



# Power BI Update



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 @anBenedetti

 <https://github.com/anbened>

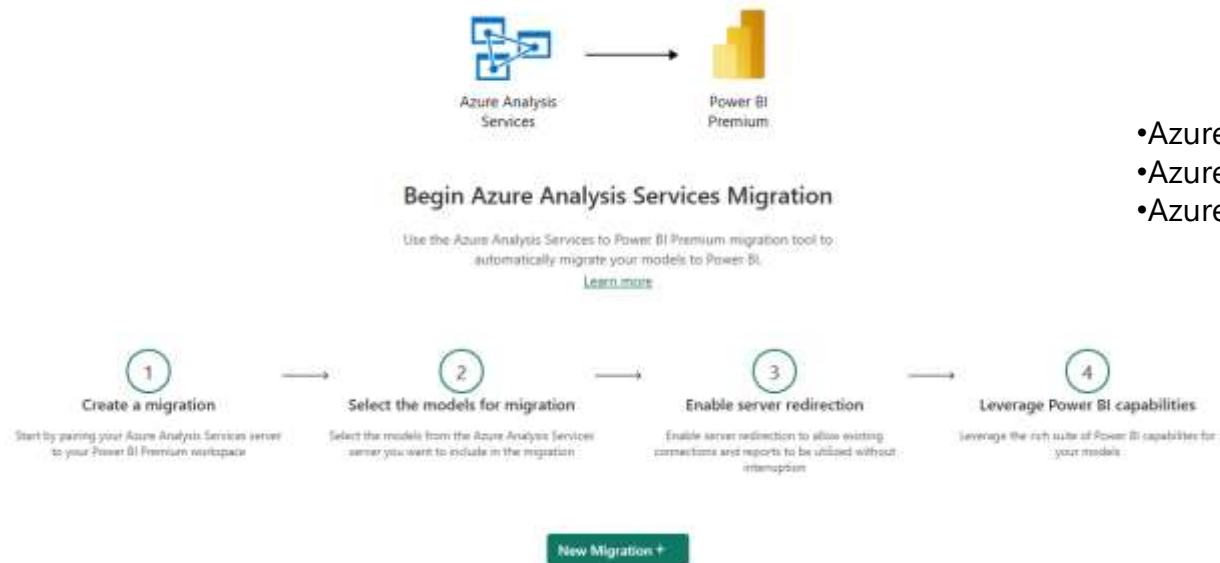
# 1

Features  
from Preview to GA



# Migration from AAS to Premium

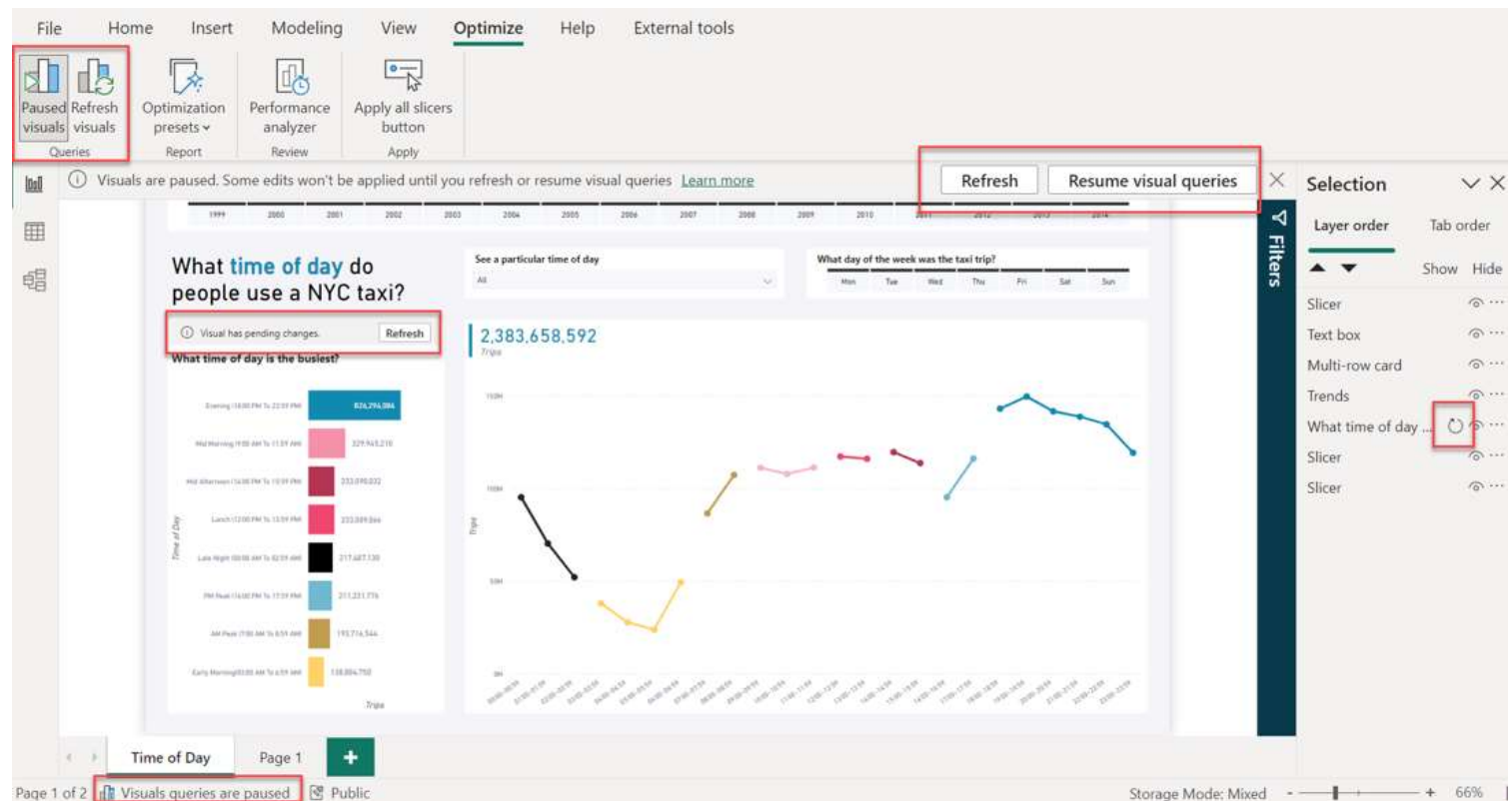
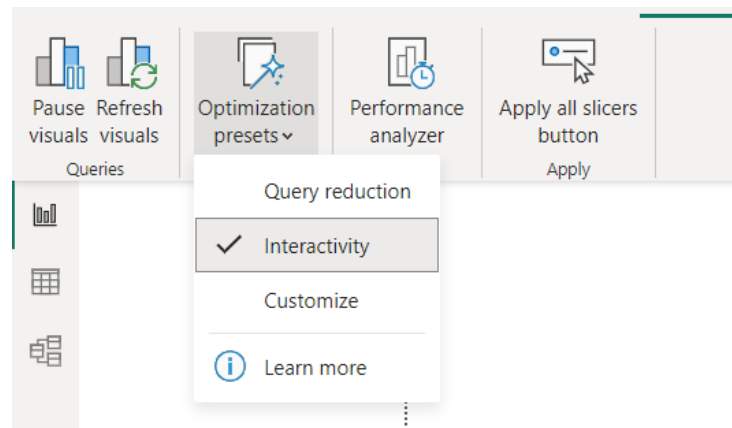
- Migrate semantic models from Azure Analysis Services (AAS) all the way to Fabric, Power BI Premium or Power BI Embedded in just a few clicks! Additionally, redirect existing reports to the migrated dataset



- Azure AS migration main page: <https://aka.ms/AASMigration>
- Azure AS migration guide: <https://aka.ms/AASMigrationGuide>
- Azure AS migration scenarios: <https://aka.ms/AASMigrationScenarios>

# Optimize ribbon in PBI Desktop

- The Optimize ribbon can help you improve your report authoring experience with three main features: Pause visuals, Optimization presets, and the Apply all slicers button.



# Hybrid tables

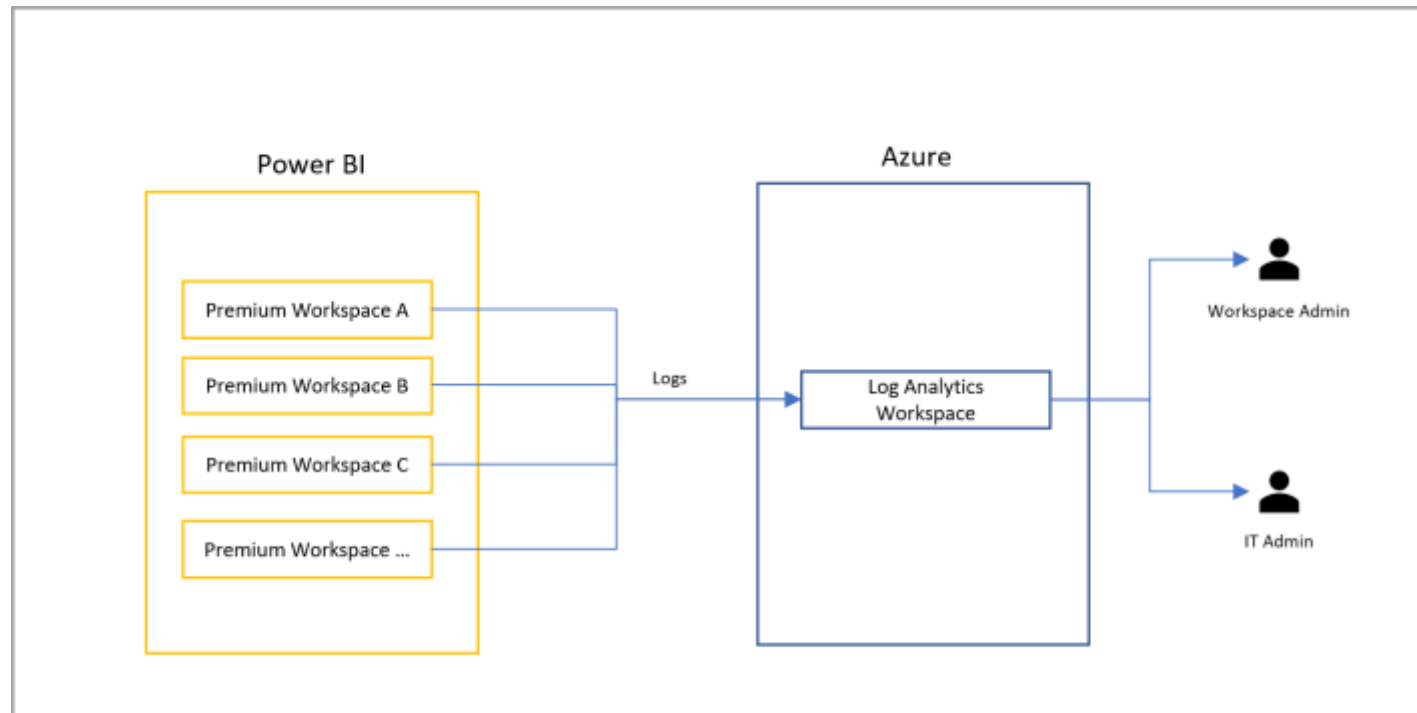
- Hybrid Tables, an advanced partitioning feature that lets you combine import mode and DirectQuery mode in a single table.

