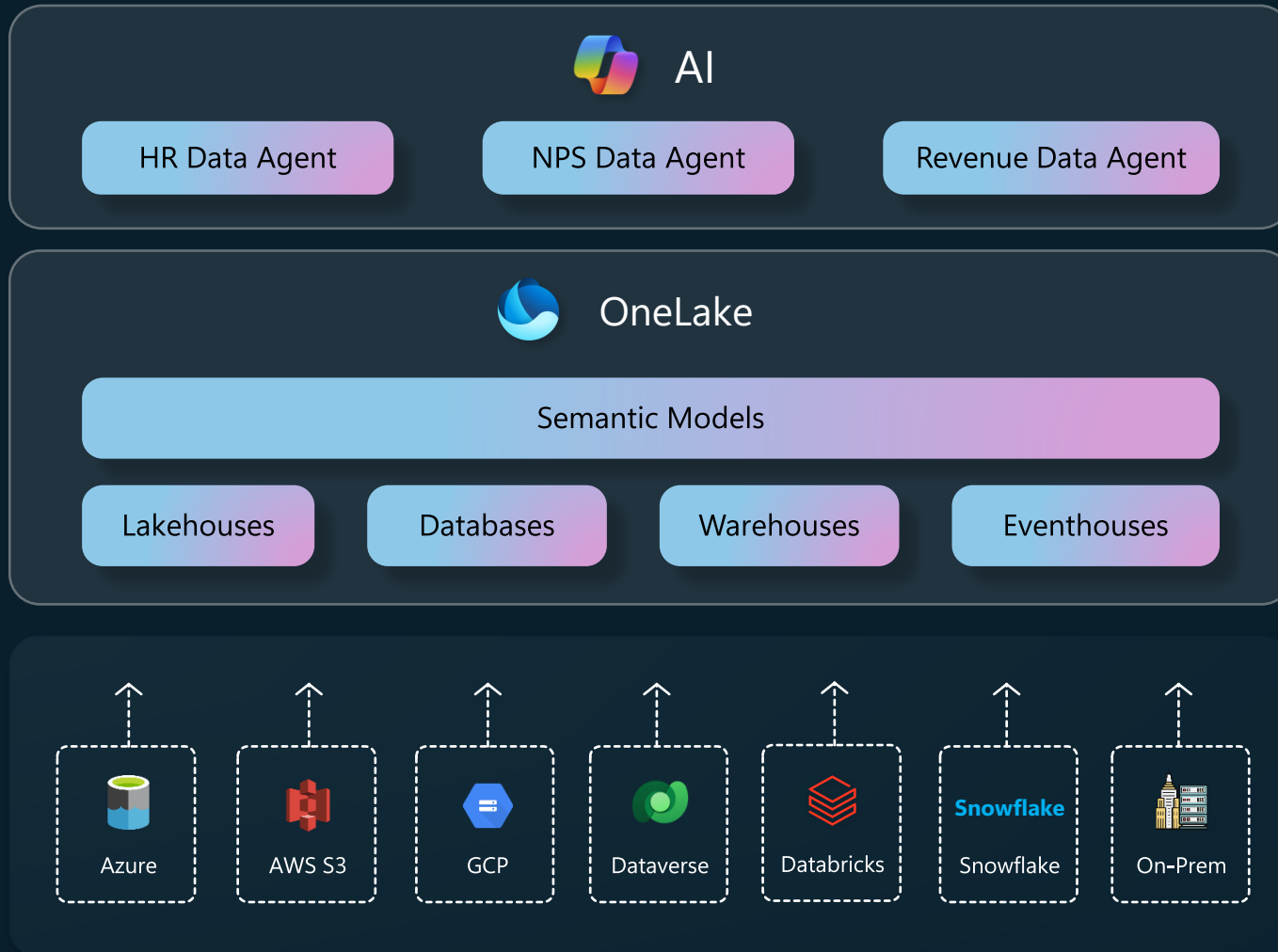
 databricks

30M MAU are regularly using 10+ million of PBI semantic models

The market footprint of PBI semantic models gives Microsoft significant leg up



Foundation: OneLake unifies the data estate



Data Agents are analytical agents that have general ability to author queries and run analysis

They are provided with a source-specific "operator's manual" on how to properly query and analyze the data

Includes instructions for when to use what data, how to understand questions, what are well known answers to common inquiries, multi-shot examples

The Data Agent can run simple queries or perform complex multi-step analysis

What is a data agent?

