

Changing the way how we interact with data In the era of AI

Data Saturday Croatia – June 14, 2025

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GOLD

span



<epam>



beta systems

BRONZE



DATA SENSE
WHERE IT SPEAKS BUSINESS



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FAVORITE STUFF:



Session breakdown

01

Understanding data
interaction

02

Setting a proper
foundation

03

Data Q&A

04

Copilot experiences

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Data Agents

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Meet users where
they are

07

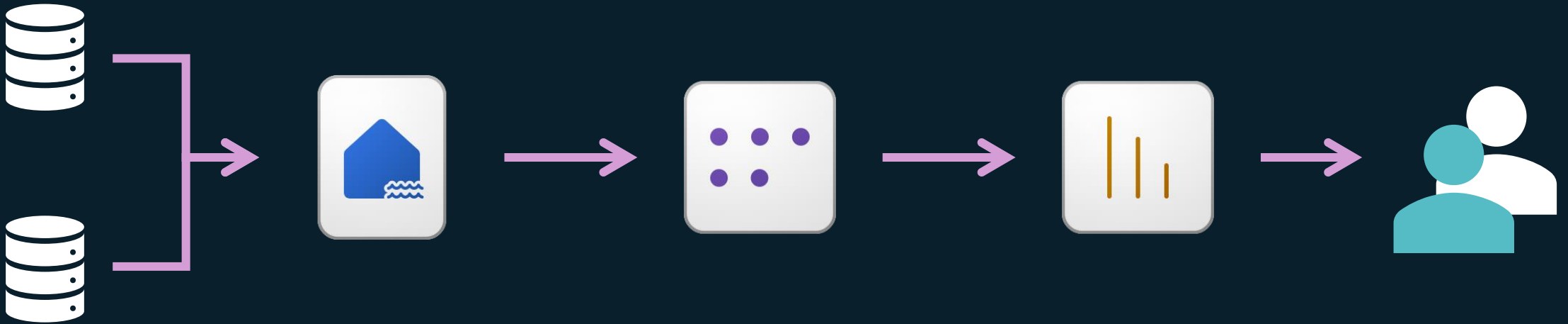
Wrap up



Understanding data interactions

Typical analytics solution today

Simplified overview



Why should I open a report
to get to my insights?



What if you could **chat** with your data?



Setting a proper data
foundation

Personas

Customer

Financial Advisors

Portfolio Managers

...

Modern Technology

Co-pilot / Chatbot

Predictions

Data Management
Platform



Fabric

Platforms

Digital Experience

CRM & ERP

Document
Management

...

Set a proper foundation!
Cause nobody wants to build a
house on quicksand, right?



Microsoft Fabric as data foundation



Data
Factory



Data
Engineering



Data
Warehousing



Data
Science



Real-Time
Intelligence



Power BI



Databases



Industry
Solutions



AI



OneLake



Purview

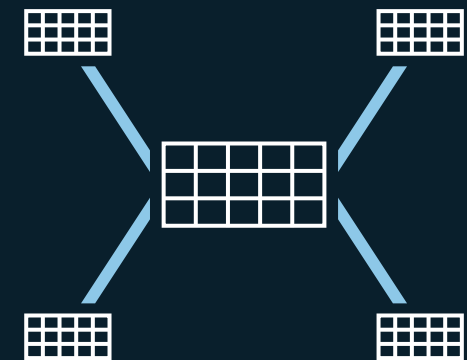
A decent data solution is more important than ever!



Structured platform
striving for a single
source of truth



Transformation
done upstream



Semantics and
business logic
added

Without data...
there is no AI!

Exploring solution areas

What are the alternatives to copilot?

What can you conclude from the orders placed versus the orders shipped?





Power BI Q&A

Q&A Visual

Exact string matching between prompt and Semantic Model

Based on:

- Tables
- Columns
- Measures

... other model objects

Ask a question with Q&A

Ask a question about your data

Try one of these to get started

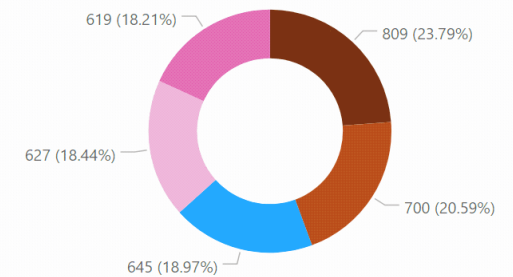
what is the #games by type

top genres by #games

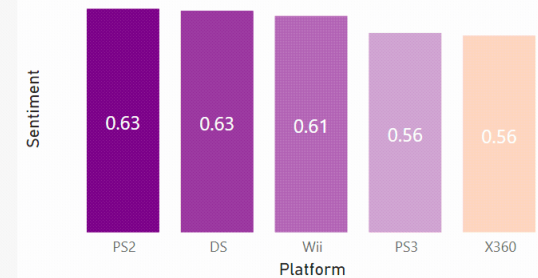
top rating by #games

Show all suggestions

Number of games by publisher



Sentiment by platform



Q&A training

Overall setup

- Training by looking at previous questions & answers from users
- Fields can be excluded from potential answers

