



Power BI Update Microsoft Ignite

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Fabric GA

The day when Fabric & DirectLake became GA at MS Ignite

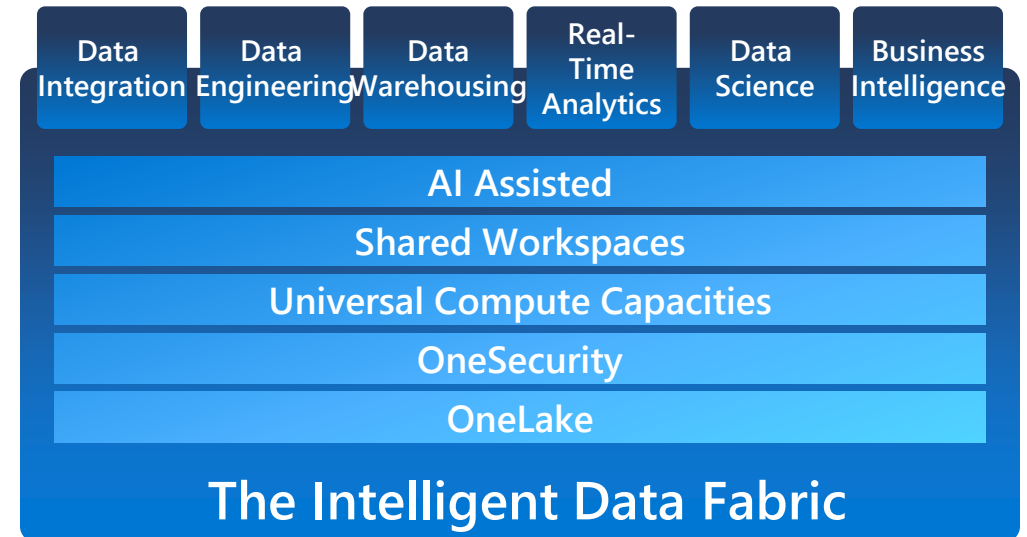
And of course:

- OneLake integration for Import semantic models
 - DirectLake works with Synapse Data Warehouse
 - DAXQueryView in Power BI Desktop
 - QSO and RLS for DirectLake
-
- ... to name but a few.



What is Fabric?

- Adds significant functionality to a Power BI tenant
- Compute in the form of Capacity Units (CU) → not a «server»
 - Power BI Premium P1 = F64
- Compute control abstracted away
- Storage = open-source Delta Lake format

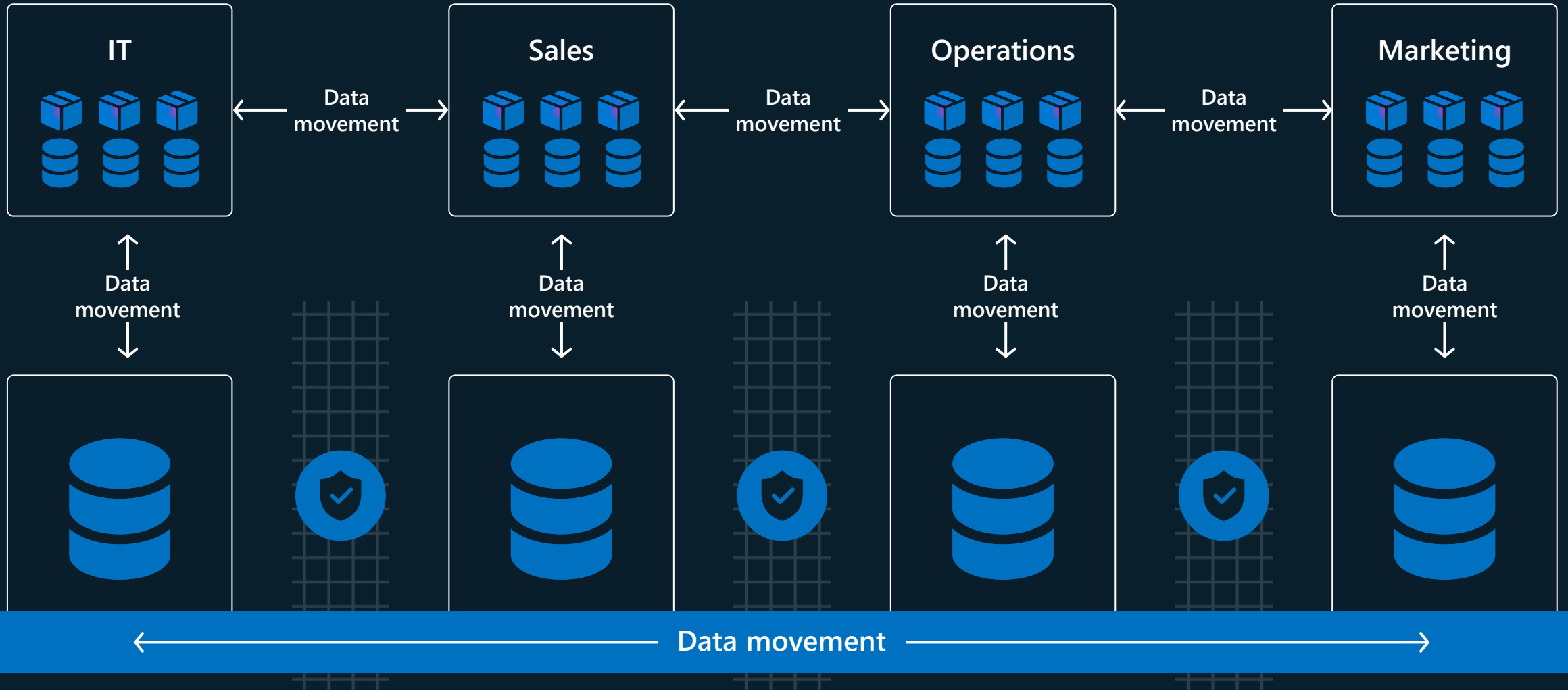




OneLake



Today: Multiple siloed lakes with lots of duplication



OneLake for all data

"The OneDrive for data"