Granularity	Name	Row Count	
Year	2011	295,489,717	Archived: <b>Import</b>
Year	2012	297,678,498	
Year	2013	295,575,442	
Year	2014	292,477,875	
Year	2015	297,780,469	
Year	2016	294,060,081	
Year	2017	300,419,682	
Year	2018	296,541,108	
Year	2019	292,787,420	
Year	2020	299,273,979	
Quarter	2021Q1	74,135,277	Incremental refresh: <b>Import</b>
Month	2021Q104	24,939,498	
Day	2021Q10501	820,805	
Day	2021Q10502	826,885	Real time: <b>DirectQuery</b>
Day	2021Q10503	821,043	
Day-DirectQuery	2021Q10504-DQ	271,110	
<b>Total</b>		<b>3,063,898,887</b>	



# Azure Log Analytics for Power BI Dataset

- With this announcement, we have lifted the limitation and customers can now connect multiple workspaces to a single log analytics workspace.



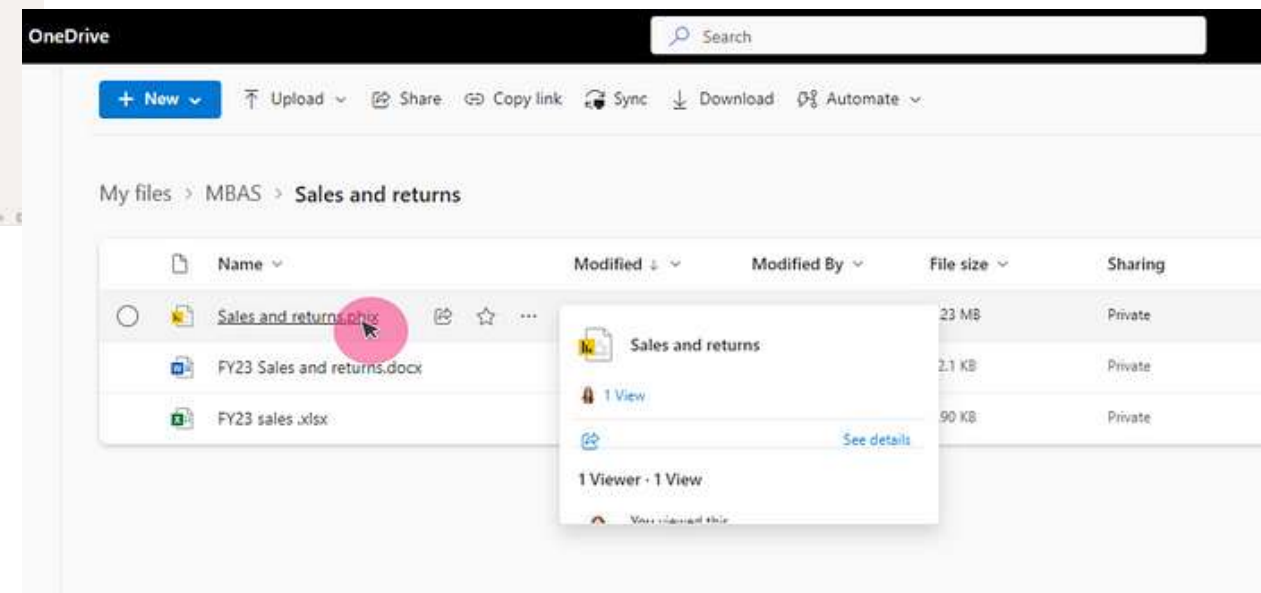
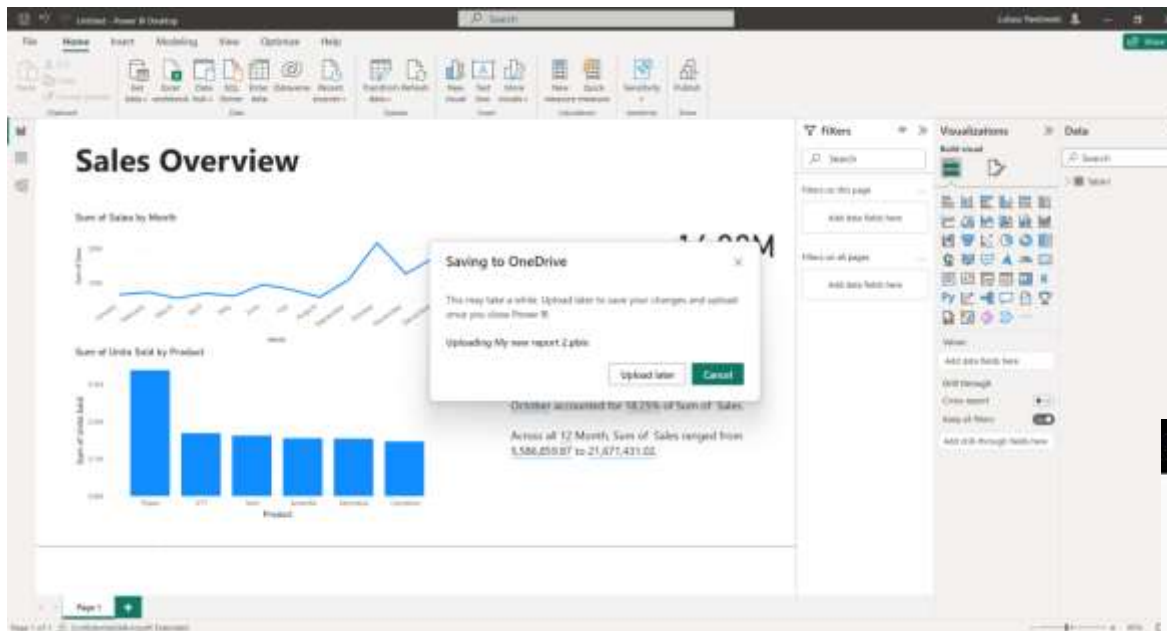
# 2

Features in Preview



# Work seamlessly in Power BI Desktop with files in OneDrive and SharePoint

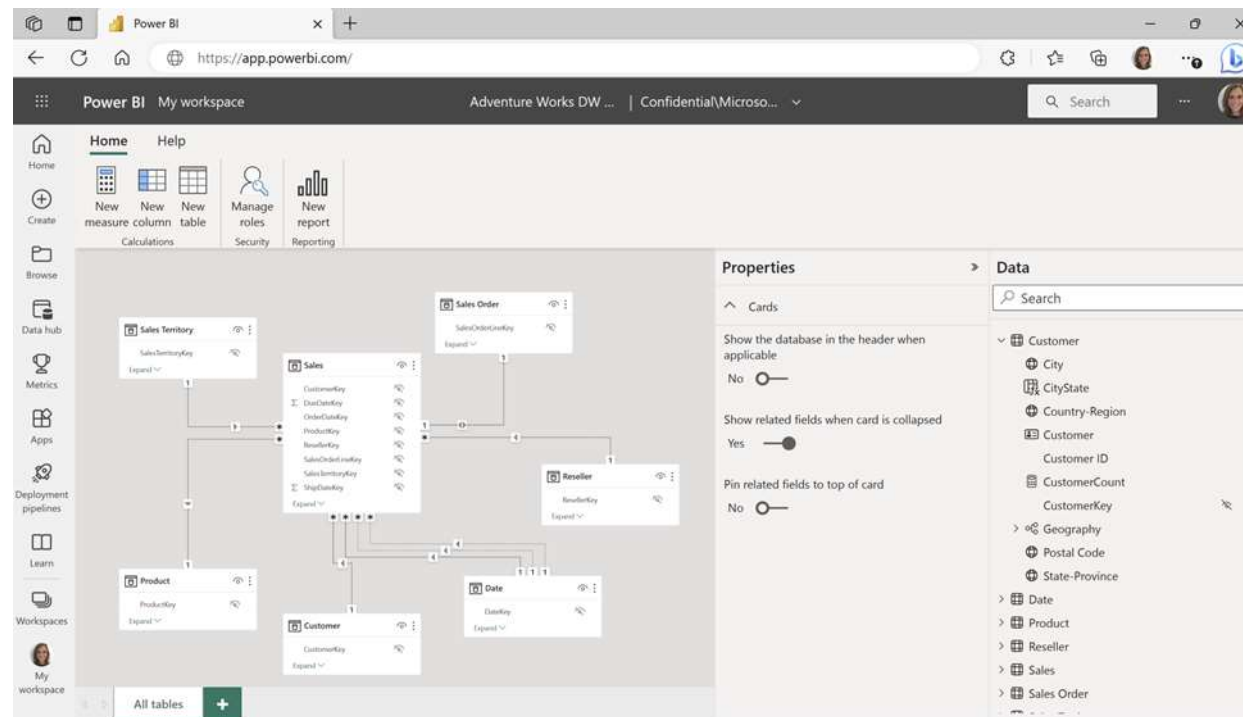
- These new capabilities help authors with file versioning, collaborating with other authors, and ensuring they always have a backup of their files in the cloud.





# Edit your data model in the Power BI Service 1/2

- Introducing data model editing on the web! A first step towards modeling parity in the Service. This feature is automatically turned on for datasets stored in My Workspace.



# Edit your data model in the Power BI Service 2/2

- This feature is automatically turned on for datasets stored in My Workspace. To try this experience in a collaborative workspace please turn on the Workspace level preview switch under workspace settings:

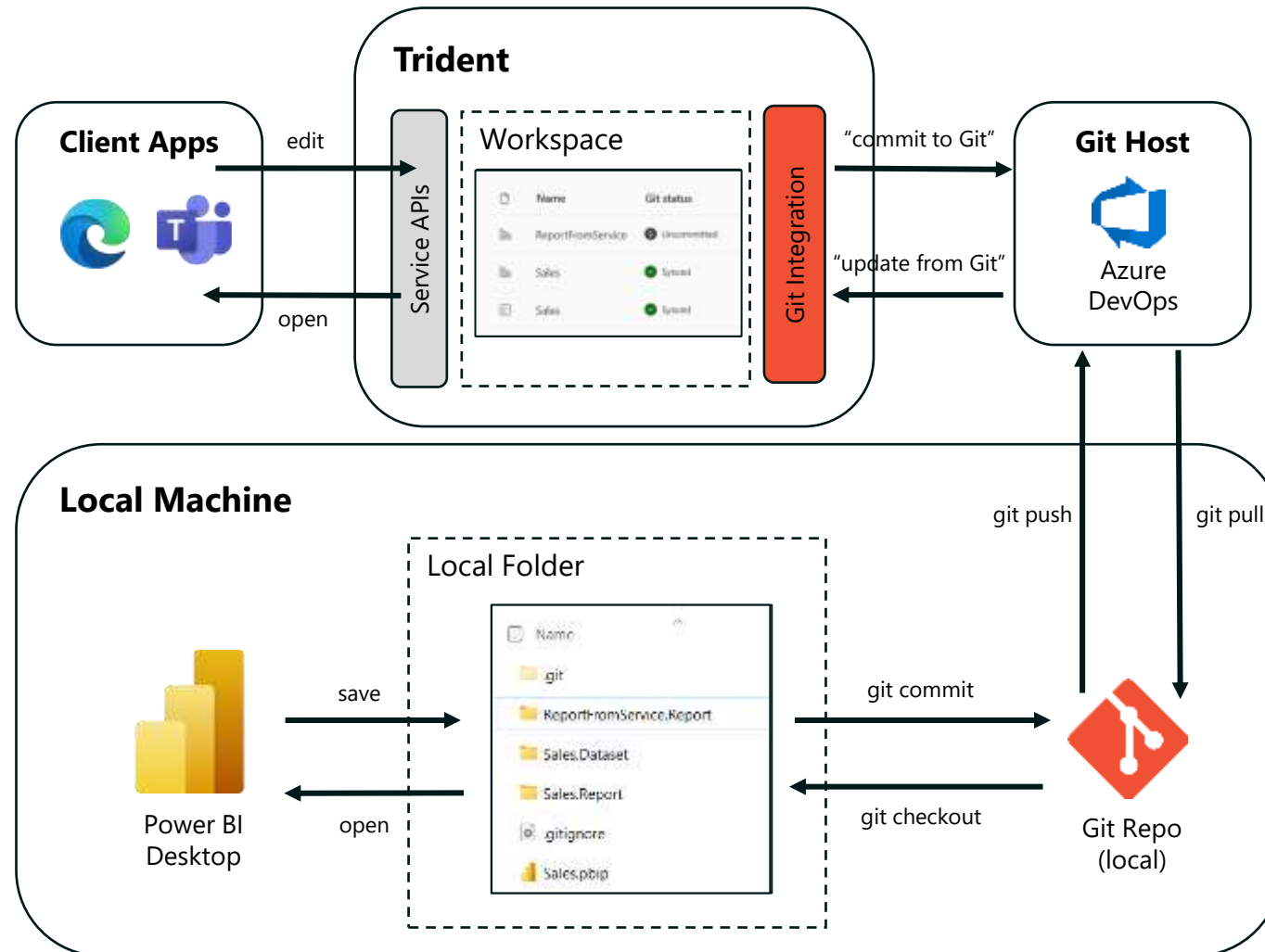
The screenshot illustrates the process of enabling data model editing in a Power BI workspace. It is divided into three main sections with numbered callouts:

- Workspace Settings:** In the top navigation bar of the 'Example Workspace', the 'Settings' icon (a gear) is highlighted with a red box and a red circle containing the number 1. A green arrow points from this icon to the settings panel on the right.
- Data Model Settings:** The 'Settings' panel on the right shows the 'Data model settings' section highlighted with a red box and a red circle containing the number 2. Within this section, the checkbox 'Users can edit data models in the Power BI service (preview)' is checked. A green arrow points from this checkbox down to the 'Save' button.
- Open Data Model:** In the bottom navigation bar of the workspace, the 'Open data model' button is highlighted with a red box and a red circle containing the number 3. A green arrow points from the 'Save' button in the settings panel to this button.

The 'Settings' panel on the right also includes tabs for 'About', 'Premium', and 'Azure connections', and a section for 'Security settings' with the option 'Allow contributors to update the app for this workspace'.

# Developer experiences

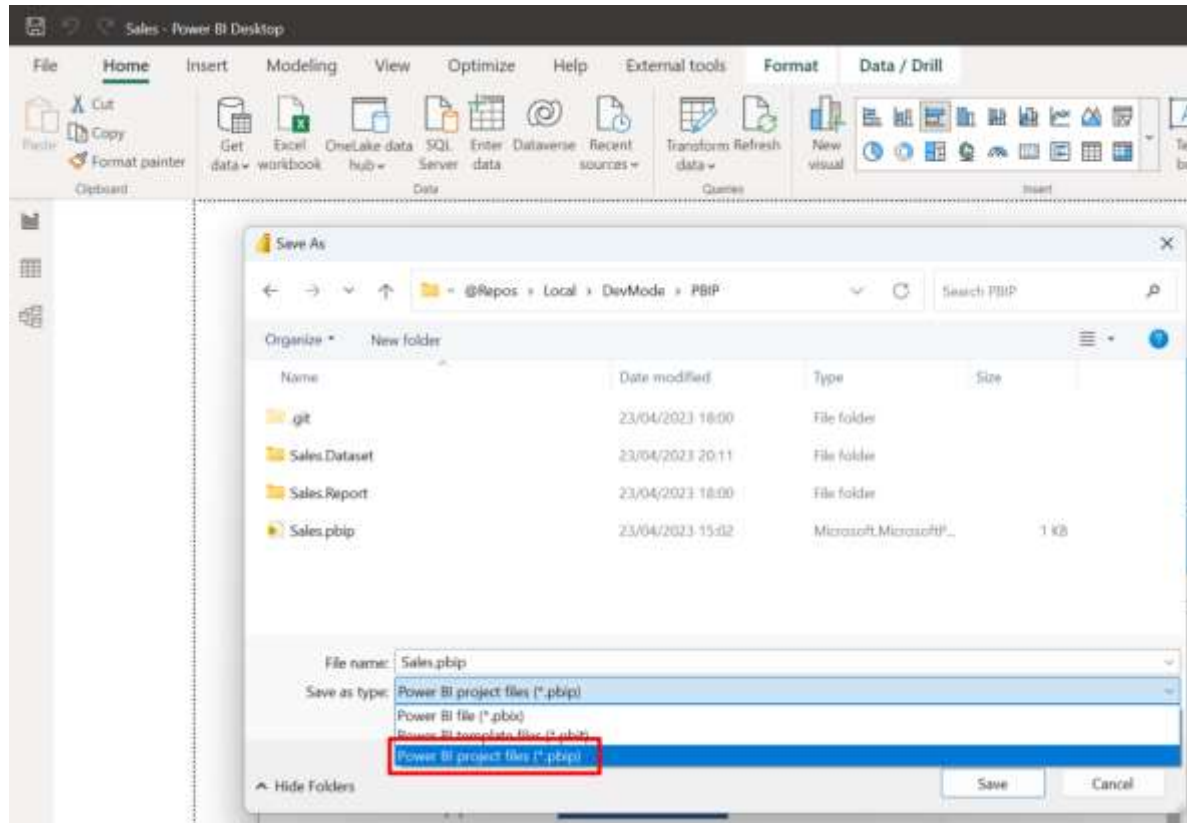
## Power BI Developer Mode with Fabric Git Integration



# Developer experiences

## Power BI Developer Mode with Fabric Git Integration

1. Power BI Desktop now lets you save your work as a **Power BI Project (PBIP)**
  - Report and dataset artifact definitions are saved as individual plain text files in a simple, intuitive folder structure

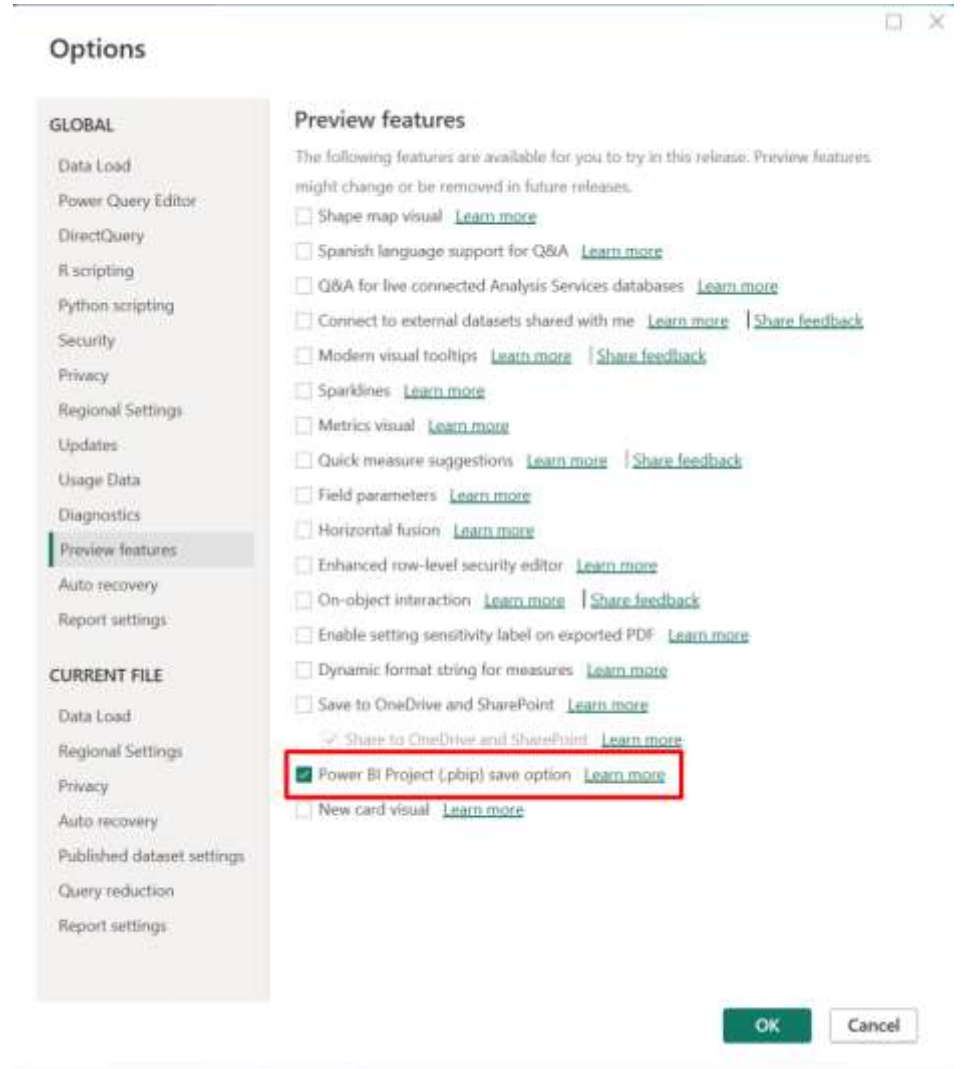


<input type="checkbox"/> Name	Date modified
Sales.Dataset	23/04/2023 20:11
Sales.Report	23/04/2023 18:00
.gitignore	23/04/2023 14:58
Sales.pbip	23/04/2023 15:02

# Developer experiences

## Power BI Developer Mode with Fabric Git Integration

- Saving as a Power BI Project file is in Preview
- Go to File > Options and settings > Options > Preview features and check the box next to "Power BI Project (.pbip) save option".