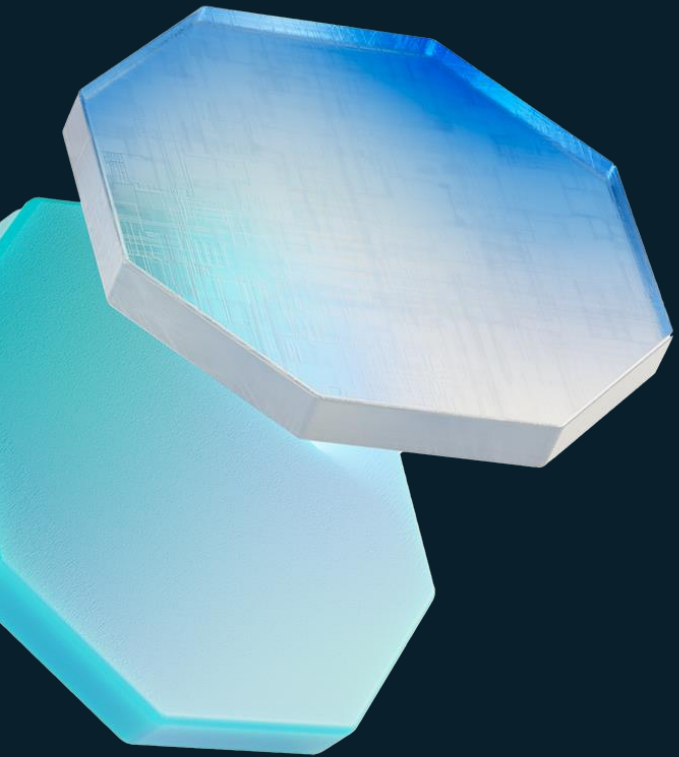
Can be enriched by

- (Field) Synonyms & descriptions
- Linguistic schema

JSON

 Copy

```
product_has_category:  
  Binding: {Table: Products}  
  Phrasings:  
    - Attribute: {Subject: product, Object: product.category}
```



Demo

Q&A visual



Copilot experiences

“IF THE ONLY TOOL YOU HAVE IS A HAMMER,
IT IS TEMPTING TO TREAT EVERYTHING
AS IF IT WERE A NAIL”



Should we hammer it
with Copilot?

Image from: <https://x.com/Vaccinologist/status/1622620533706588161>

Copilot in Fabric

Which copilot experiences do we have?