OneDrive
for documents

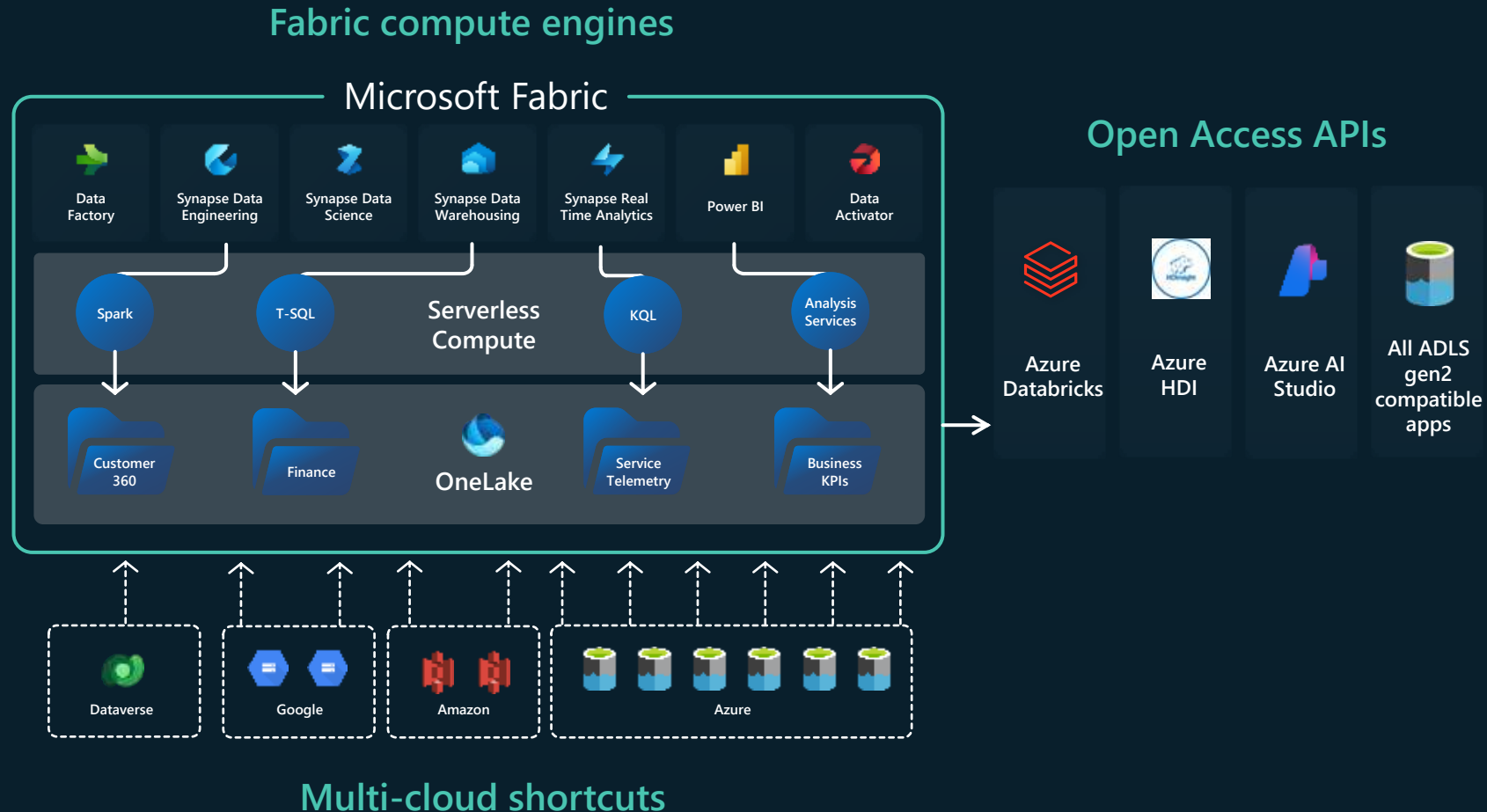


OneLake
for data

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

All roads lead OneLake

Creating Data Gravity in OneLake



Direct Lake



Storage Modes (today)

SMALLER MODELS	Time to Import Data	Model Size	Query Speed
Direct Query	-	-	?
Import	😊	😊	😊

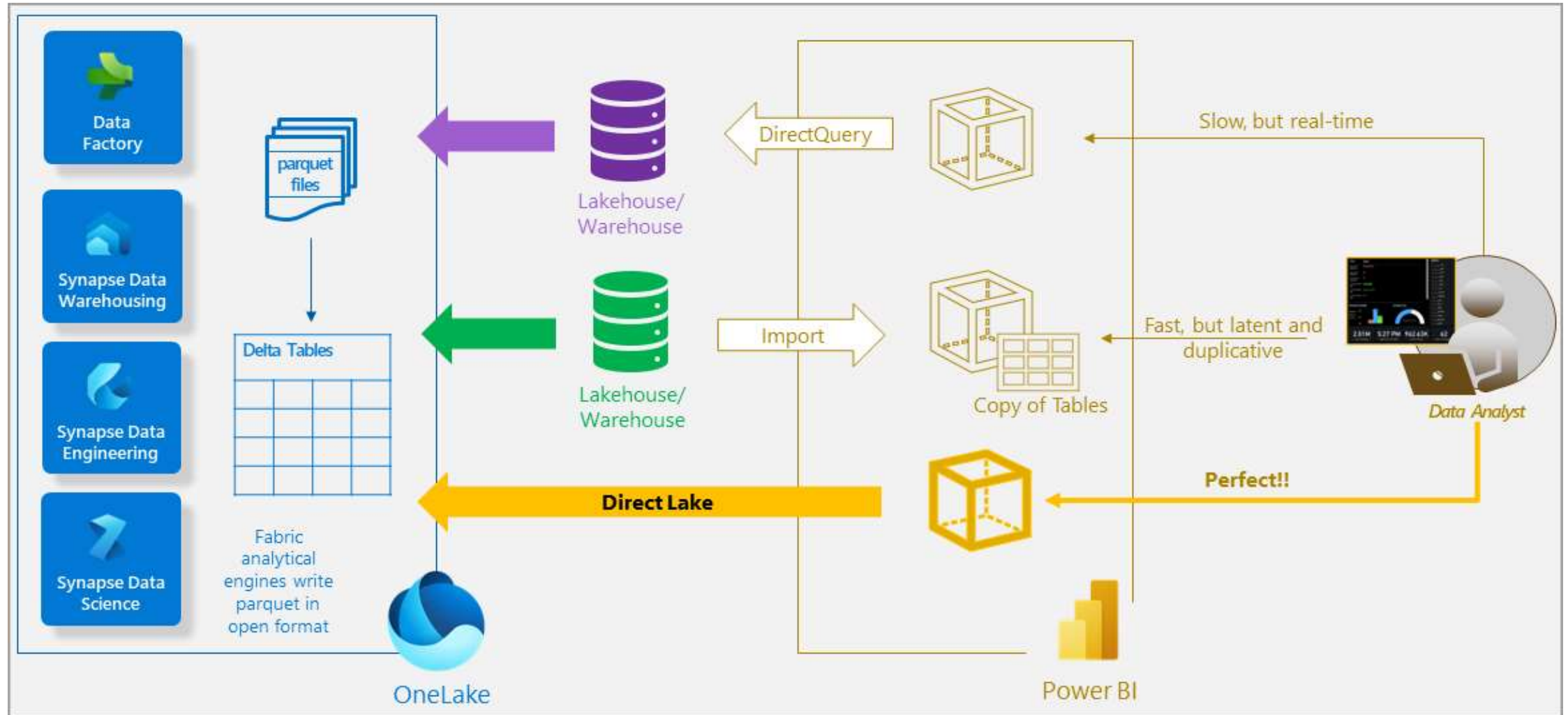
LARGE MODELS	Time to Import Data	Model Size	Query Speed
Direct Query	-	-	?
Import	😐	😐	😊

Storage Modes

SMALLER MODELS	Time to Import Data	Model Size	Query Speed
Direct Query	-	-	?
Import	😊	😊	😊
DirectLake	😊	😊	😊

LARGE MODELS	Time to Import Data	Model Size	Query Speed
Direct Query	-	-	?
Import	😐	😐	😊
DirectLake	😊	😊	😊

Direct Lake



Why Parquet?

- Open source/open data format
- Column-oriented data file format designed for efficient data storage and retrieval
- Efficient data compression and encoding schemes especially data in bulk
- Parquet available in languages including Rust, Java, C++, Python, etc...
- Is lingua franca for data storage format
 - Databricks, Microsoft - delta lake and parquet,
 - Snowflake - iceberg and parquet/orc
- Enhanced with V-Order



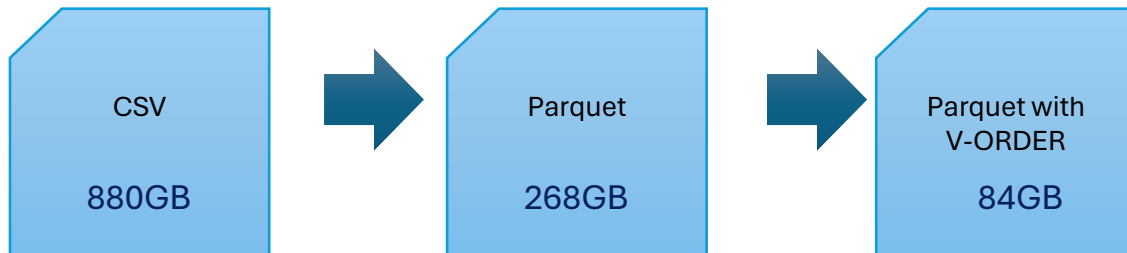
Parquet file format

- Data compression
- Columnar Storage
- Language Agnostics
- Open-source format
- Support for complex data types
- Row-store vs Column-store