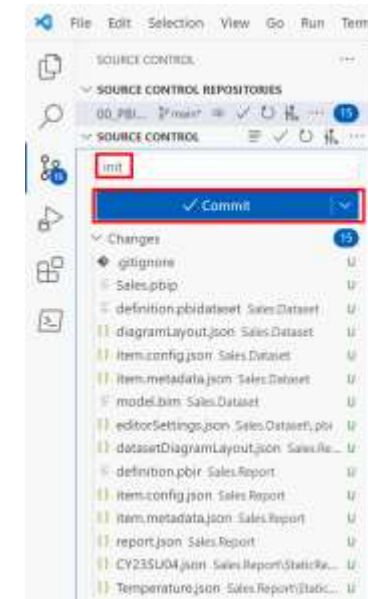
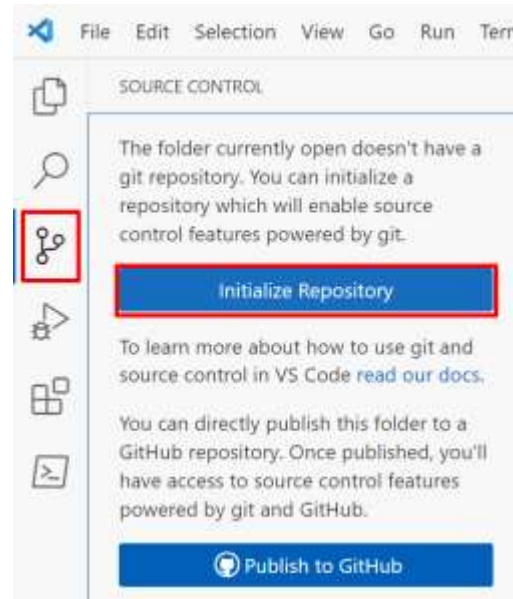
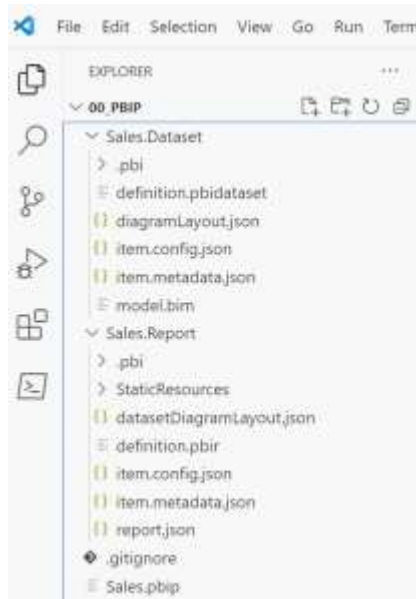


# Developer experiences

## Power BI Developer Mode with Fabric Git Integration

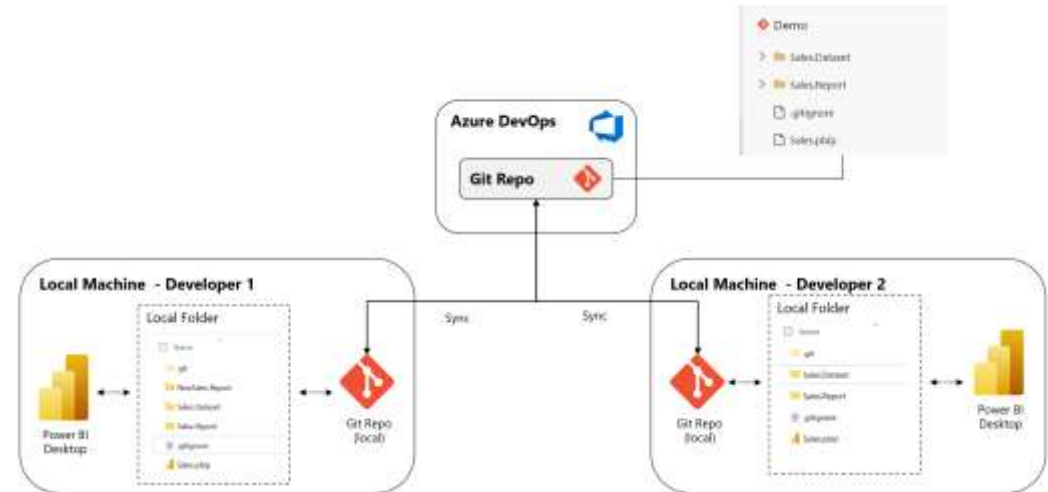
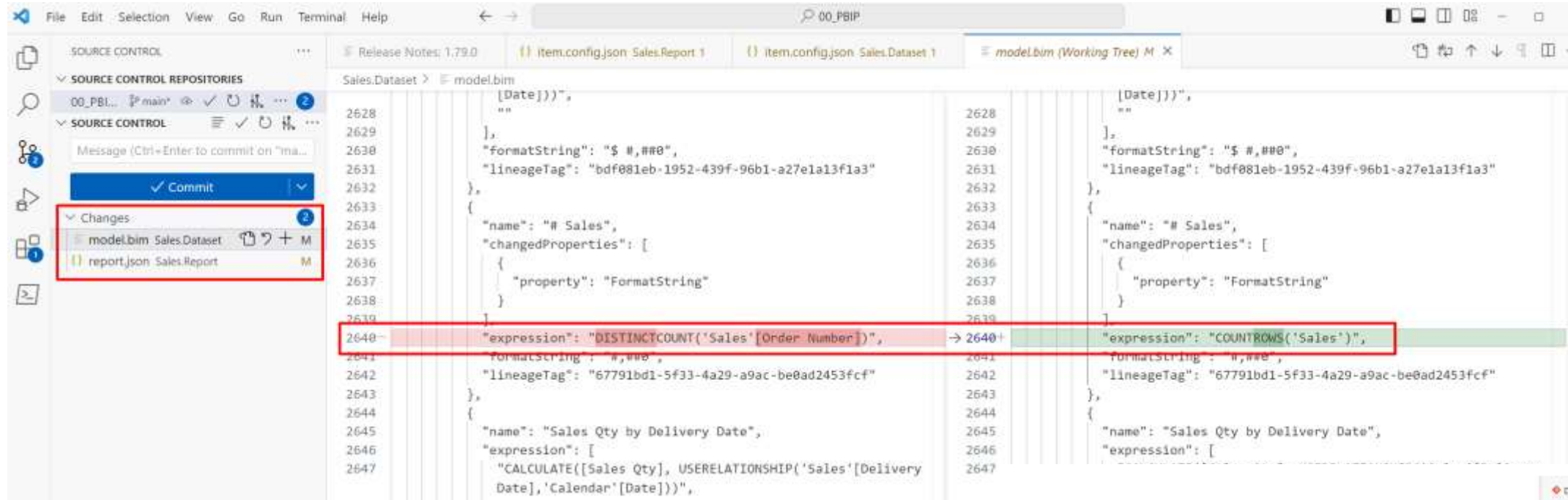
If you are new to Git, please refer to the following training courses to learn the basics:

- [Introduction to Git – Training | Microsoft Learn](#)
- [Use Git version-control tools in Visual Studio Code – Training | Microsoft Learn](#)
- [Collaborate with Git – Training | Microsoft Learn](#)
- [Branching and merging in Git – Training | Microsoft Learn](#)



# Developer experiences

## Power BI Developer Mode with Fabric Git Integration

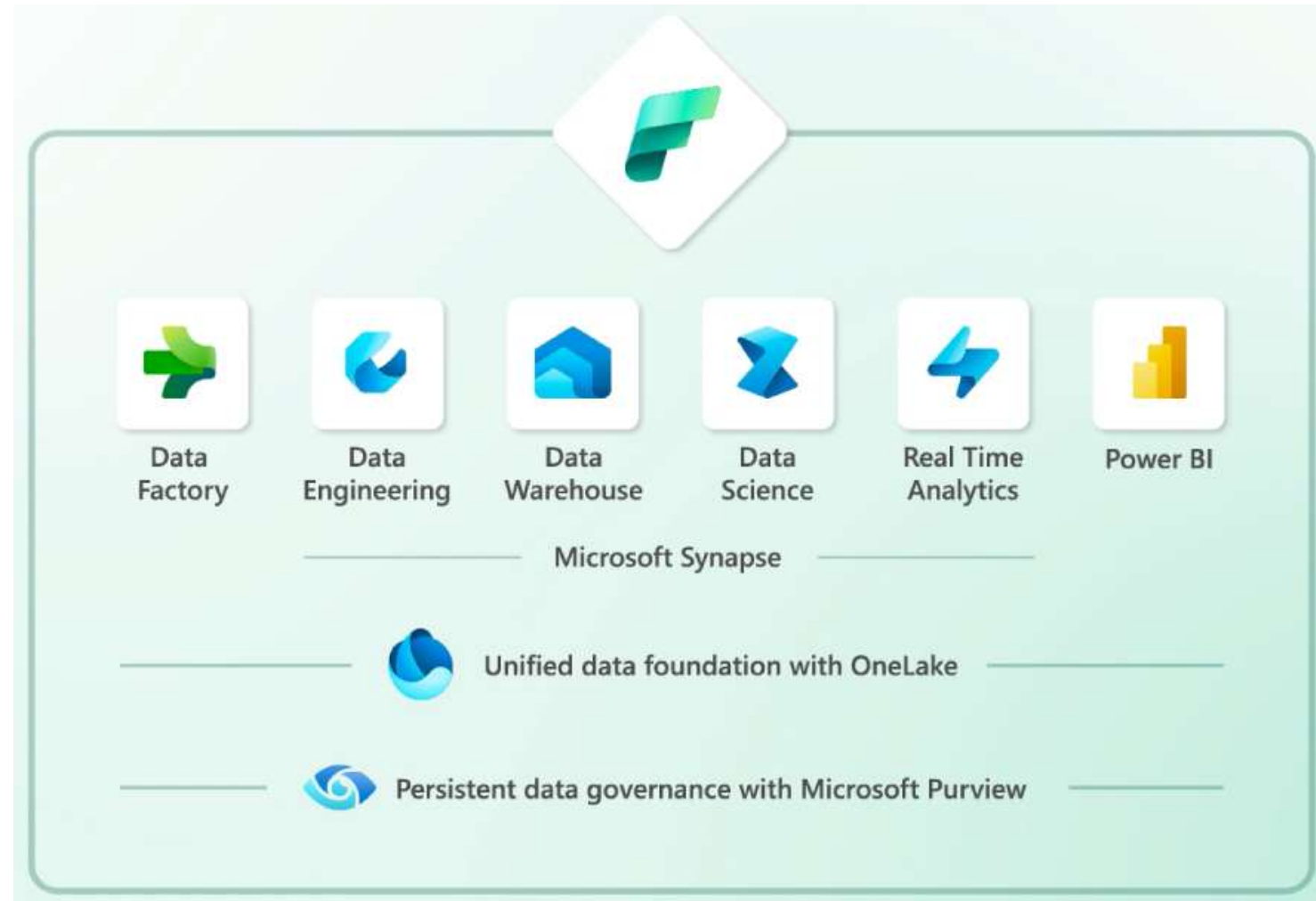


# 3

**Special  
Announcements**



# Microsoft Fabric



# Still far too complex

Many Products

Different Experiences

Proprietary and Open

Dedicated and Serverless

PaaS and SaaS

Different Business Models

Steep Learning Curves

Deep Expertise Needed

High Integration Effort



Purview



Power BI



Kusto



Data Factory



Azure AI



Synapse DW



Synapse Spark



# Analytics vNext



Data Factory



Kusto



Azure AI



Power BI



Synapse Spark



Synapse DW



Purview

From to collection of products, to...