An agent for analyzing your data



The conversational data agent allows users to interact with data naturally, enhancing accessibility and usability.



Chat canvas for creators with new debugging capabilities, making it easier to understand and refine responses.

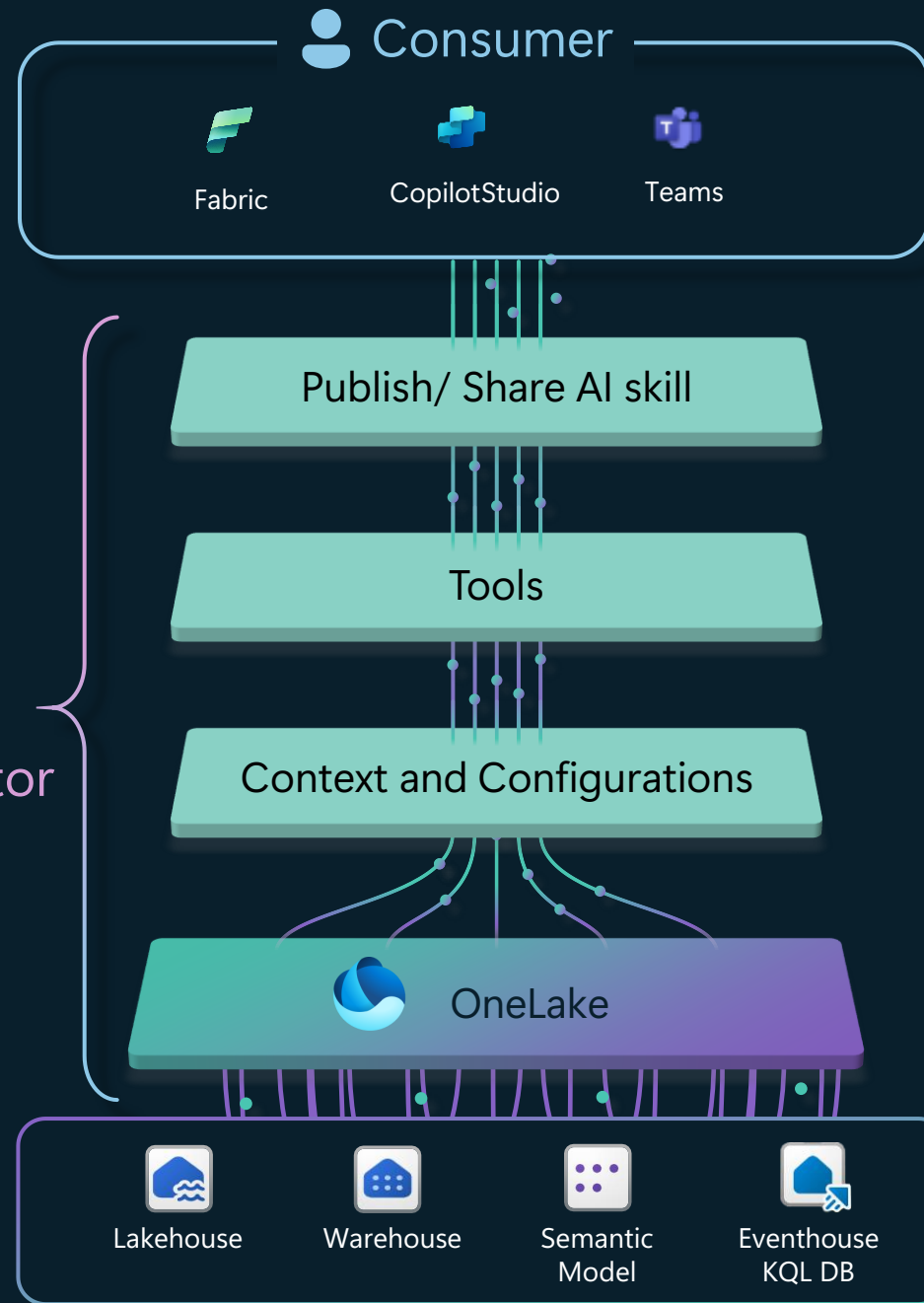


Seamlessly reason over multiple data sources, including Data Warehouse, Lakehouse, Semantic models and Eventhouse KQL databases, to create a powerful Data Expert tailored to your data domain.



Your Data Agent can be consumed inside and outside of Fabric. Stay tuned for upcoming integrations with Copilot Studio/Teams, Azure AI Foundry and your own custom applications.