	Column 1	Column 2	Column 3	Column 4	Column 5
	Product	Customer	Country	Date	Sales Amount
Row Group 1	Ball	John Doe	USA	2023-01-01	100
	T-Shirt	John Doe	USA	2023-01-02	200
Row Group 2	Socks	Maria Adams	UK	2023-01-01	300
	T-Shirt	John Doe	USA	2023-01-02	100
Row Group 3	T-Shirt	Maria Adams	UK	2023-01-02	500
	Socks	John Doe	USA	2023-01-05	200

The engine will not scan these records

All of Microsoft
Sales Data
(162 tables)



x3.2 Less I/O for all
workloads

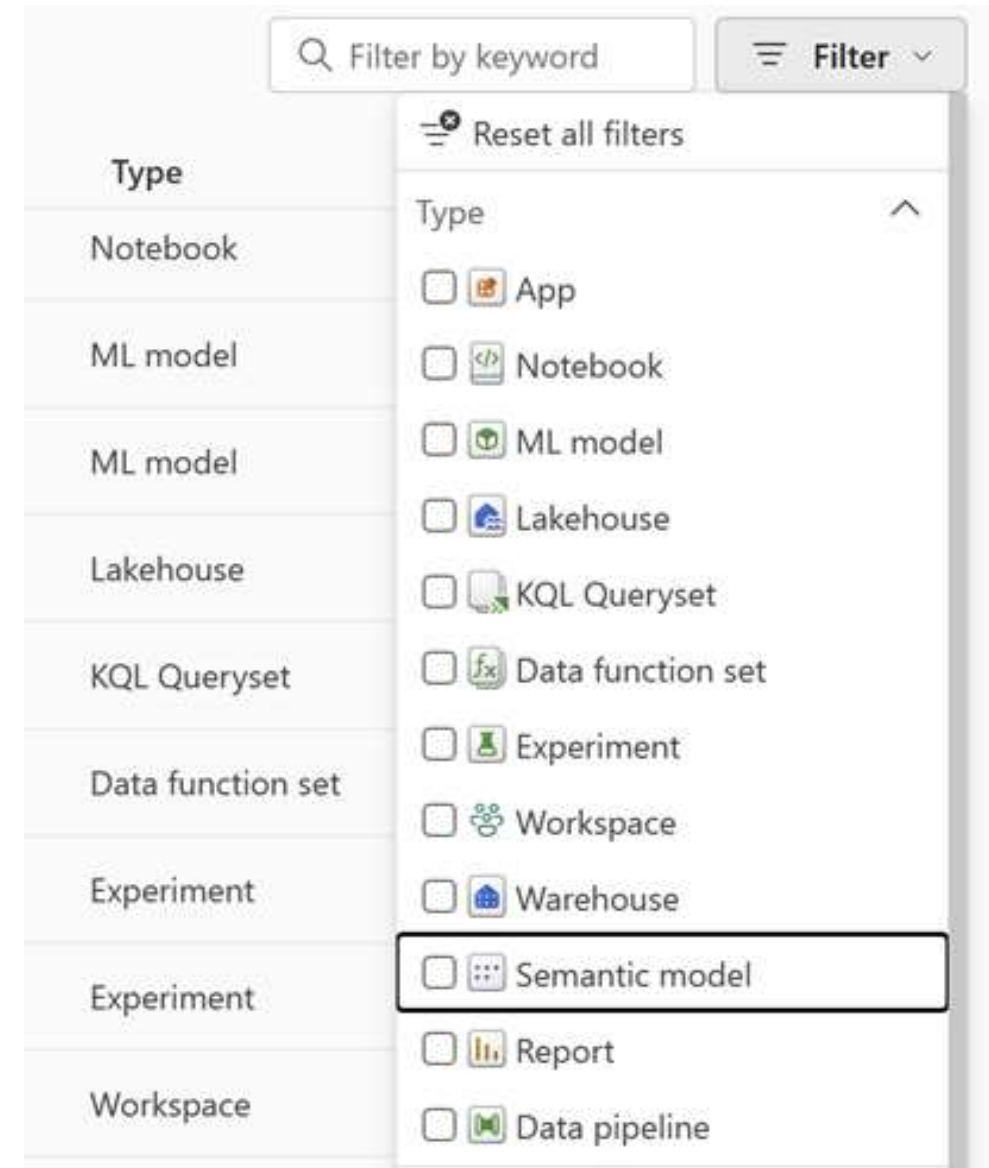
V-Order

Features and News



Datasets renamed to **semantic models**

- Datasets are being renamed to semantic models in Power BI and Fabric.
- This is necessary for disambiguation from other Fabric items and will make the product clearer and more usable.



Datasets renamed to **semantic models**

- The term “dataset” is too generic and too confusing
- “semantic model” is a lot more specific and descriptive



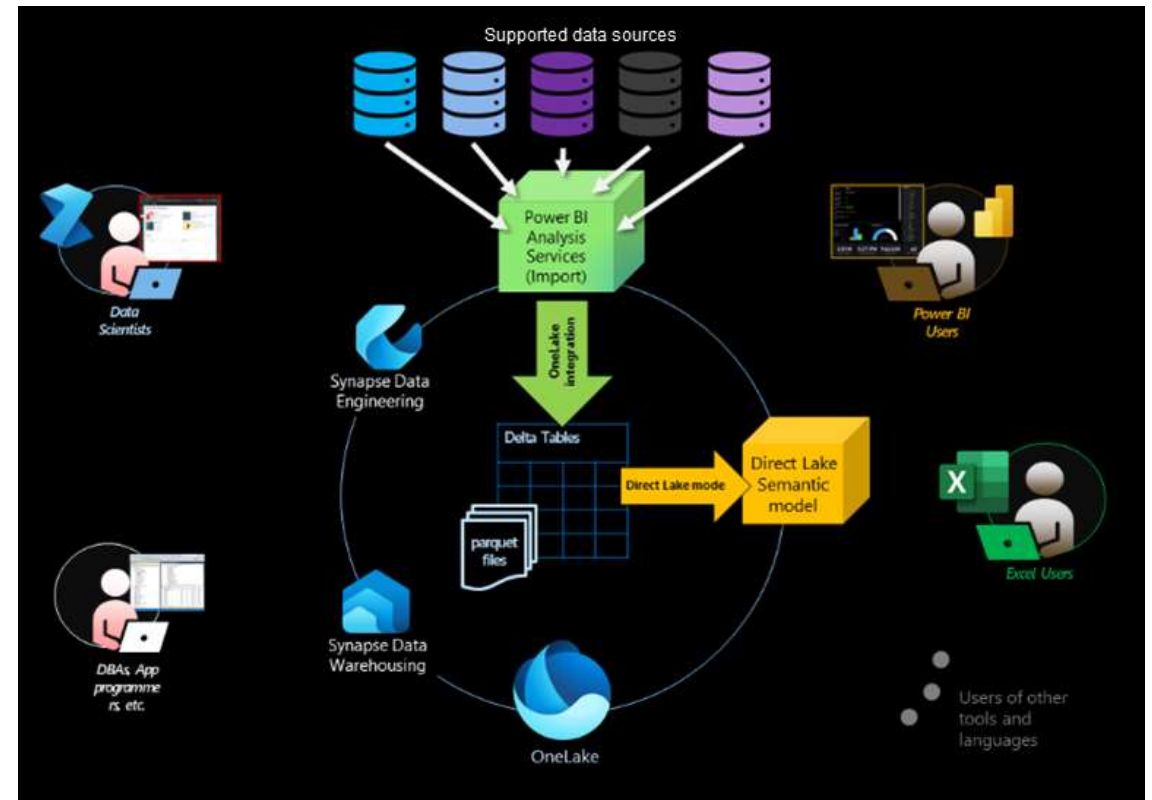
Even before they were re-named, Power BI datasets were semantic models