Copilot accelerated
experiences

Help me build stuff



AI-driven
insights

Summarize and find insights



Custom generative AI
for your data

Custom configured and build

Copilot in Fabric

Focused on the different workloads



Data Factory

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



Data Warehouse

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



Data Engineering & Data Science

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



Databases

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



Real-Time Intelligence

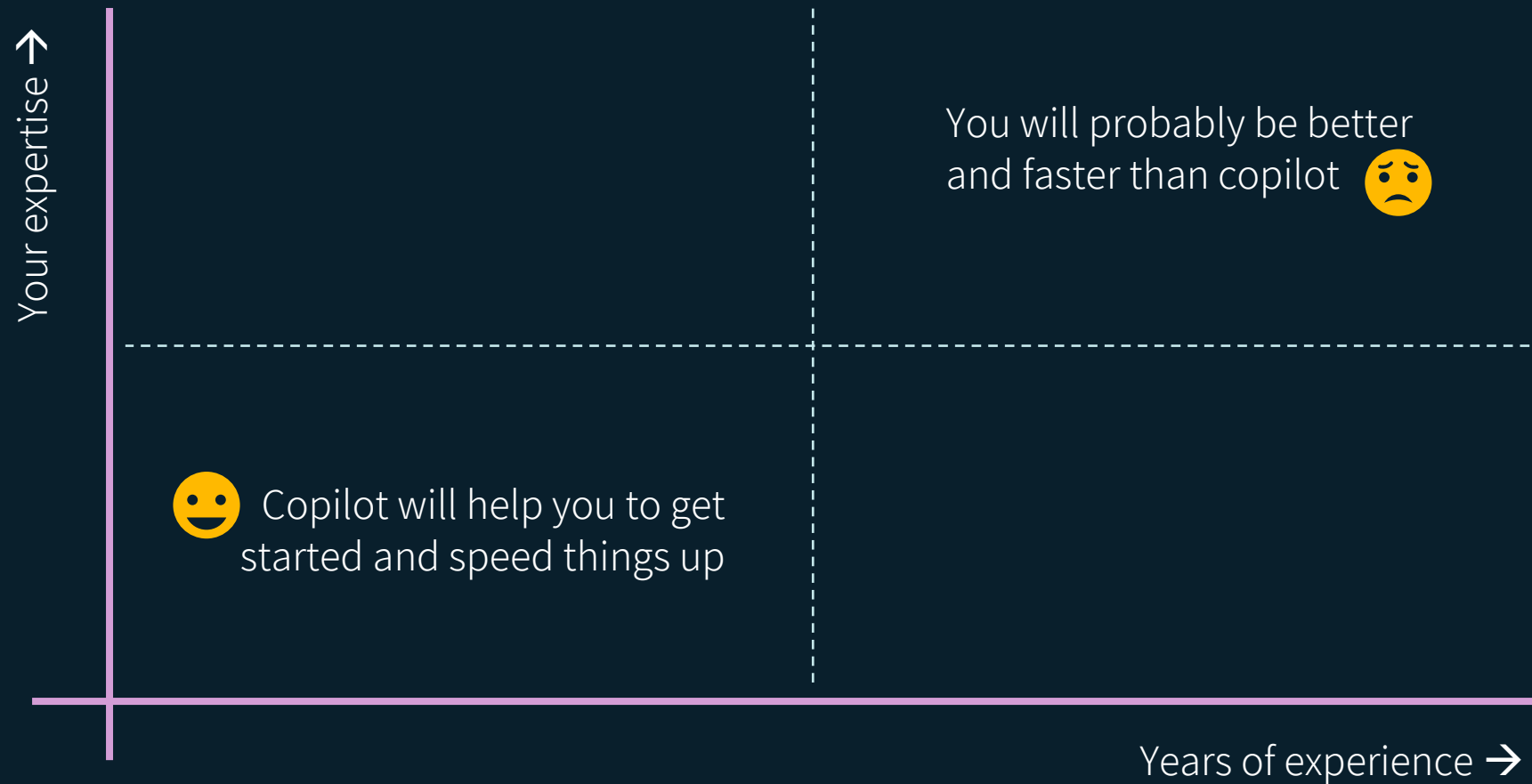
Translate questions into KQL queries that you can execute.