Creator



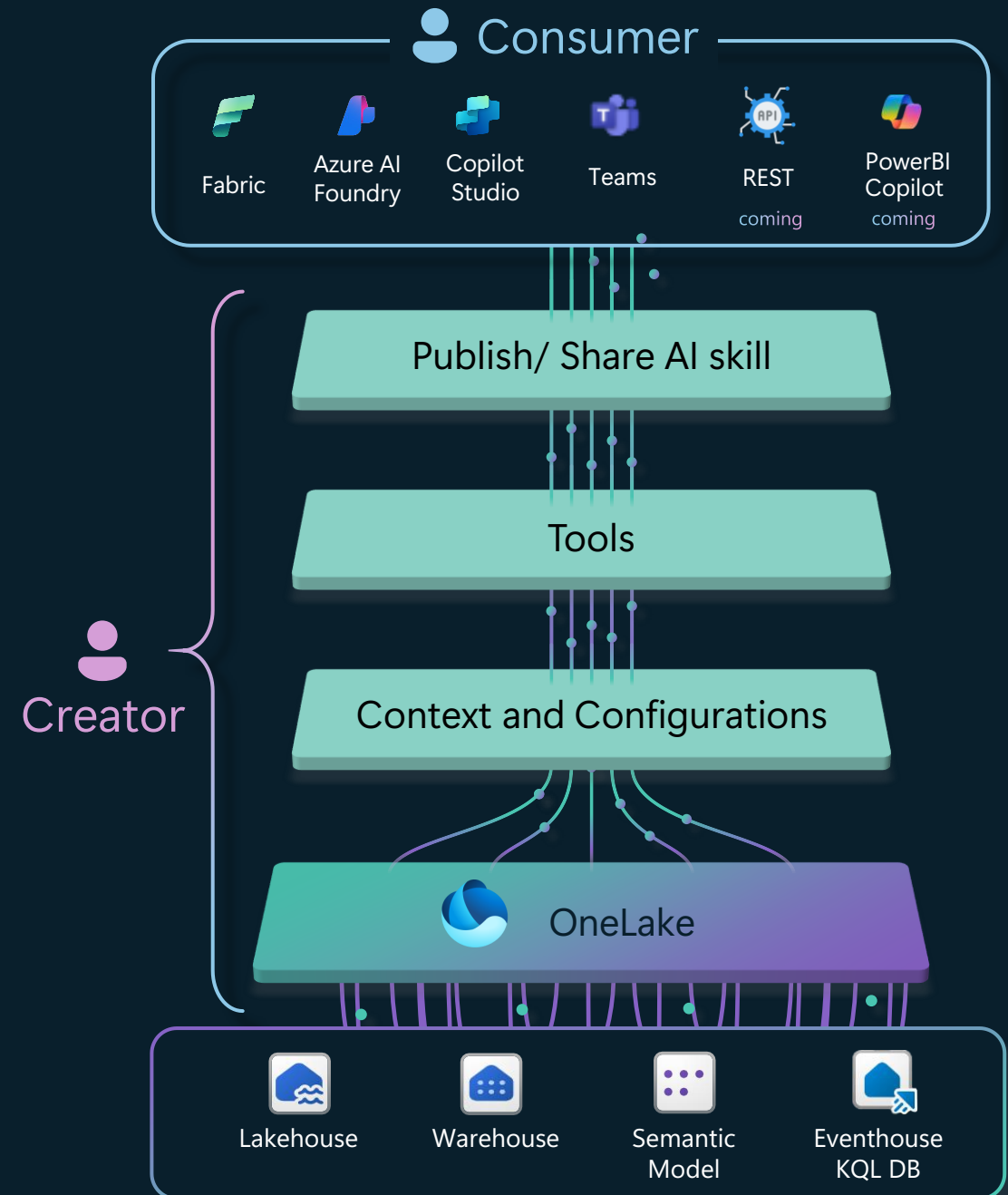
Data Agents Roadmap

Q1 CY 2025

- Agentic Framework unlocking conversational abilities
- Integration with Azure AI Foundry (Public Preview)
- Semantic Models & KQL Databases supported as data sources
- Public Preview: Data Agent + AI Foundry

Q2-Q4 CY 2025

- Preview: Integration with MS Copilot Studio
- Preview: Enhanced instructions incl. data source instructions
- Preview: Data Agent REST Endpoint
- Preview: Data Agent APIs for automating tasks (SDK)
- Preview: Unstructured data support
- Preview: Monitoring & evaluation experiences