# Microsoft Fabric



Data  
Integration



Data  
Lake



Spark  
Engines



Data  
Warehouse



Real Time  
Analytics



Data  
Science



Business  
Intelligence



Governance

## Unified analytics fabric

End-to-end analytics data fabric  
From the data lake to the business user

# Microsoft Fabric

End-to-end analytics data fabric  
From the data lake to the business user

## Complete Analytics Platform

Everything, Unified

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SaaS-ified

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Azure OpenAI Assisted

## Lake centric and open

OneLake

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One Copy

---

Always Synched

## Empower Every Office User

Familiar and intuitive

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Built into Office

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Insight to action

## Pervasive security and governance

End to end visibility

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Always governed

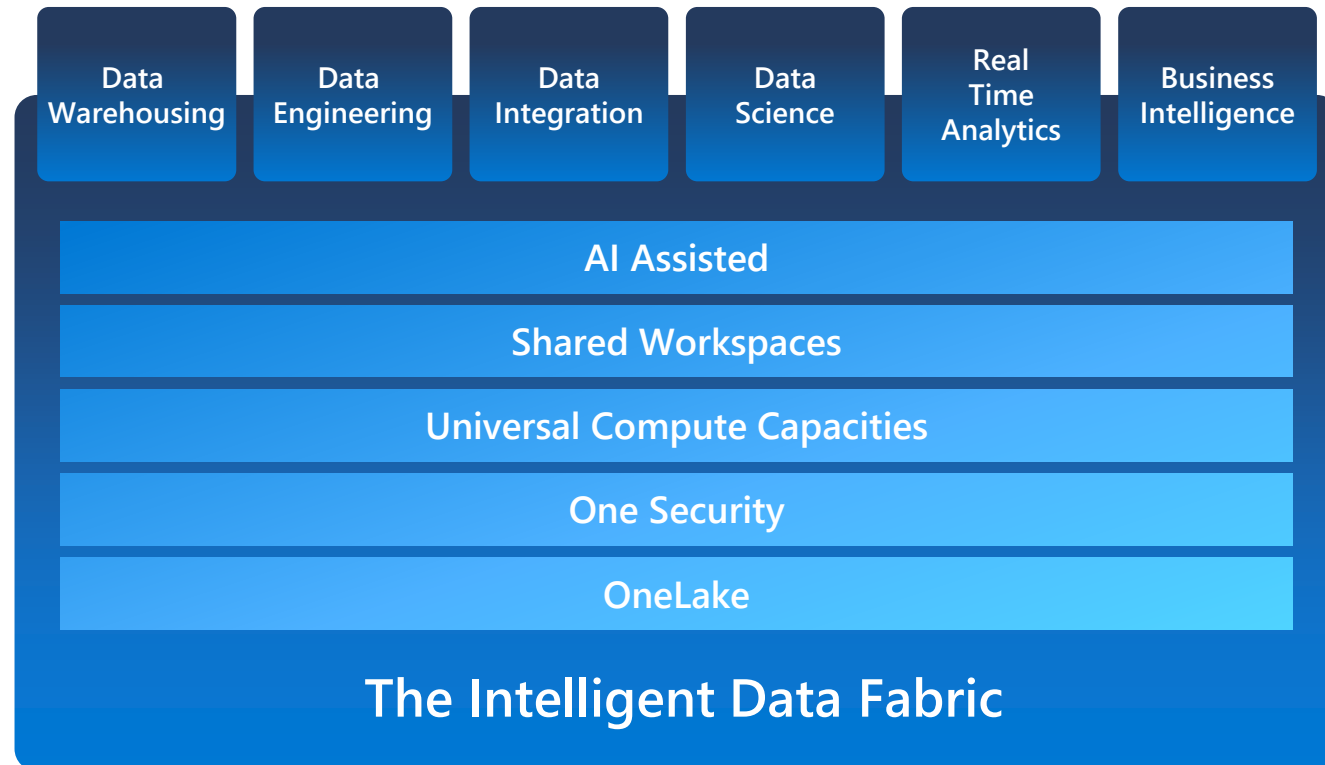
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Secure by default

# Unified analytics fabric

End-to-end analytics data fabric

From the data lake to the business user



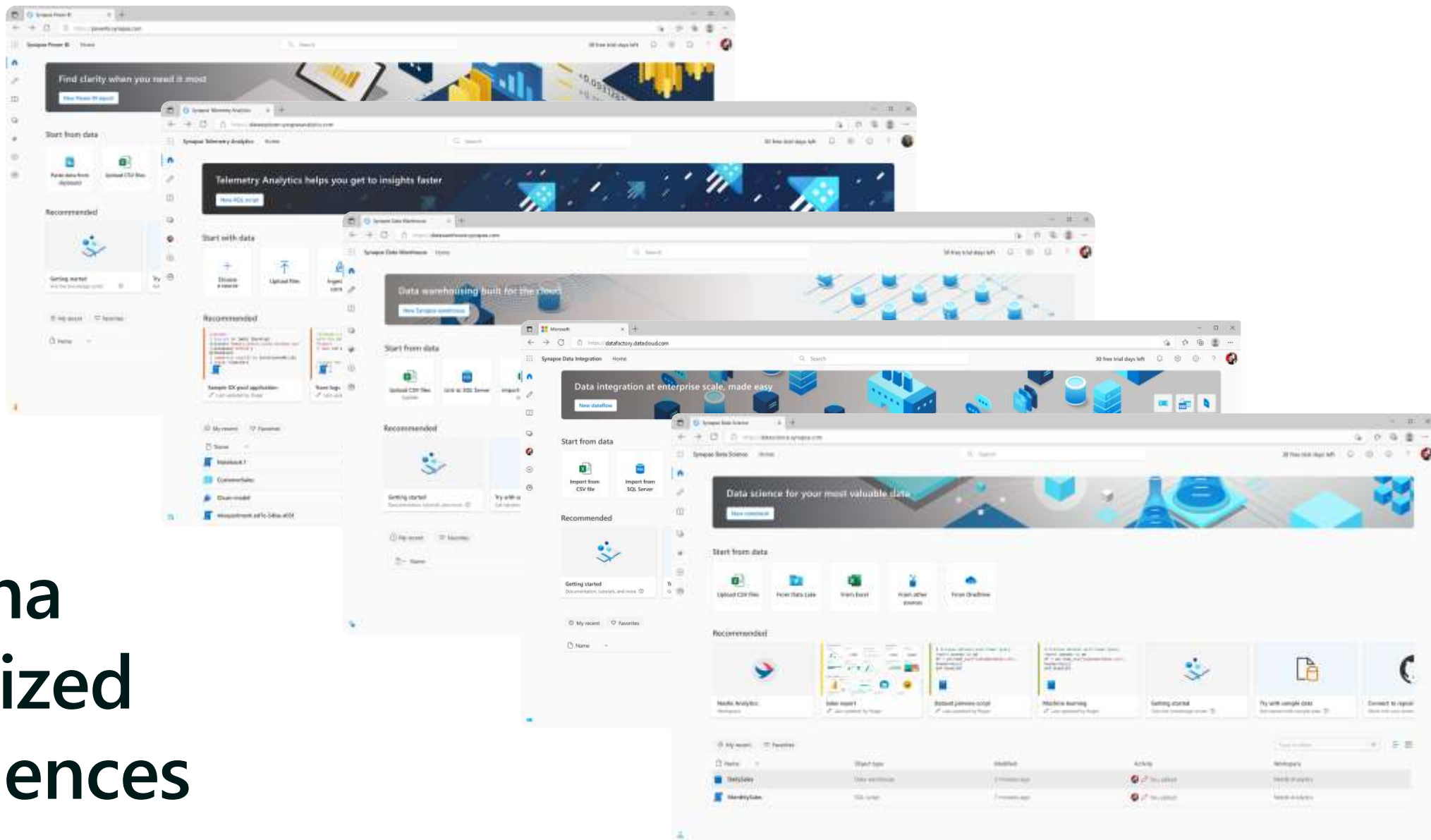
## Single...

- Onboarding and trials
- Sign-on
- Navigation model
- UX model
- Workspace organization
- Collaboration experience
- Data Lake
- Storage format
- Data copy for all engines
- Security model
- CI/CD
- Monitoring hub
- Data Hub
- Governance & compliance

## Ad personam experience...

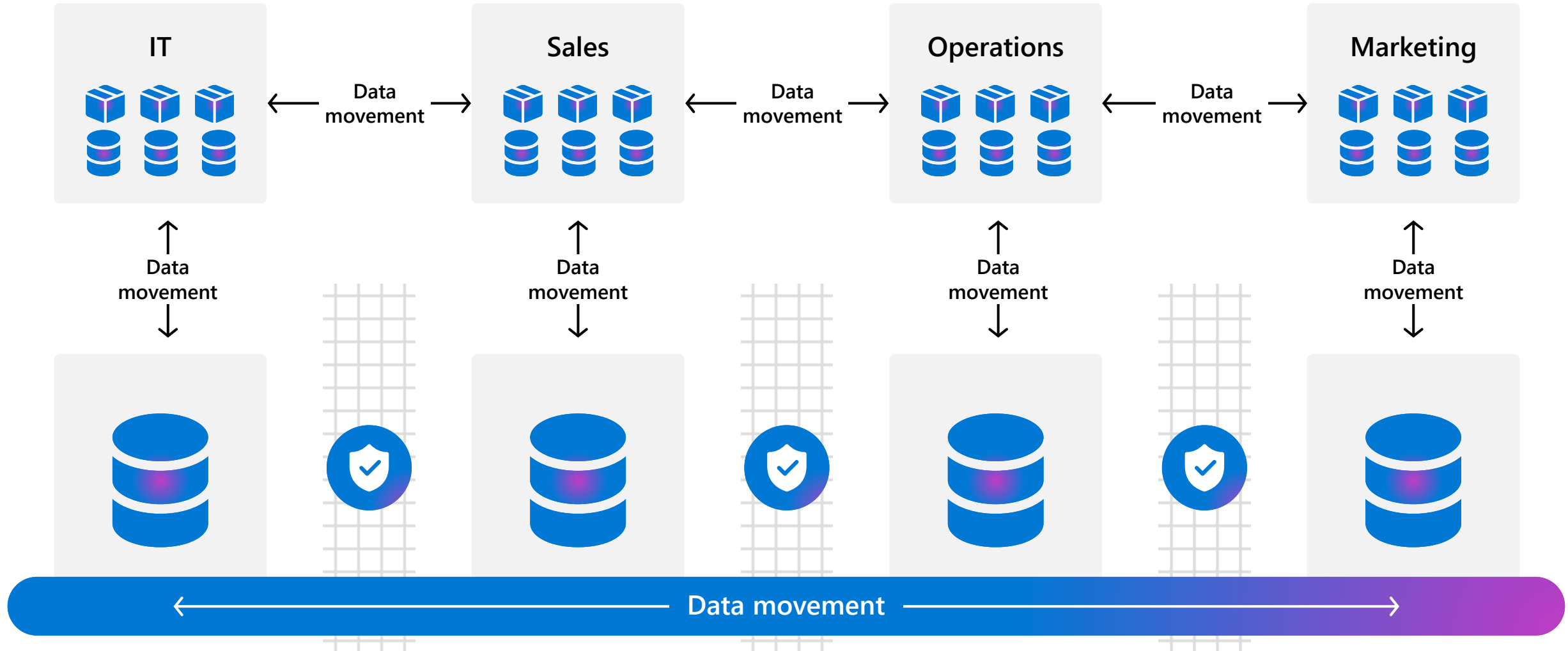
- Data Warehousing
- Data Engineering
- Data Integration
- Data Science
- Real Time Analytics
- Business Intelligence

# Persona optimized experiences





# Today: Multiple siloed lakes with lots of duplication



# OneLake for all data

"The OneDrive for data"