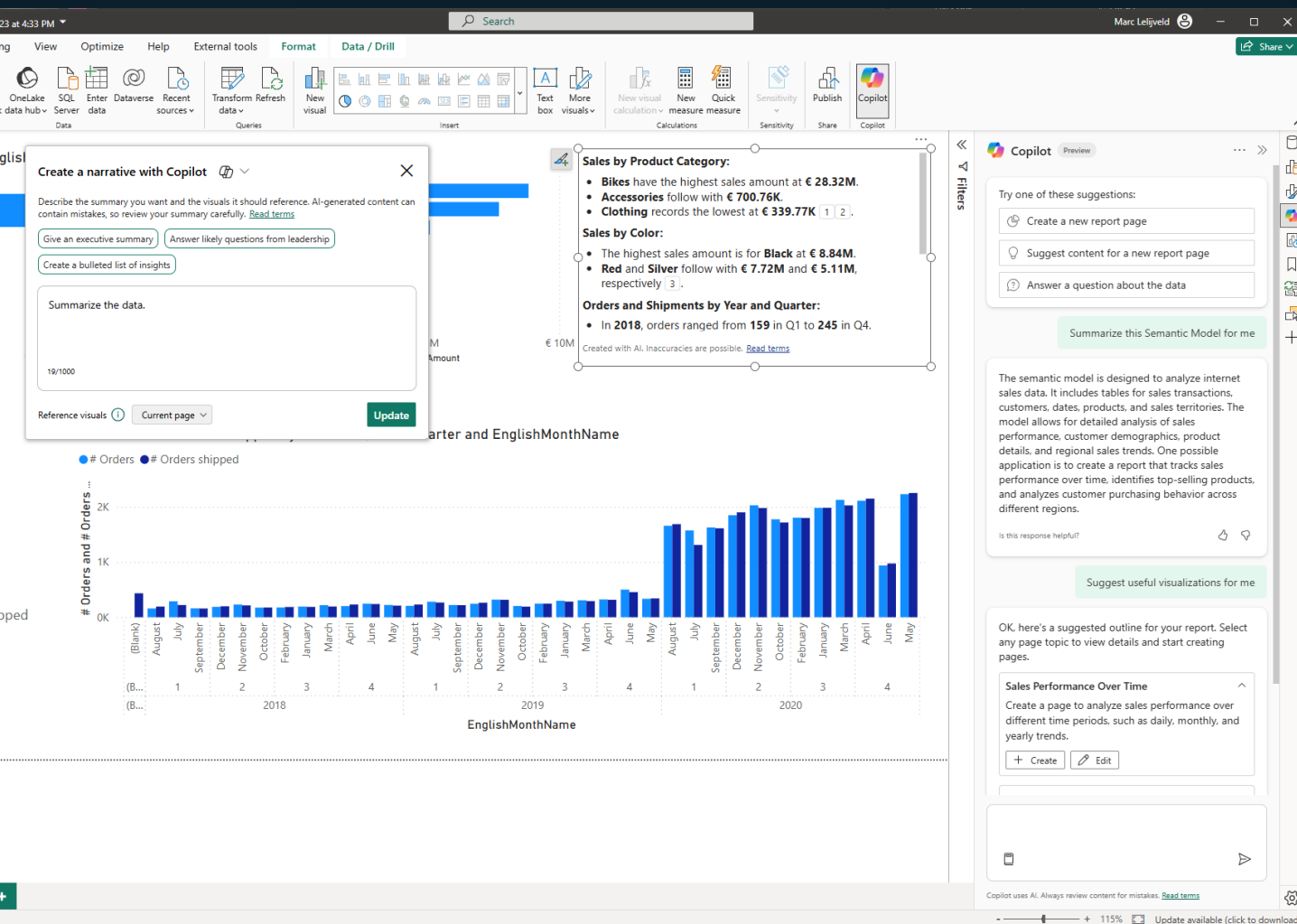
Power BI

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

Who copilot is for



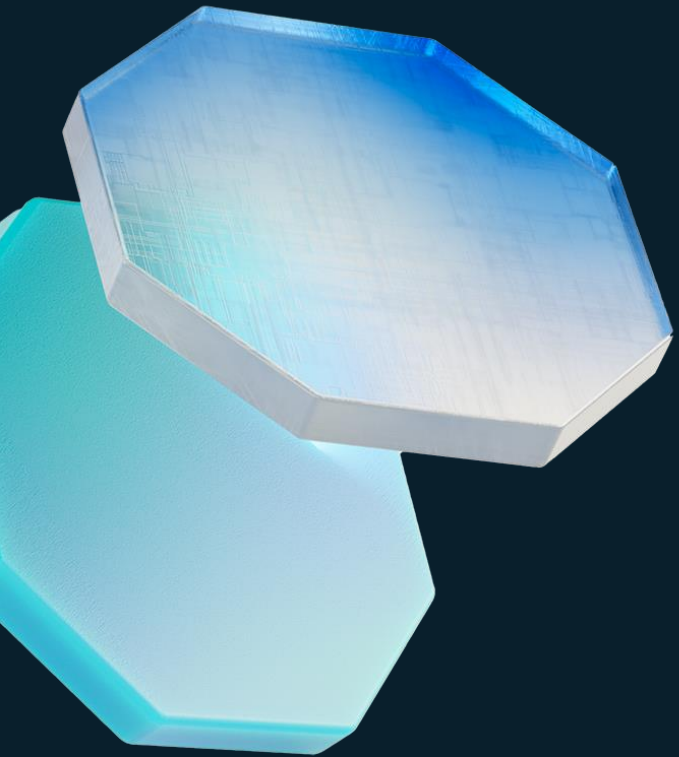
Copilot – Power BI use cases



How can copilot help you

- Summarize semantic model
- Suggest report content
- Create report page
- Create summary visual (Smart narrative)
- Add synonyms to model
- Add descriptions to measures
- Write DAX (& DQV)

... and more!



Demo

Copilot consumer experience



Data Agents

Data Agents

Previously known as AI Skills

Introducing Data Agents



The **conversational Data Agent** allows users to interact with data naturally, enhancing accessibility and usability.