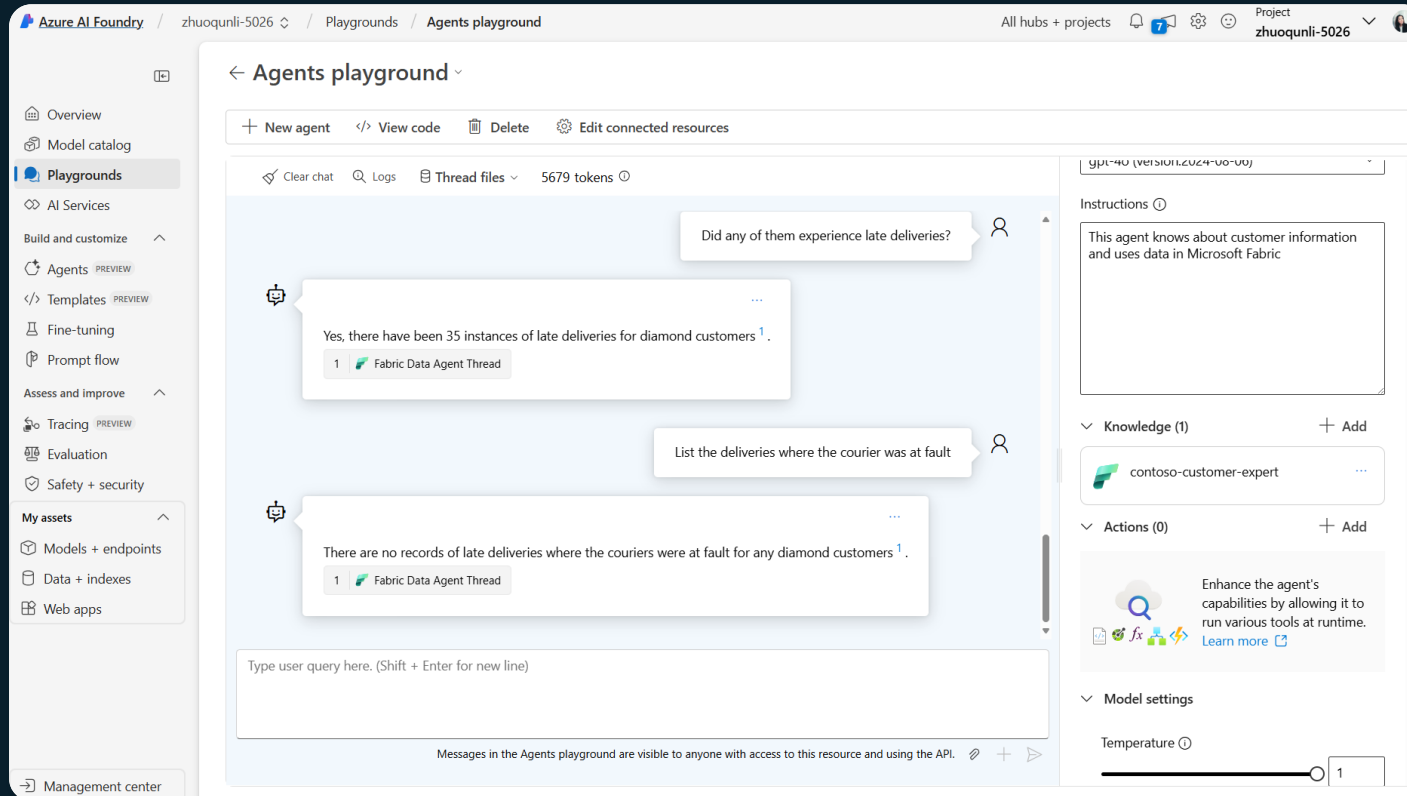


Demo

Data Agent

Integration with Azure AI Foundry

Public preview