Semantic models because a user can:

- Integrate / load data from different sources into a single db
- Create, classify, relate objects (like tables, columns, measures) that represent real-world concepts
- Specify business logic and aggregate data by using calculations (in DAX) to query the data model
- Connect to the published model to use objects and aggregate data from different client tools

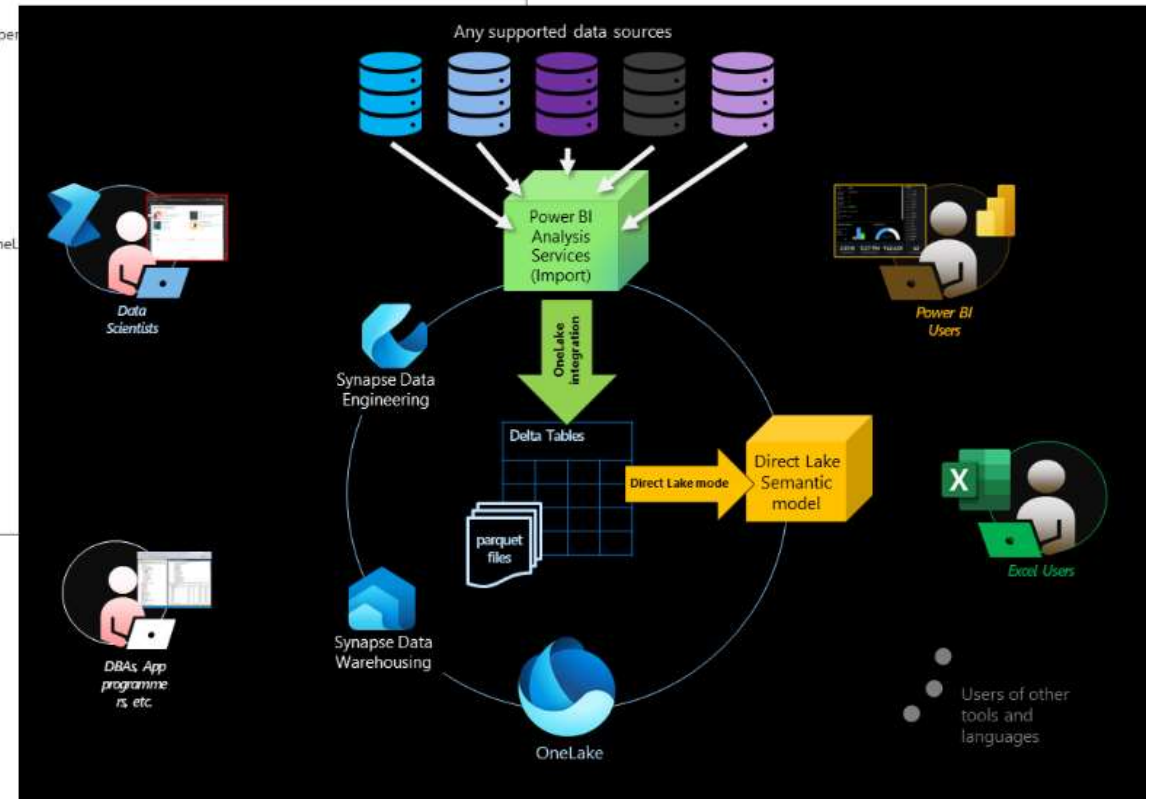
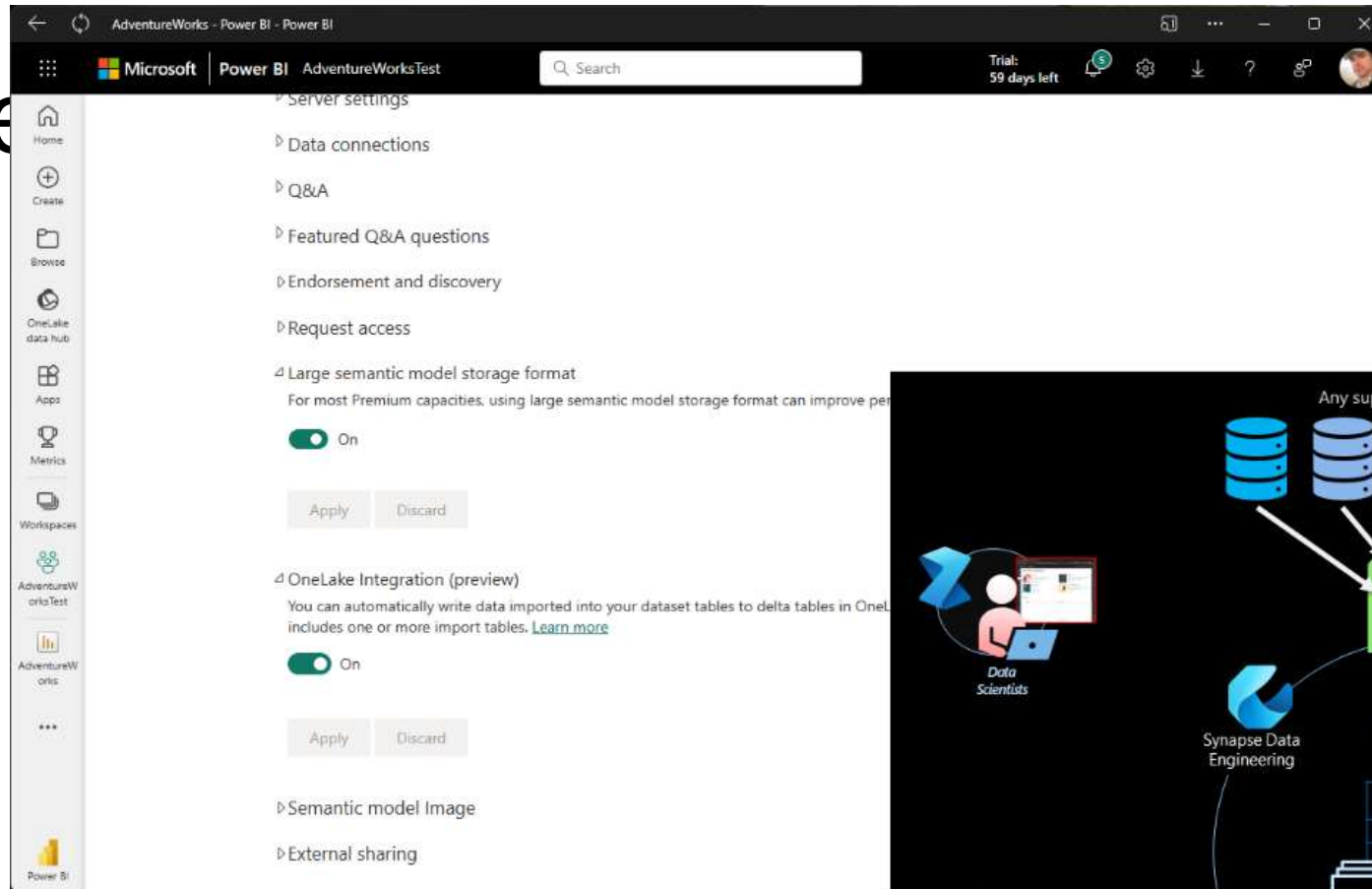
OneLake integration for semantic models

- OneLake Integration for import datasets, irrespective of source write import data to OneLake, like the abf files were written to ADLSg2 but with OSS delta
- This is the **biggest announcement for me**, Power BI Import mode dataset can be exported as a Delta Table, that just make perfect sense !