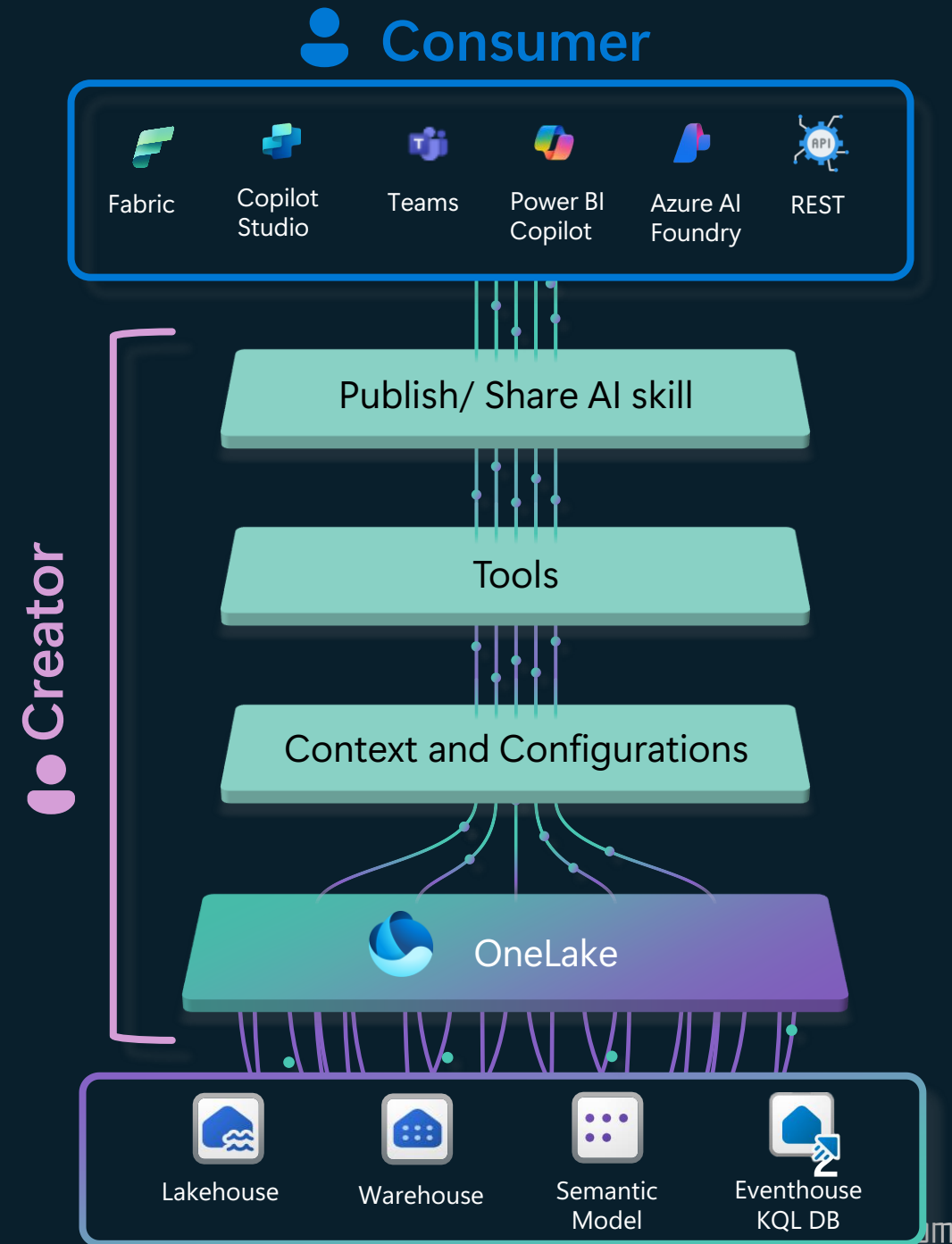
Improved chat canvas for creators with **new debugging capabilities**, making it easier to understand and refine responses.



Seamlessly reason over multiple data sources, including **Lakehouses, warehouses, semantic models and Eventhouse KQL databases**.



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.



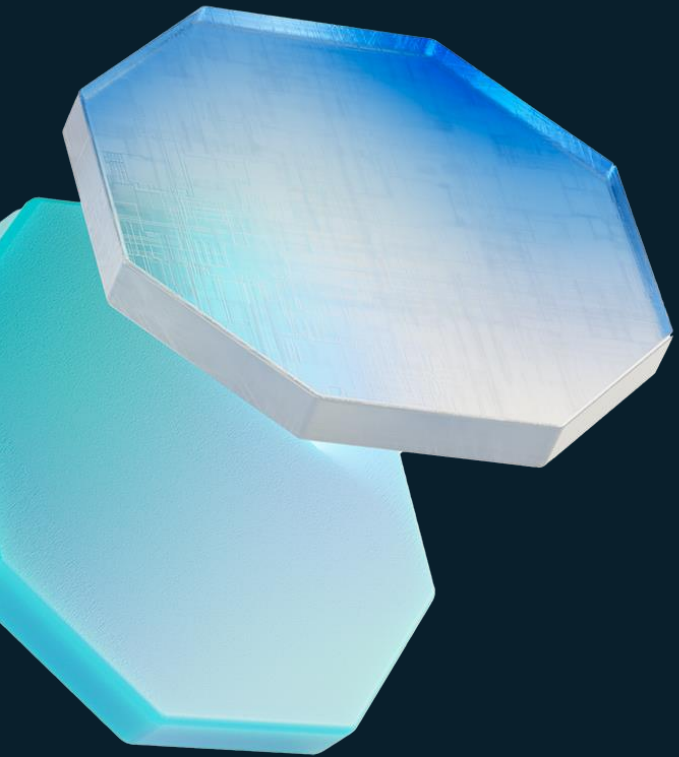
Understanding the Data Agent creator experience

The screenshot shows the ChatWithYourData interface, which is used for interacting with data through a chat-based AI agent. The interface is divided into several sections:

- Connected source tables:** A sidebar on the left lists the data sources and tables available for querying. In this case, the 'sampledata' source is selected, showing tables like 'customer', 'date', 'product', and 'sales'.
- Chat window:** The central area where the user can ask questions and receive AI-generated responses. It includes a text input field at the bottom and a 'Sample questions' button.
- Reasoning for results:** A section that displays the AI's internal reasoning and the SQL query it generated to answer the user's question. The query shown is:

```
SELECT s.OrderDate, s.SalesAmount, c.Country
FROM [dbo].[sales] s
JOIN [dbo].[customer] c ON s.CustomerID = c.CustomerID;
```
- Notes to enrich model:** A section on the right that provides additional context or instructions to the AI agent, such as 'If you plot something over time, always use OrderDate. When I ask about anything sales, it is most likely about money so please format it as money. Also, make sure you round it by zero decimal places. An order is not shipped if the ShipDate is empty for all order lines.'
- Example queries:** A section at the bottom right that provides sample questions to help users get started.

Callouts from the surrounding text boxes point to these specific components of the interface.



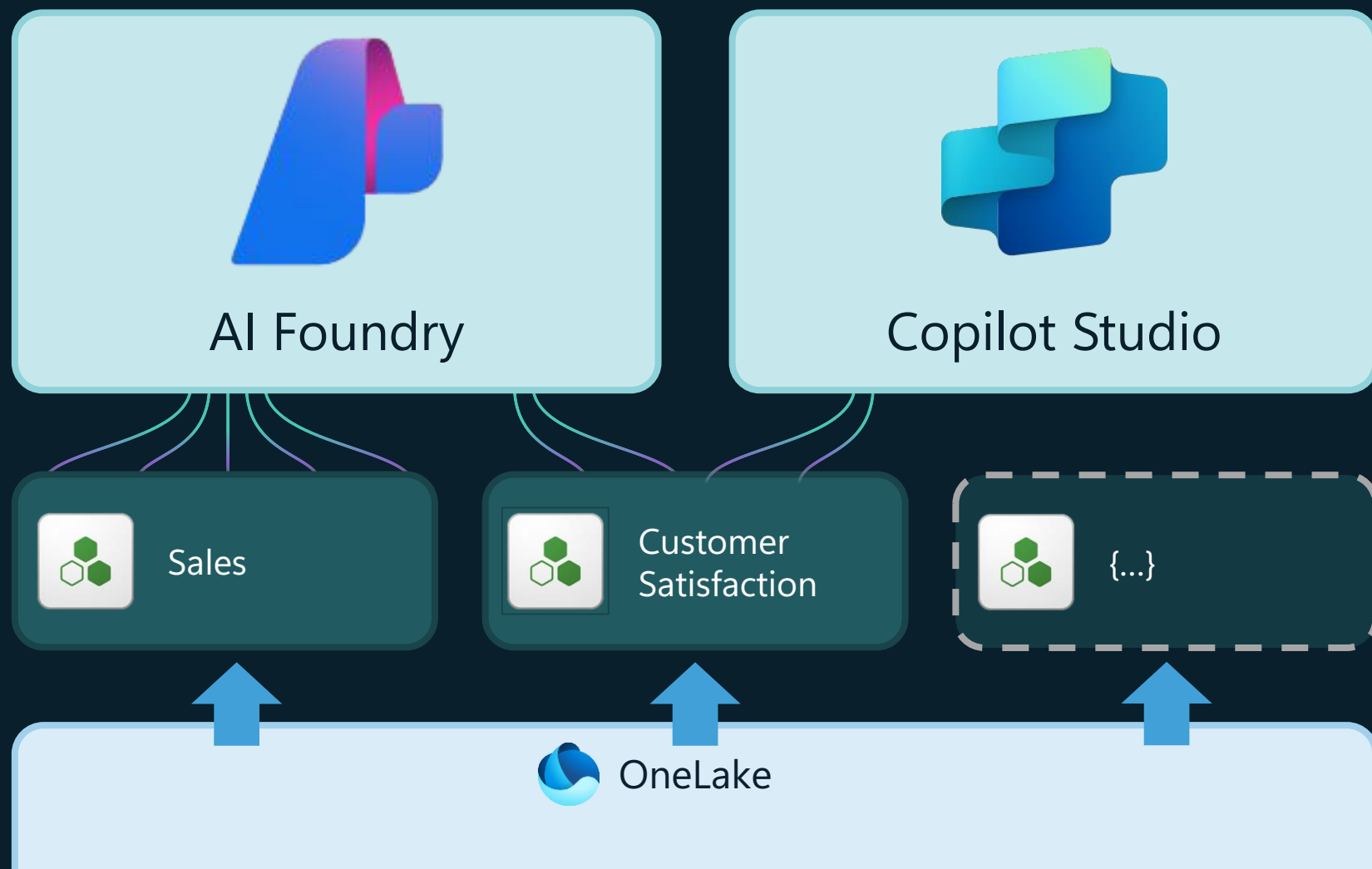
Demo

Data Agents

Agent architecture

One to rule them all?