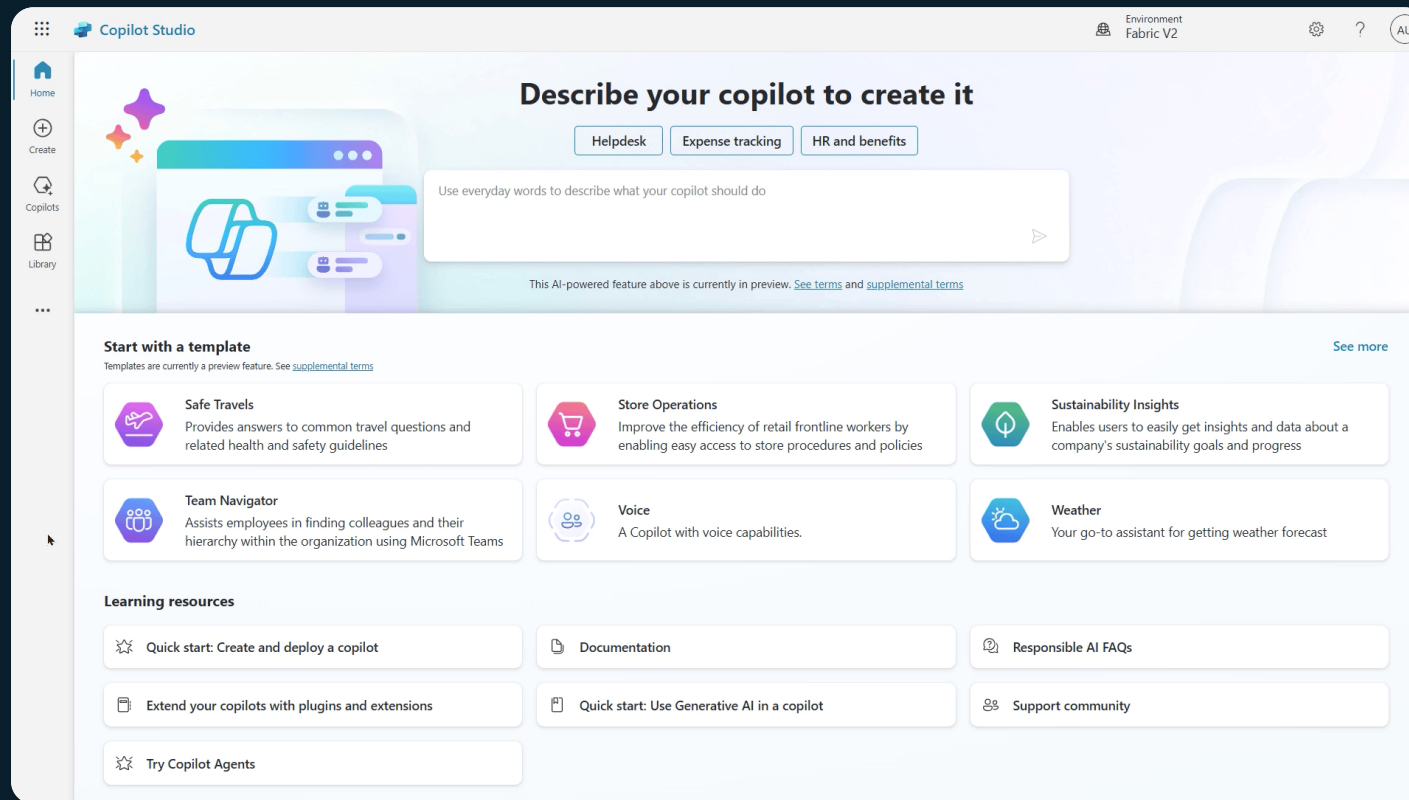
Create custom agents in Azure AI Foundry Agent Service with Fabric data agents as knowledge source