**OneDrive**  
for documents

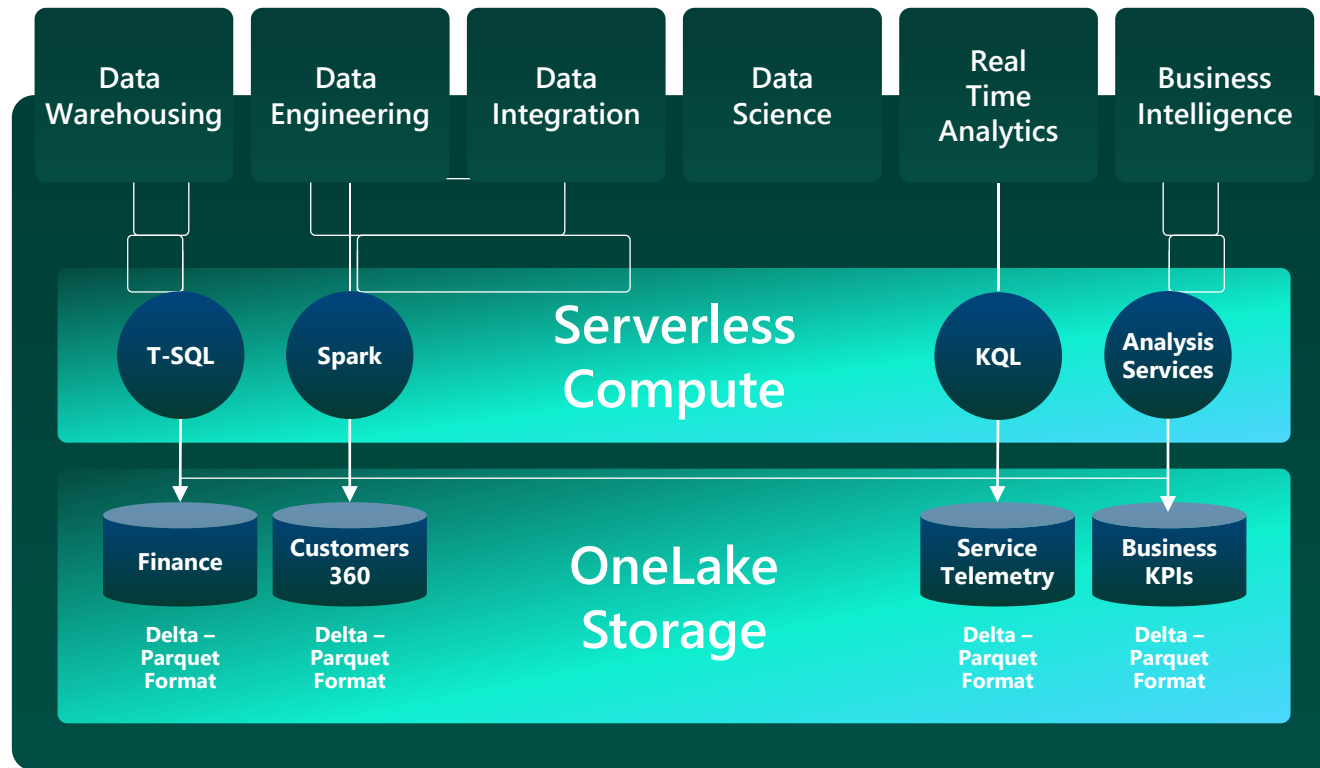


**OneLake**  
for data

**OneLake provides a data lake as a service without you needing to build it**

# One Copy for all computes

Real separation of compute and storage



All the compute engines store their data automatically in OneLake

The data is stored in a single common format

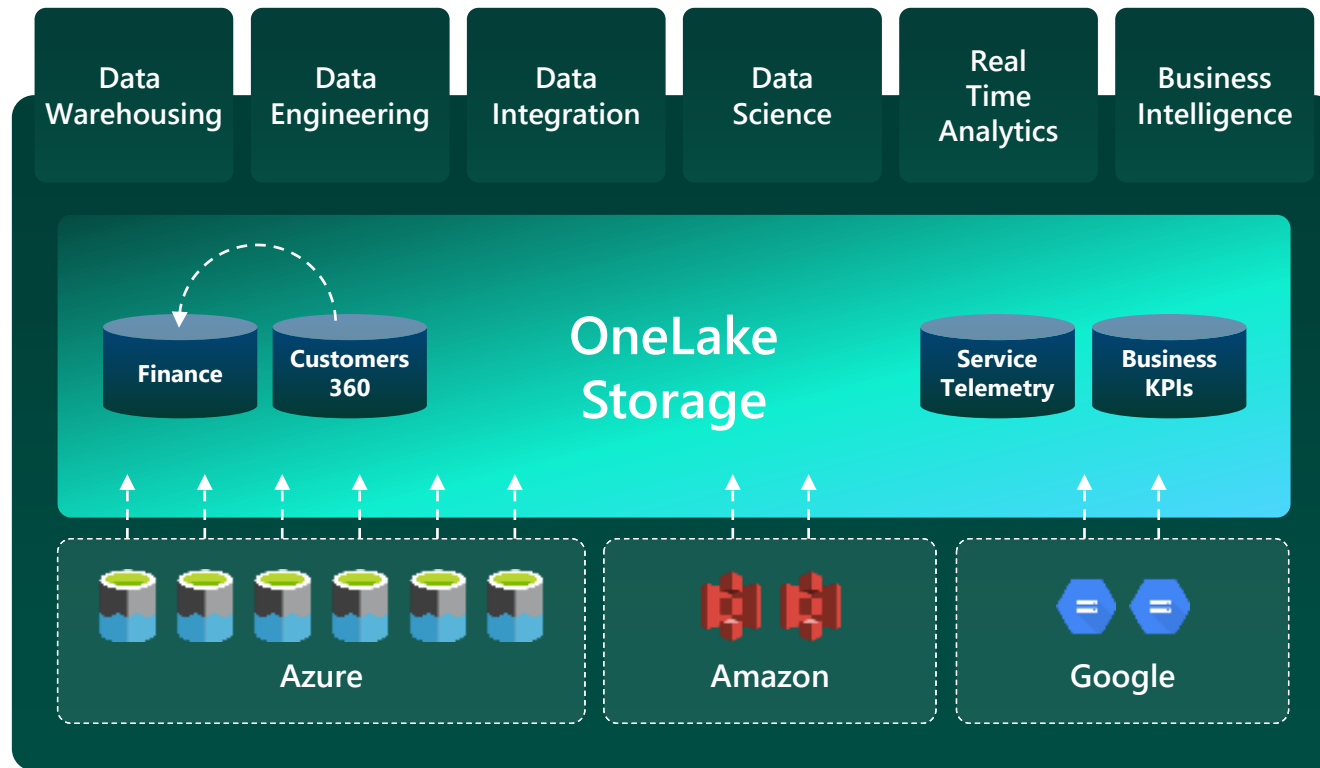
**Delta – Parquet**, an open standards format, is the storage format for all tabular data in Analytics vNext

***Once data is stored in the lake, it is directly accessible by all the engines without needing any import/export***

All the compute engines have been fully optimized to work with Delta Parquet as their native format

Shared universal security model is enforced across all the engines

# One Copy from all sources



Sharing data in OneLake is as easy as sharing files in OneDrive

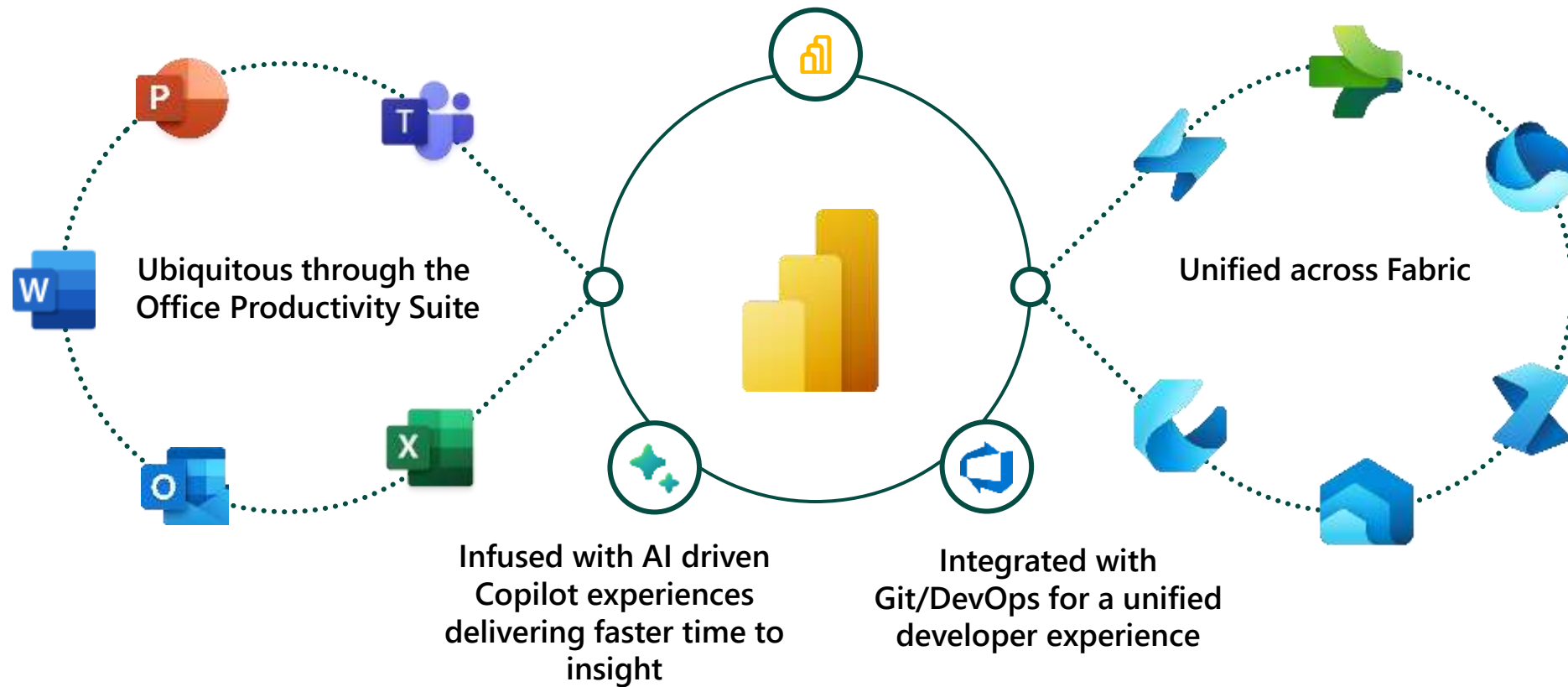
With [shortcuts](#), data throughout OneLake can be composed without data movement

Shortcuts also allow linking of data in **Azure, AWS, and GCP, without any data duplication**, making [OneLake the first multi-cloud data lake](#)

With industry standard APIs, OneLake can be accessed by any application or service

# PBI Strategy

Be the undisputed leader in ease of use, depth of data visualization and analysis capabilities