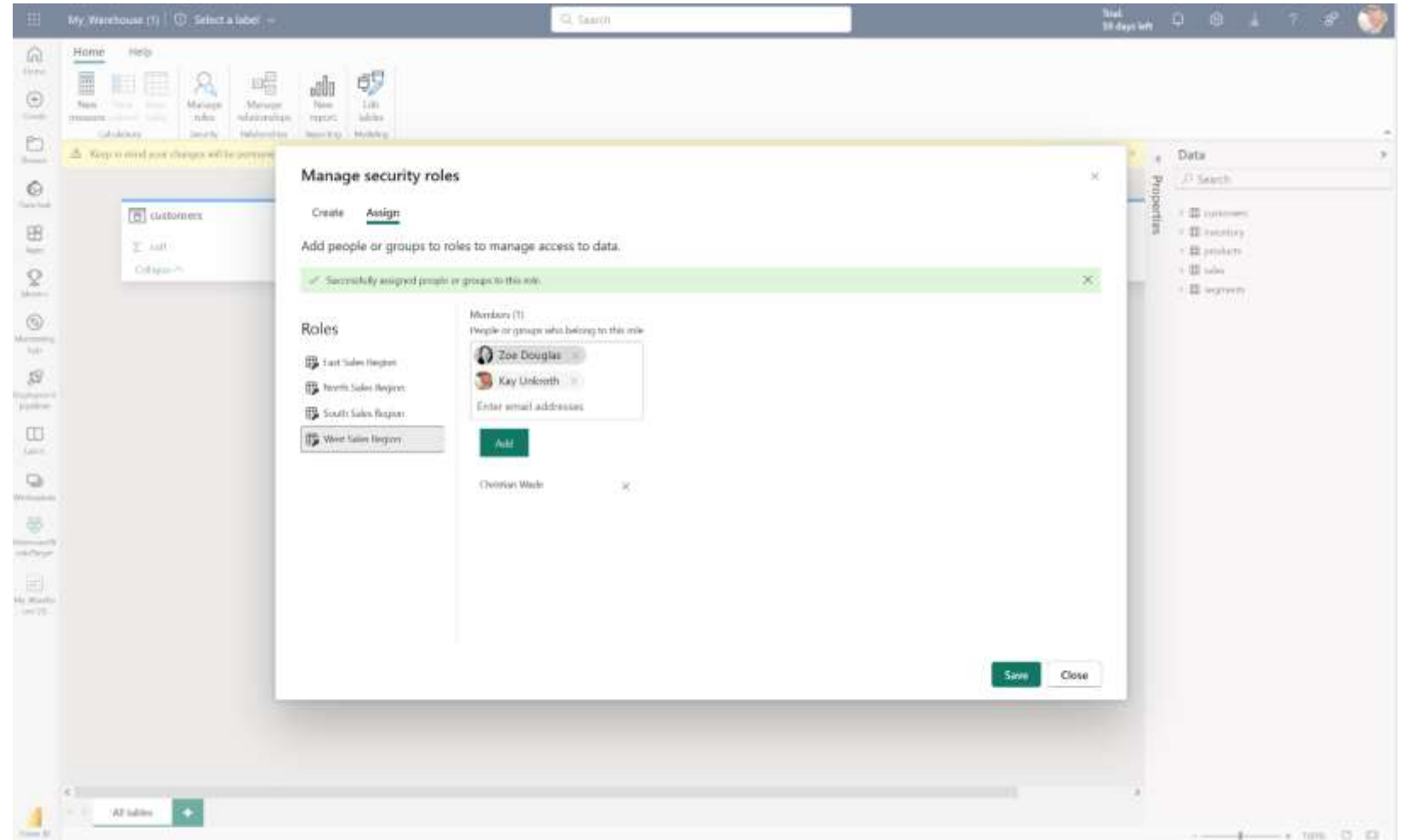
One

models



RLS/OLS security and stored credentials for Direct Lake semantic models

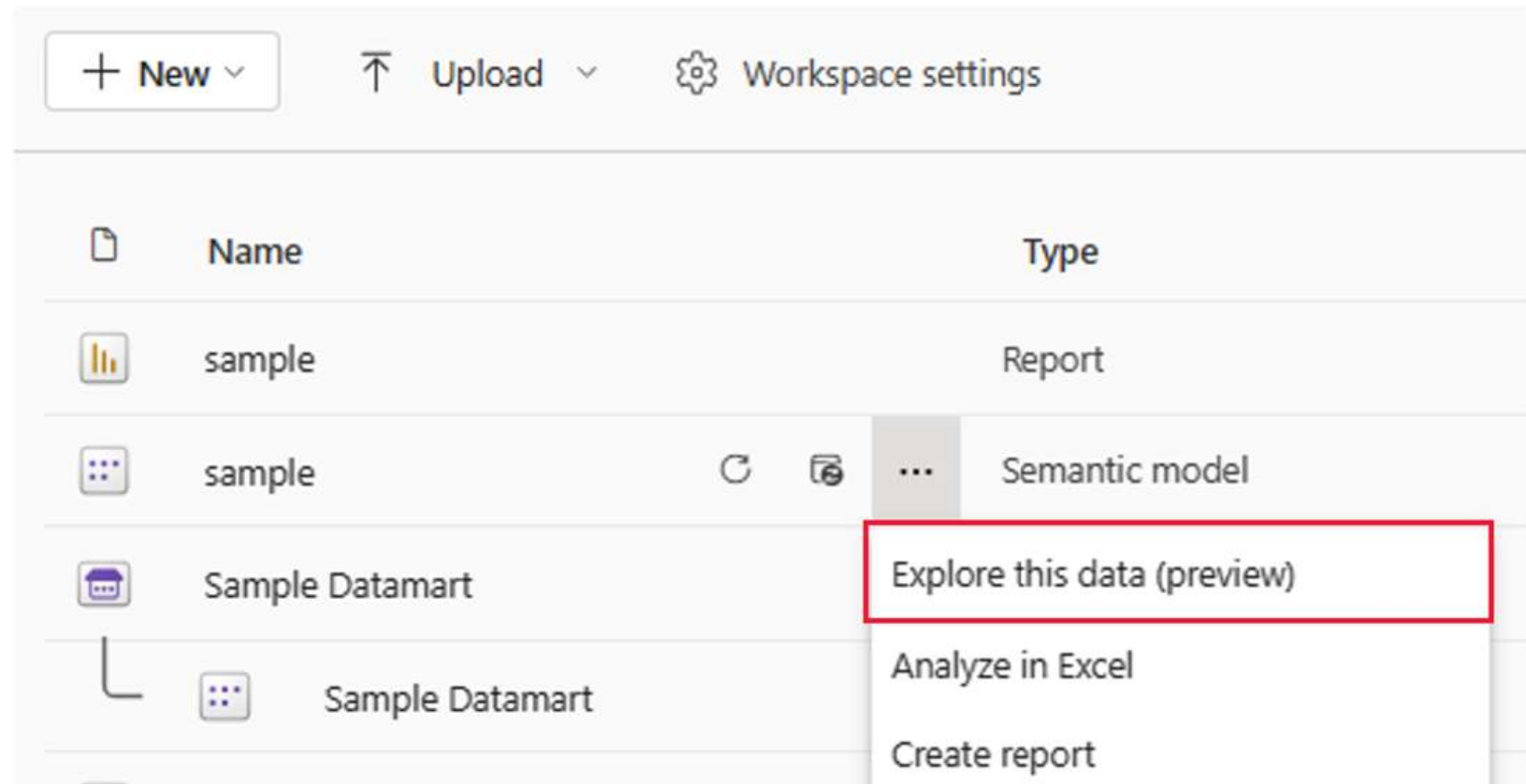
RLS/OLS security is a Power BI feature that enables you to define row-level and object-level access rules in a semantic model, so that different users can see different subsets of the data based on their roles and permissions