No!





Meet users where
they are

Tools we use day in, day out



Meet users where they are



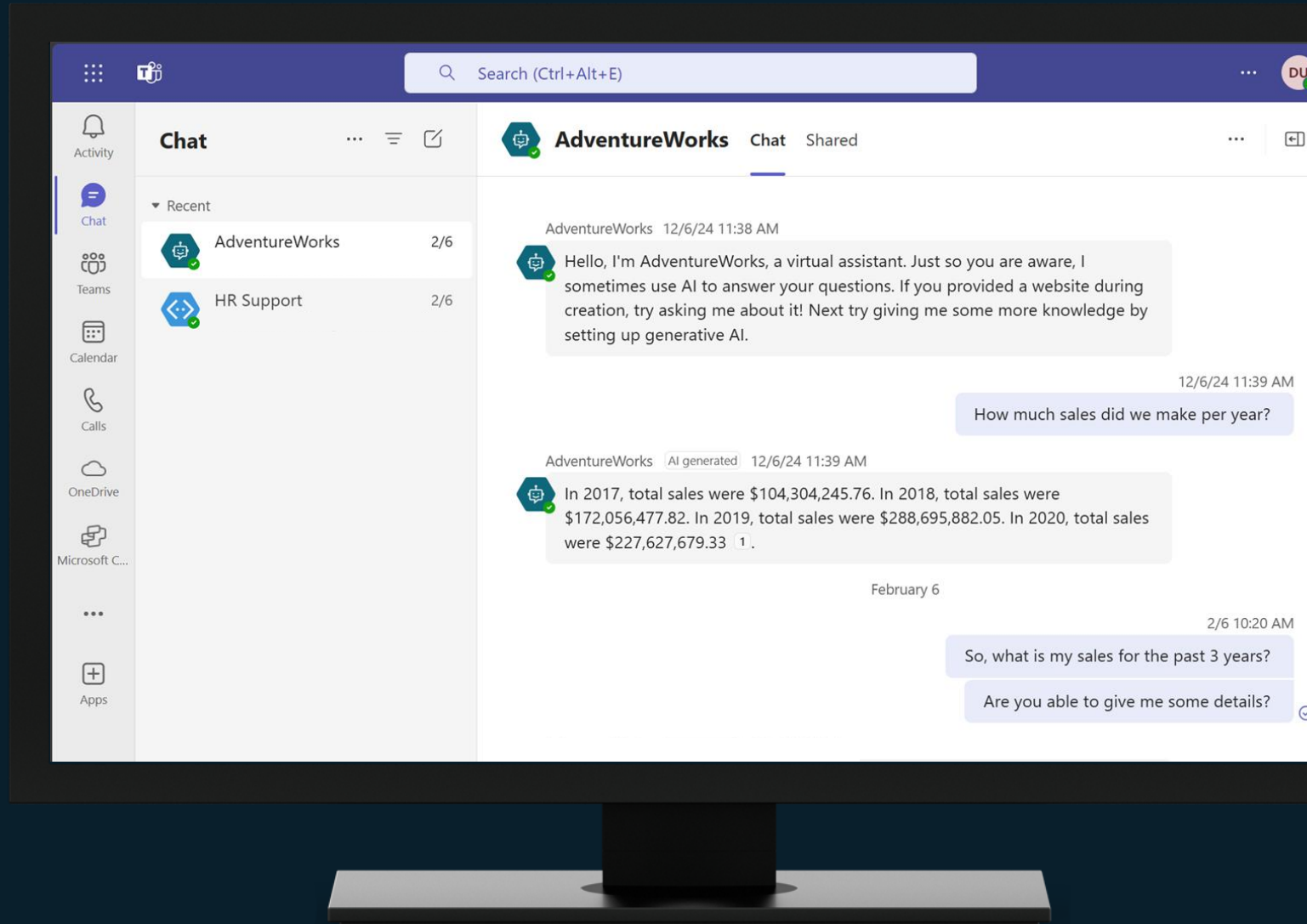
Using Copilot Studio (Power Platform) to build custom agents to do anything