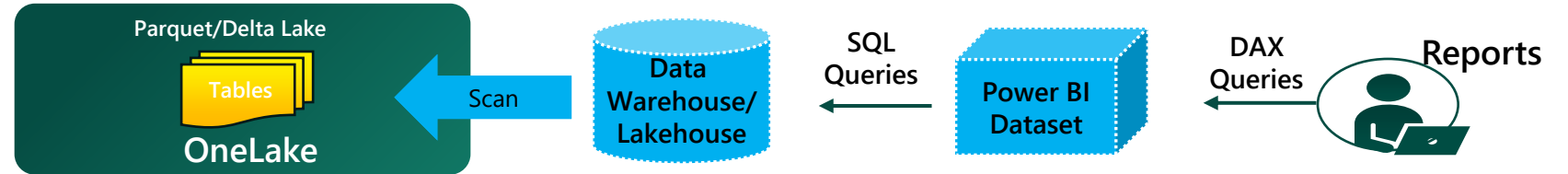




# PBI Data Read

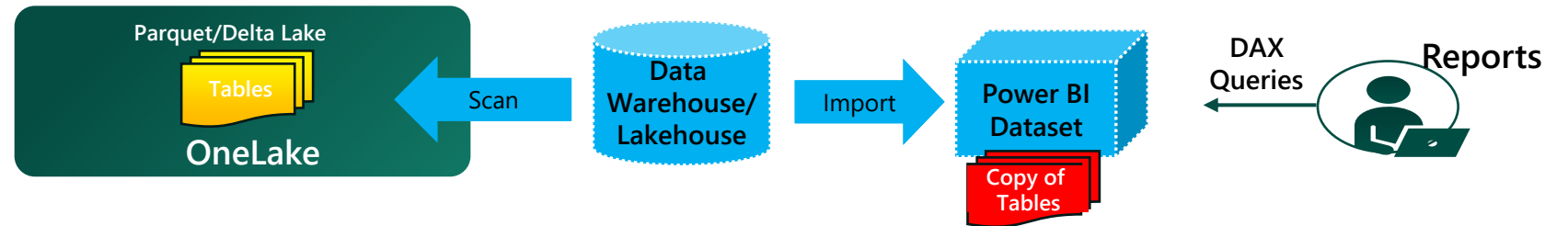
## "Direct Query Mode"

Slow, but real time



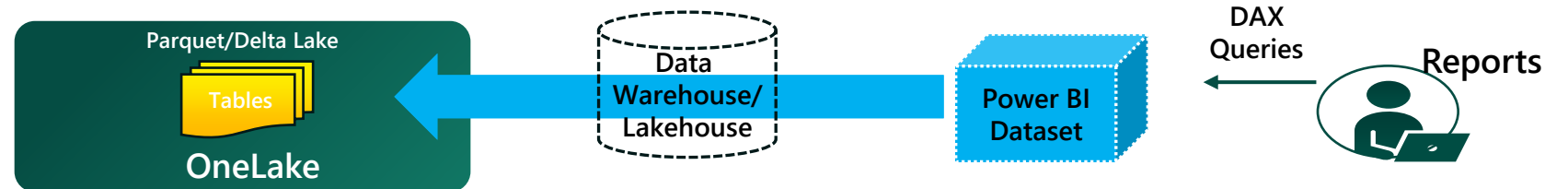
## "Import Mode"

Latent & duplicative but fast



## "Direct Lake Mode"

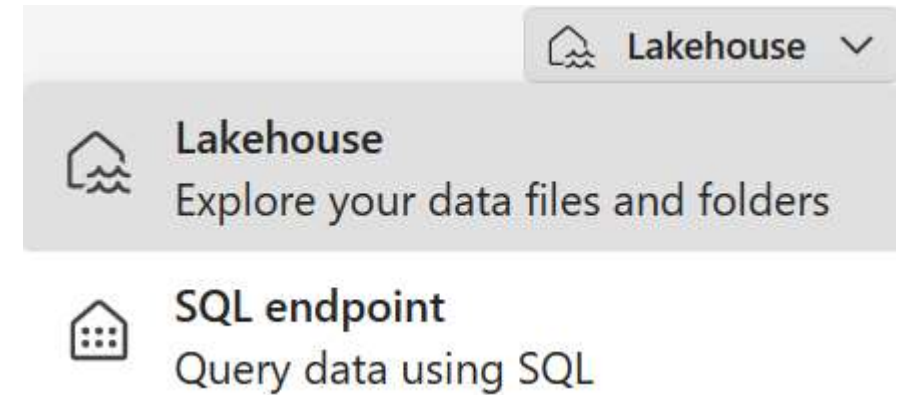
Perfect!



# PBI Direct Lake Mode

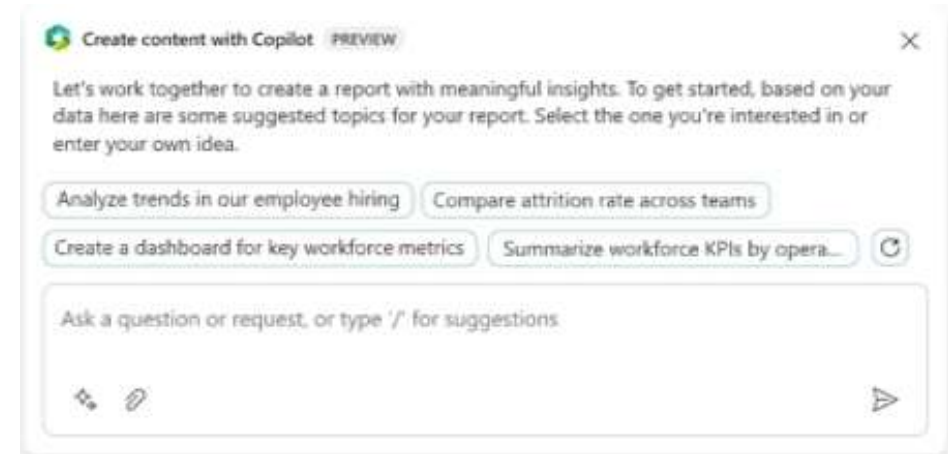
## Several Benefits

- Improved query performance
  - queries are executed directly on the Delta tables
  - performance is similar to the import mode
- Automatic detection of changes
  - Any changes made to the Delta tables are automatically detected
- Compatibility with other compute engines
  - Power BI is just one compute in the Fabric ecosystem
  - Other compute engines like Spark notebooks, data warehouses, and Kusto can also access the same Delta tables
- Reduced data movement
  - Data does not need to be copied or refreshed as frequently as in the import mode



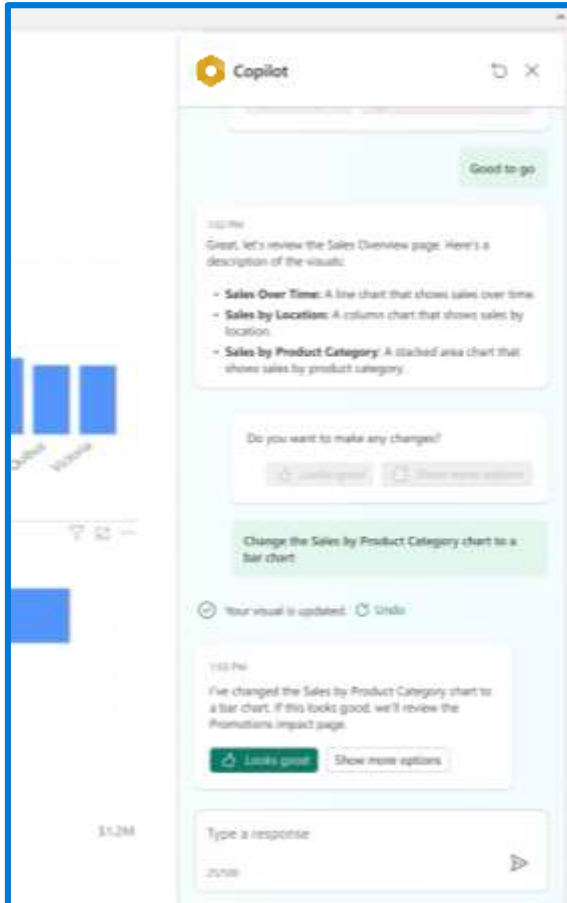
# Introducing Copilot in Power BI

Transformational chat-based experiences that guide and interact with users to deliver faster time to insight within specific end-to-end scenarios



# Introducing Copilot in Power BI

## Chat based Copilot experiences

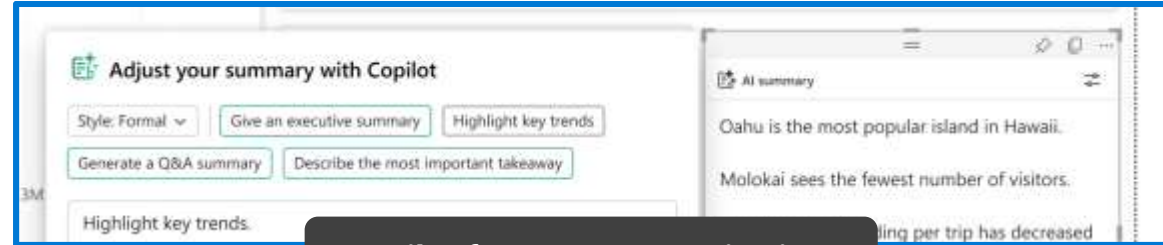


**Copilot in Power BI for Creators & Consumers**

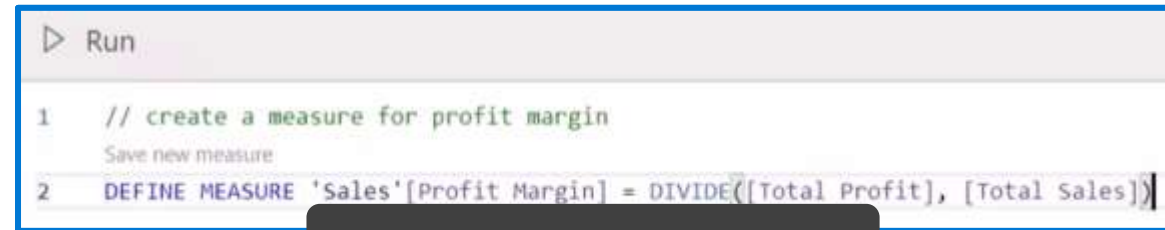
Private Preview  
Fall 23

Private Preview  
Winter 23

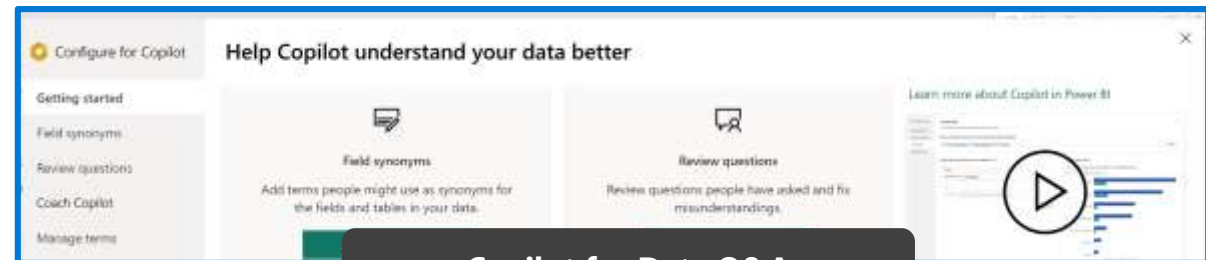
## Contextual experiences enhancing Power BI features