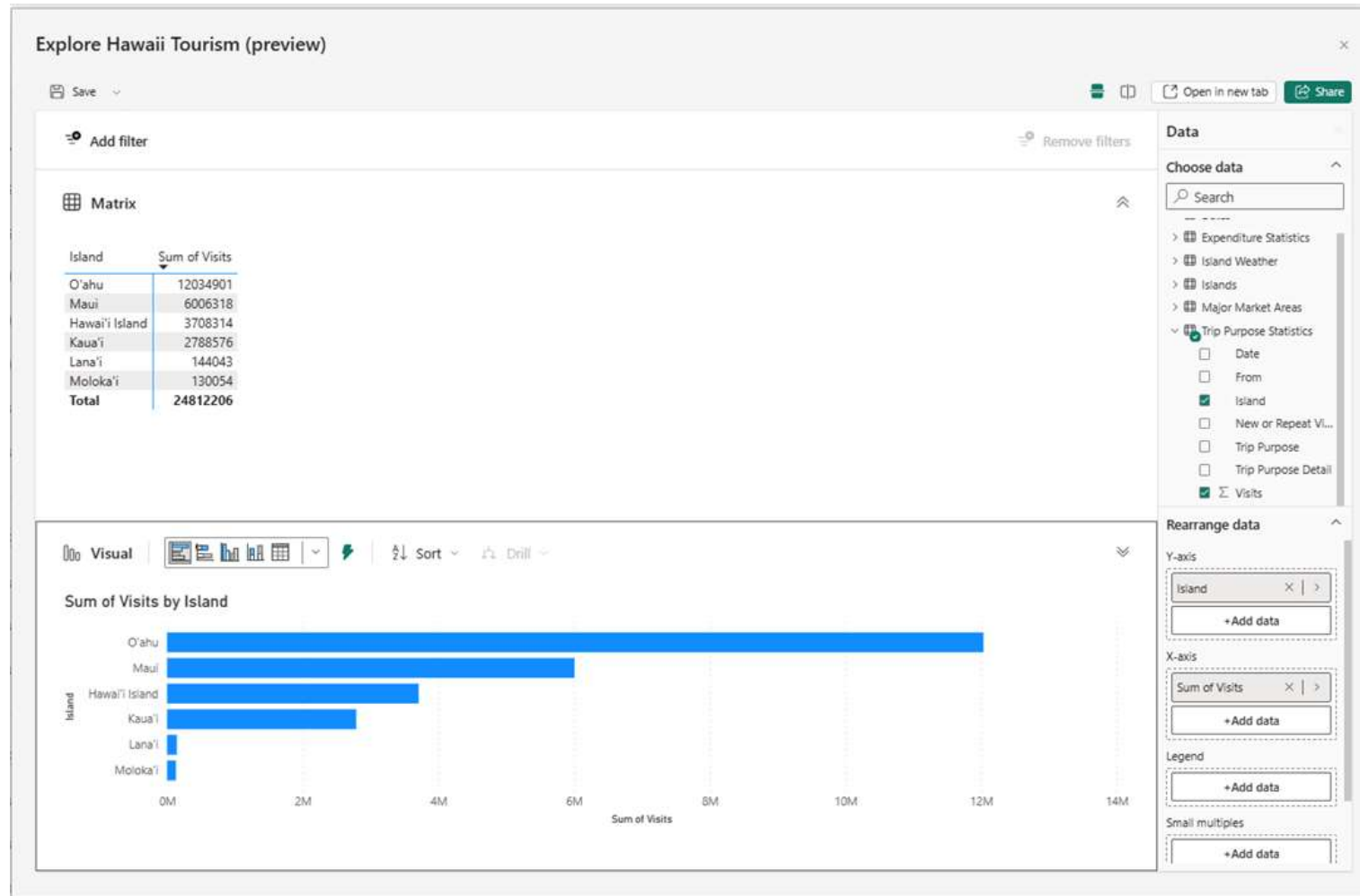
Introducing **Explore** (Public Preview)

Many times, users need to perform ad-hoc exploration of their data

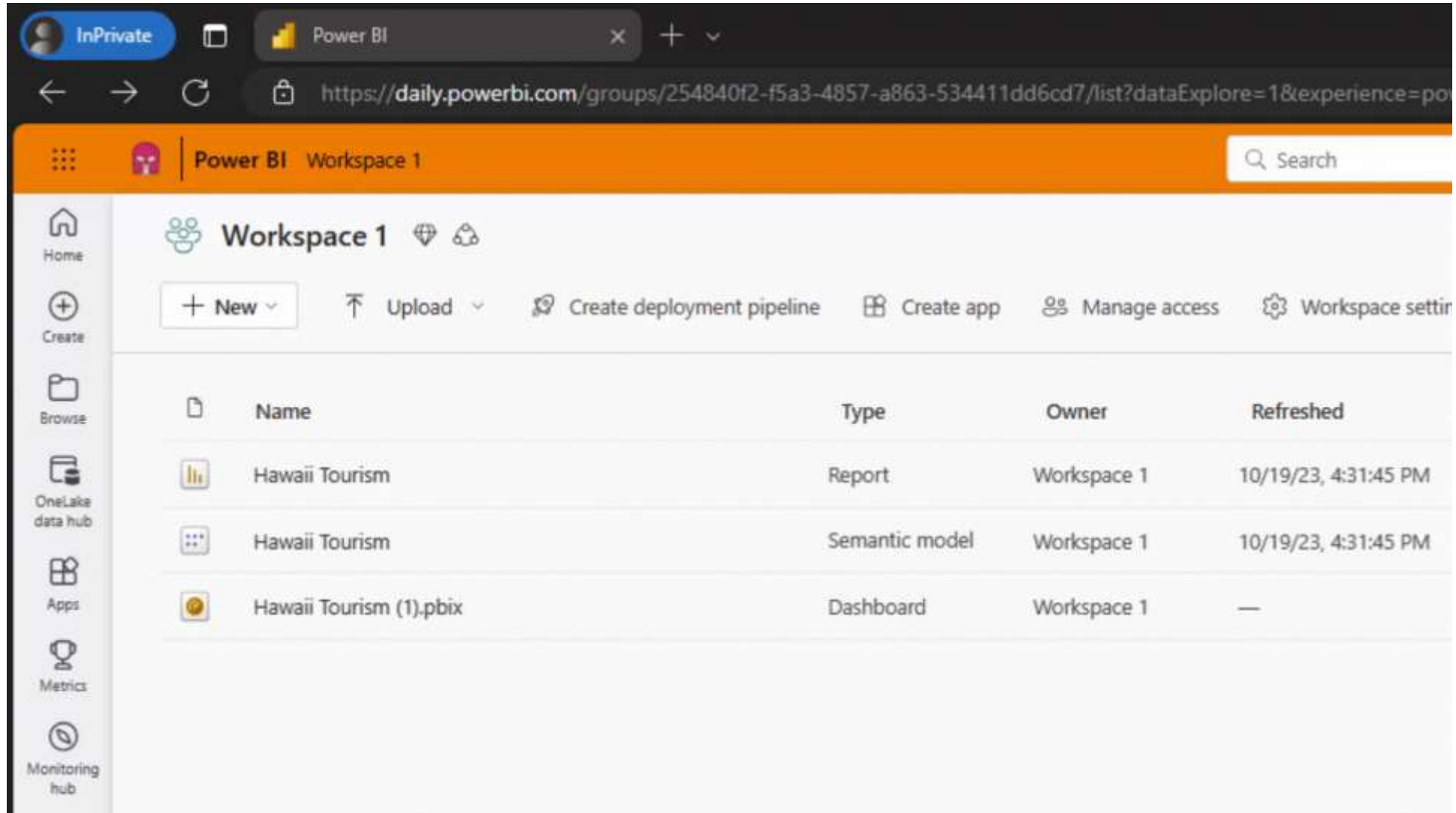
Similar to exporting and building a PivotTable in Excel



Introducing **Explore** (Public Preview)