Use Fabric Data Agents as knowledge base

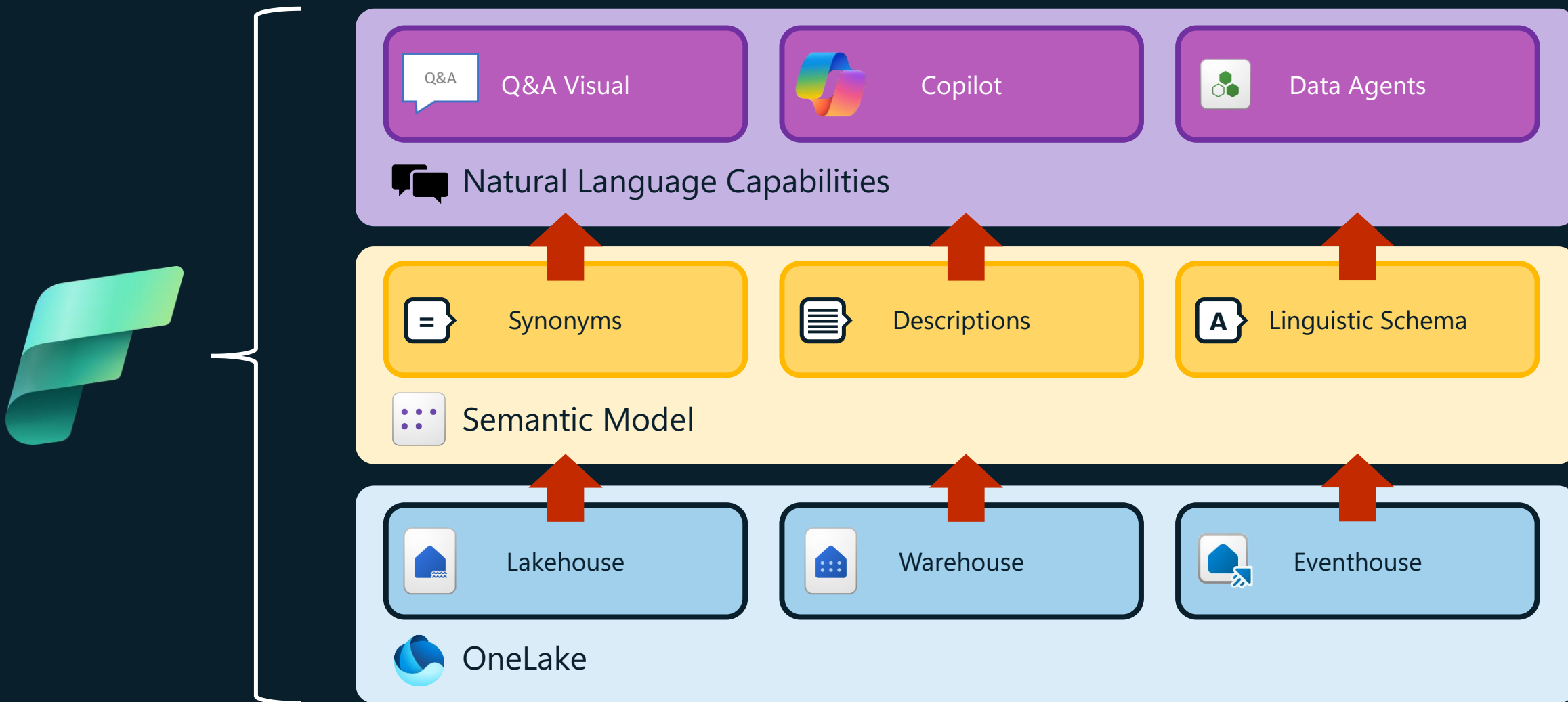


Integrate the agent into Microsoft Teams





Wrap up & take-aways



Key take-aways

Building a chat interfaces on top of your data

- A proper data foundation is key!
- Improve answer quality by using Semantic Models – including synonyms, descriptions and the linguistic schema

Data Agents (AI skills) in Fabric

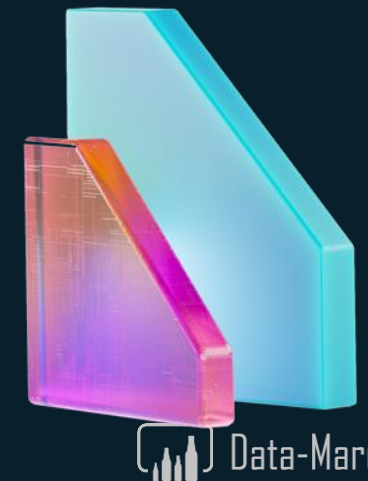
- ...allows for customization and training, compared to out of the box copilot
- ...only work on structured data
- ...generate NL2SQL, NL2KQL and NL2DAX
- ...loses accuracy if you use large schemas with dozens of tables

Copilot Studio / AI Foundry

- ...brings the experience to the users to meet them where they are
- ...has its own licensing structure

Most up to date list of limitations:

<https://learn.microsoft.com/en-us/fabric/data-science/concept-ai-skill>



Session evaluation, thanks!



<https://eval.sqlsaturday.com/event/9795233>