**Copilot for Data Summarization**



**Copilot for DAX Authoring**



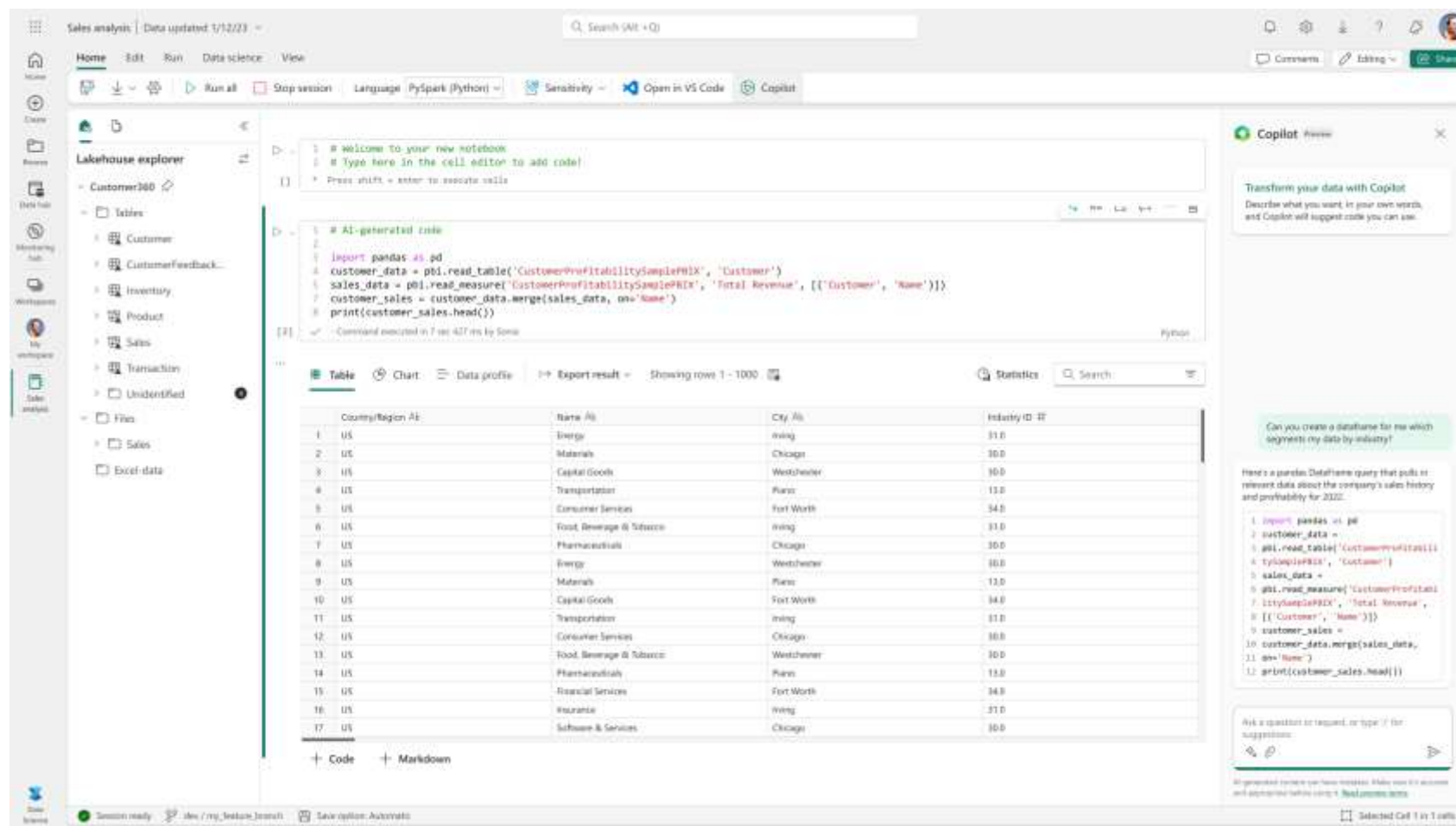
**Copilot for Data Q&A**

# Copilot experiences for developers

Copilot embeds the best of Azure Open AI, contextualized with your data, directly into your development workflows

## Improve productivity:

- Code generation
- Generate natural language explanations and summary of code and data
- Simplify migration



The screenshot displays the Azure Databricks Copilot interface. On the left is the 'Lakehouse explorer' sidebar showing a tree view of data assets including 'Customer360', 'Tables', 'Files', and 'Excel data'. The main workspace shows a notebook with Python code for data analysis. Below the code is a table visualization showing data for 17 rows, with columns for Country/Region, Name, City, and Industry ID. On the right, the 'Copilot' sidebar is active, displaying a prompt 'Transform your data with Copilot' and a generated SQL query.

```
# Welcome to your new notebook
# Type here in the cell editor to add code
# Press shift + enter to execute cells

# AI-generated code
import pandas as pd
customer_data = tbl.read_table('CustomerProfitabilitySamplePRIX', 'Customer')
sales_data = tbl.read_table('CustomerProfitabilitySamplePRIX', 'Total Revenue', [{"Customer", "Name"}])
customer_sales = customer_data.merge(sales_data, on='Name')
print(customer_sales.head())
```

Country/Region Ab	Name Ab	City Ab	Industry ID Ab
1 US	Energy	Irvine	31.0
2 US	Materials	Chicago	30.0
3 US	Capital Goods	Westchester	30.0
4 US	Transportation	Puerto	13.0
5 US	Consumer Services	Fort Worth	34.0
6 US	Food, Beverage & Tobacco	Irvine	31.0
7 US	Pharmaceuticals	Chicago	30.0
8 US	Energy	Westchester	30.0
9 US	Materials	Puerto	13.0
10 US	Capital Goods	Fort Worth	34.0
11 US	Transportation	Irvine	31.0
12 US	Consumer Services	Chicago	30.0
13 US	Food, Beverage & Tobacco	Westchester	30.0
14 US	Pharmaceuticals	Puerto	13.0
15 US	Financial Services	Fort Worth	34.0
16 US	Insurance	Irvine	31.0
17 US	Software & Services	Chicago	30.0

Can you create a dataframe for me which segments my data by industry?

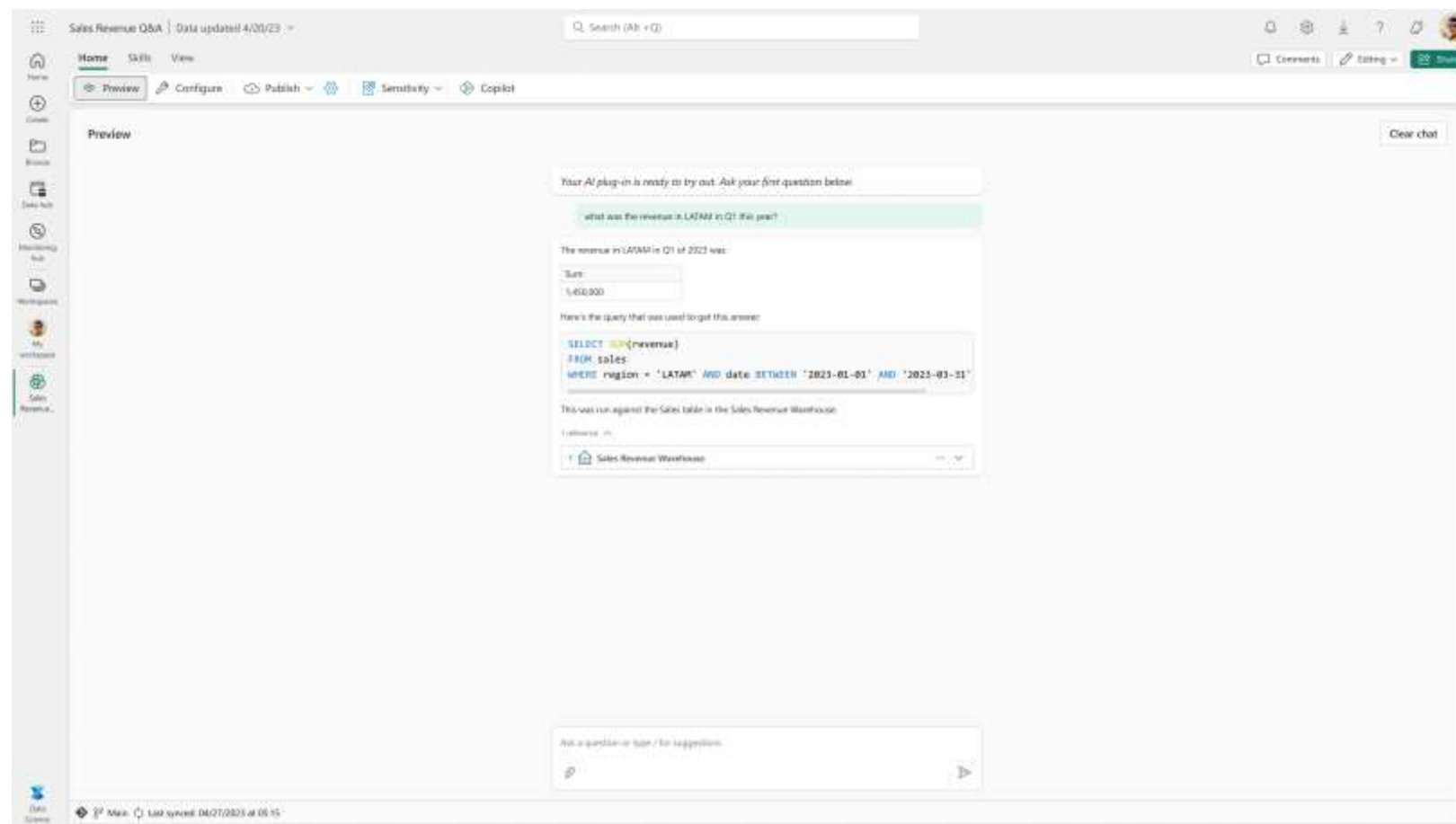
```
1. import pandas as pd
2. customer_data =
3. tbl.read_table('CustomerProfitabilitySamplePRIX', 'Customer')
4. tbl.read_table('CustomerProfitabilitySamplePRIX', 'Total Revenue', [{"Customer", "Name"}])
5. sales_data =
6. tbl.read_table('CustomerProfitabilitySamplePRIX', 'Total Revenue', [{"Customer", "Name"}])
7. customer_sales =
8. customer_data.merge(sales_data, on='Name')
9. print(customer_sales.head())
```



# Create AI Plugins for *your* Data

Create and customize your own AI plugin for answering questions about your data in your Lakehouse/Warehouse.

These data centric AI Plugins can be **published and used in other chatbots like M365 Business Chat** and can also be consumed in experiences across MS Fabric.





# Available now

## Public preview

Data Factory

Synapse Data Engineering

Synapse Data Science

Synapse Data Warehousing

Synapse Real Time analytics

Copilot for Power BI (DAX)

OneLake

## Generally available

Power BI

## Private Preview

Data Activator

Copilot for Microsoft Fabric

Copilot for Power BI (full)

Thank you

An abstract graphic featuring a vibrant green, curved, ribbon-like shape that flows from the bottom left towards the top right. The surface of this green shape is densely populated with numerous small, white, spherical particles, some of which appear to be floating or drifting away from the surface, creating a sense of motion and depth. The background is a clean, solid white.