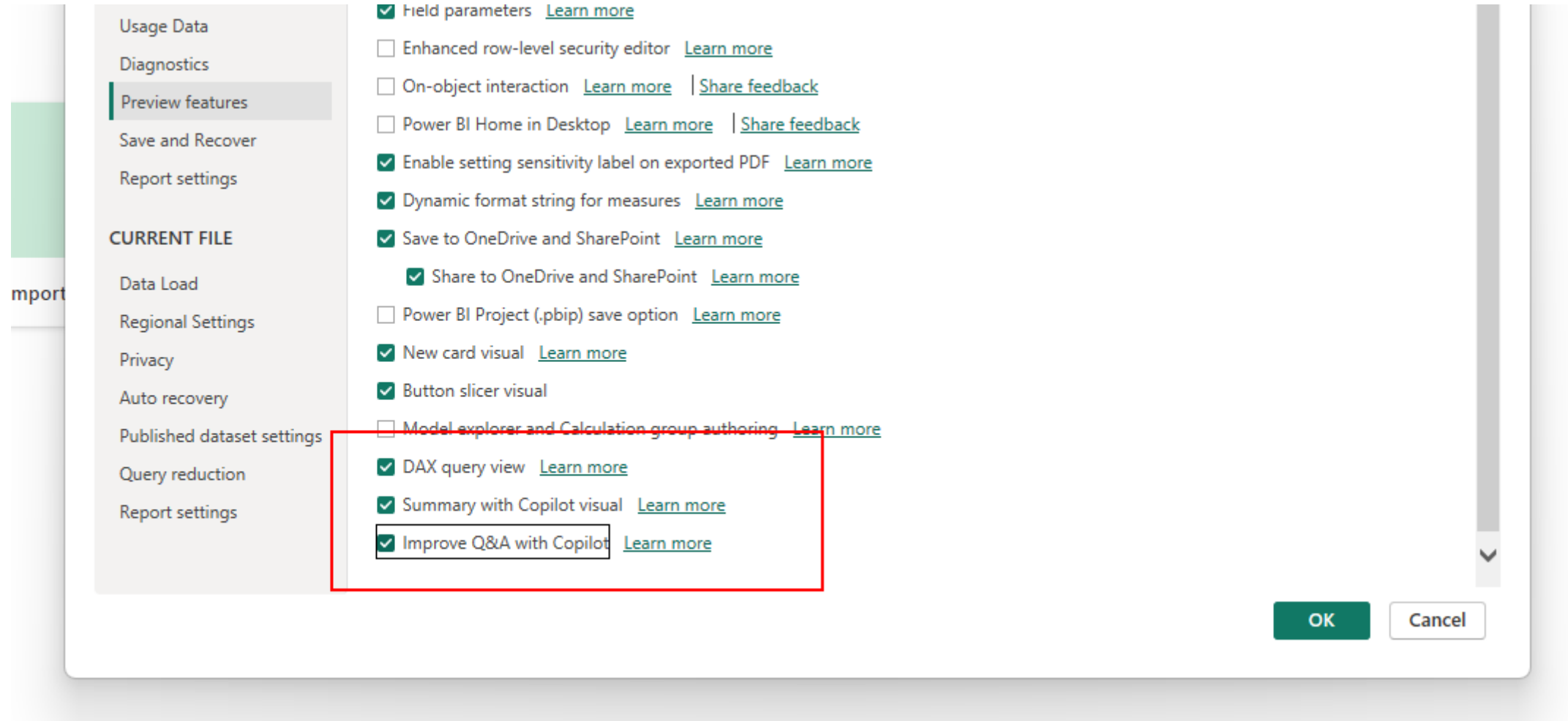
Introducing **Explore** (Public Preview)



The screenshot shows the Microsoft Power BI 'Workspace 1' interface. The top navigation bar includes the 'InPrivate' browser tab, the 'Power BI' logo, and a search bar. The main content area displays a table of items in the workspace, including reports, semantic models, and dashboards.

Name	Type	Owner	Refreshed
Hawaii Tourism	Report	Workspace 1	10/19/23, 4:31:45 PM
Hawaii Tourism	Semantic model	Workspace 1	10/19/23, 4:31:45 PM
Hawaii Tourism (1).pbix	Dashboard	Workspace 1	—

Let the fun begin!



DAX Query View

- You no longer need DAX Studio to just run a query. Period.
- You can test, edit, and ***SAVE*** measures to the model while editing your DAX query.

Marco Russo  @marcorus · 15 nov

#daxstudio is here to stay: features like Server Timings, VertiPaq Analyzer, Query Builder, Export Data, and much else are not likely to appear anytime soon in PBI Desktop. But at least we have a native DAX query experience now.

DAX Query View

- With the DAX Query View now you can keep your DAX in draft state, close come back and pick up where you left off
- During development I usually create a page or two for validation, create measures that are used only for validation (or save the .dax file) and delete later. Not anymore!
- Dax Query View is based on the monaco editor you know and love from VSCode
- It's a *proper* dev experience in Power BI Desktop 😊

The screenshot displays the DAX Query View in Power BI Desktop. At the top, a tab labeled 'Report view' is visible with a note: 'es are kept when you save the report.' Below this is a green 'Run' button. The main area contains a DAX query in a monaco-style editor:

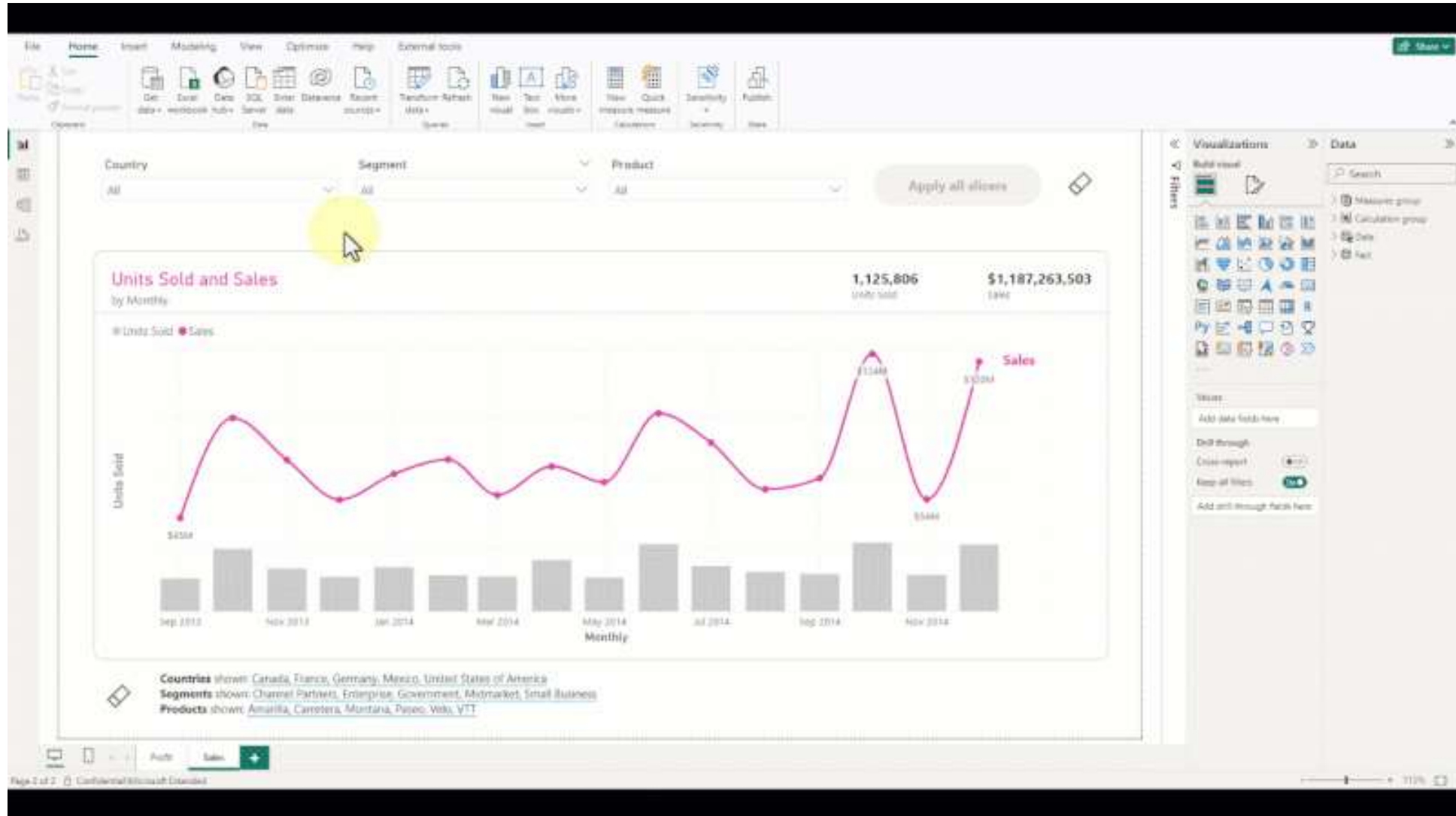
```
1 EVALUATE
2   SUMMARIZE(
3     'Product',
4     'Product'[Category],
5     "RR",
6     [Return Rate]
7   )
```