Seamless Data Retrieval from AI Foundry to connect to Fabric data agents for direct access to rich data insights

Incorporate your Fabric data agents in custom Apps with AI Foundry

Integration with Microsoft Copilot Studio

Private preview



Create custom Copilot agents in MCS with data agent as Knowledge Source

Enhance your custom agent with different knowledge sources and actions

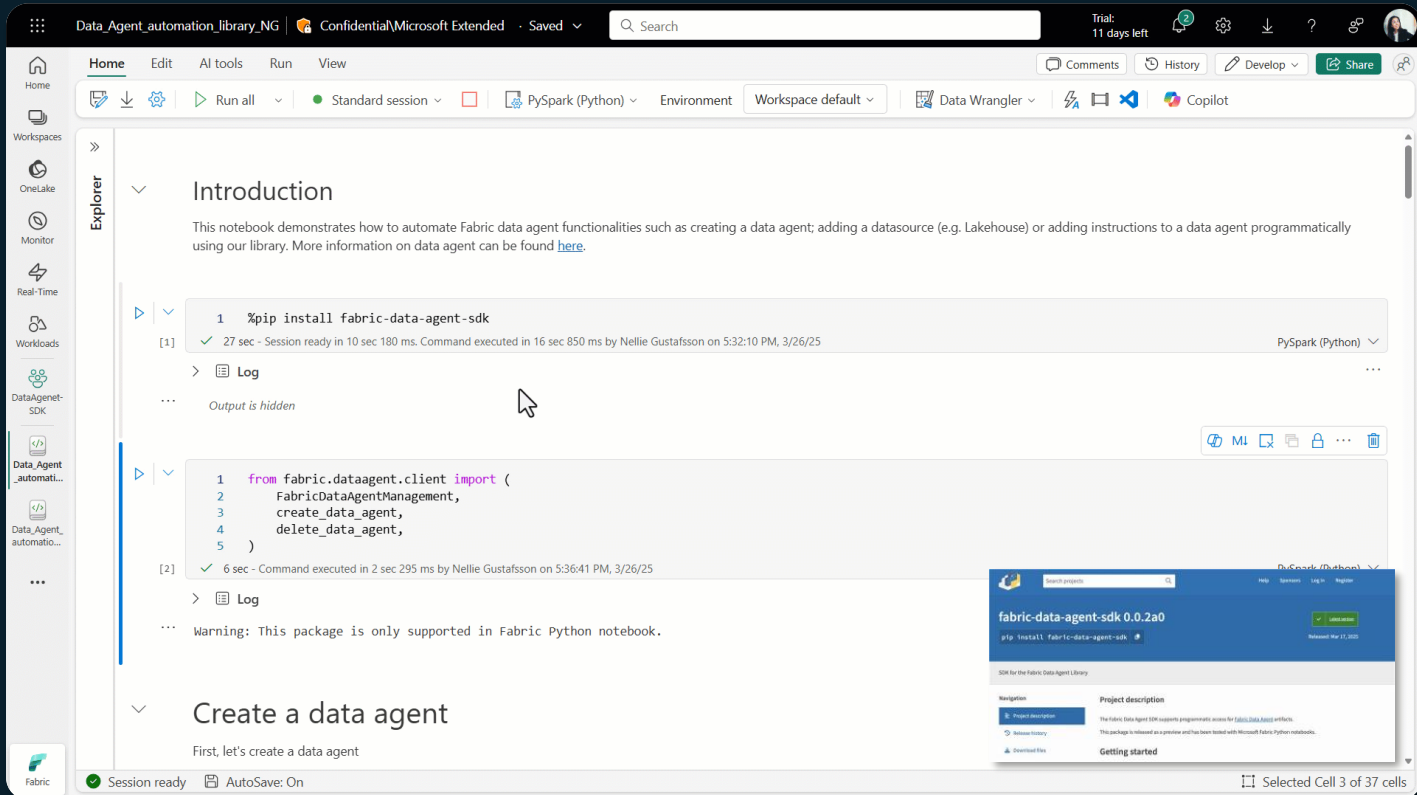
Publish your custom agent to Microsoft Teams and other channels

Private preview soon

AI Skills + Power BI Home Copilot

Fabric Data agent SDK

Public preview soon



Leverage a Data agent SDK to invoke Data agents in Fabric from Fabric Notebooks (external endpoint coming)

Create and configure data agents for automation and testing

Test and evaluate data agents against your ground truth datasets. (Sample evaluation notebook coming.)

Roadmap

Data science

Real-time endpoints for ML Models

Cross-workspace Mlflow logging

Hardware-accelerated GPUs

Mlflow endpoint callable from outside Fabric

Model and data drift monitoring and alerting

AI

Data agent

- Public Preview: MS Copilot Studio integration
- REST endpoint incl. SDK
- Unstructured data support
- Monitoring & Evaluation experiences

AI functions

- Invoke AI functions from new experiences
- AI powered operations in Data Wrangler

Lab Repo - <https://github.com/lukenewport-prog/eraofai/>

Lab 1 - Build a Data Agent

<https://learn.microsoft.com/en-us/fabric/data-science/data-agent-scenario>

Import Data Agent - Bonus notebook for extended AI Instructions and use examples.json for more few shot queries.

Lab 2 - CMS Medicare Part D

<https://github.com/isinghrana/fabric-samples-healthcare/tree/main/analytics-bi-directlake-starschema>

-try making a dashboard before and after modeling

Upcoming Events in the St. Louis Microsoft Innovation Hub

Best of Build – June 5

<https://aka.ms/BestofBuildStLouis>

Join us for **Best of Build**, a one-day event recapping the hottest topics from Microsoft Build 2025.
AI Innovations, Platform Innovation, Enterprise AI Adoption, Trust and Security

Hands-on Lab for Agentic AI

- Build and deploy Azure AI Agents using Azure AI Foundry.
- Integrate Azure AI Search for a Retrieval-Augmented Generation (RAG) agent.
- Develop a multi-agent system for data insights.

Era of AI: Hands on Semantic Kernel Agents – June 27

<https://aka.ms/EraOfAISTL>

Overview of Semantic Kernel Framework

Hands-on Building AI Agents and Memory Implementation

Breakout Sessions: Advanced Patterns and Process Framework