Below the editor, the 'Results' section shows 'Result 1 of 1' with a 'Copy' button. A table displays the results:

	Product[Category]	[RR]
0	Office 365	0.36
1	XBOX	0.01
2	Power Platform	0.13

A red arrow points from the table to a red box at the bottom of the interface. This box contains three buttons: 'validate_rrate', 'validate_srate', and 'optimize_rrateYTD', each with a green checkmark icon. A green '+' button is also present. At the very bottom, a status bar shows a green checkmark and the text: 'Success (155.1 ms) 2 columns, 3 rows'.

Start using the DAX Query View



DAX Query View - Details

The screenshot shows the DAX Query View interface in Power BI Desktop. The interface is divided into several sections:

- Ribbon:** Common actions to help in writing DAX queries. The ribbon includes tabs for File, Home, and Help, with various icons for actions like Paste, Format, and Run.
- Command bar:** Critical actions needed for running DAX queries. The command bar includes a Run button and a status bar.
- Data pane:** See model tables and columns to use in DAX queries. The data pane shows a list of tables and columns in the model.
- DAX query editor:** Write DAX queries. The editor shows a DAX query being written, with a Run button and a status bar.
- Results grid:** Results of the DAX query. The results grid shows a table of data with columns for FactSegment, FactCountry, FactProduct, FactDiscount Band, FactUnits Sold, FactManufacturing Price, and FactSale Price.
- Quick queries:** Generated DAX queries from tables, columns, and measures. The quick queries pane shows a list of generated queries.
- Query tabs:** Create, remove, and navigate multiple DAX queries & see status of queries. The query tabs show a list of queries with their status.

DAX query view: Access via 4th view in Power BI Desktop

Ribbon: Common actions to help in writing DAX queries

Command bar: Critical actions needed for running DAX queries

Data pane: See model tables and columns to use in DAX queries.

DAX query editor: Write DAX queries

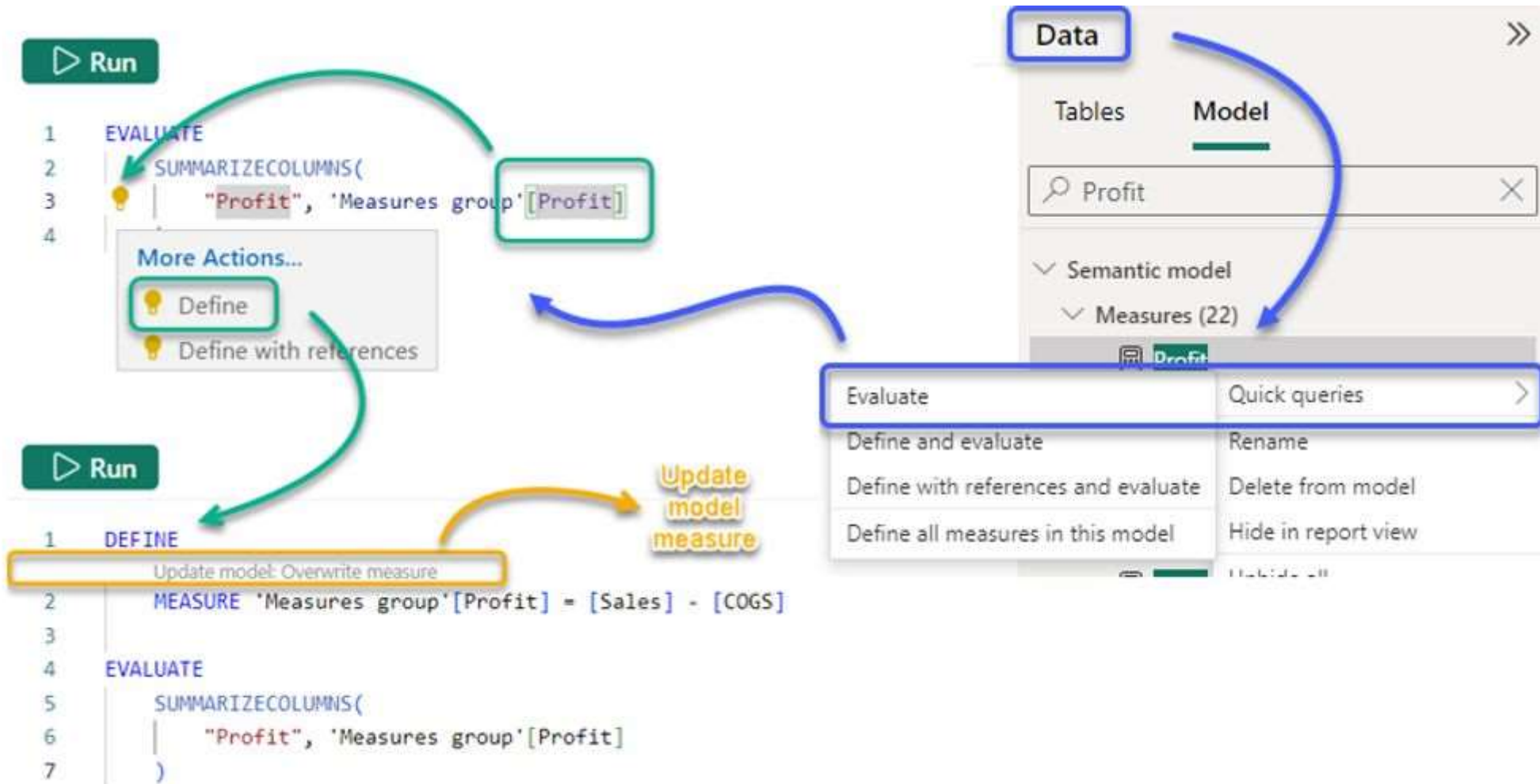
Results grid: Results of the DAX query

Quick queries: Generated DAX queries from tables, columns, and measures.

Query tabs: Create, remove, and navigate multiple DAX queries & see status of queries

FactSegment	FactCountry	FactProduct	FactDiscount Band	FactUnits Sold	FactManufacturing Price	FactSale Price
1 Government	Germany	Camera	None	1512	8	350
2 Government	Canada	Phone	None	1006	18	350
3 Government	Germany	Phone	None	1125	16	350
4 Government	Germany	Web	None	1513	16	350
5 Government	Germany	Web	None	1006	125	350
6 Government	France	VTT	None	1527	250	350
7 Government	Norway	Amateur	None	2736	260	350
8 Government	Mexico	Camera	Low	5210	8	350

DAX Query View - Workflow



DAX Query View

- Powerful way to interact with your data model
 - Quick queries can generate DAX queries for you
 - Quick queries to get the DAX expression of all, some, or a specific measure
 - Update the model
 - Measures that reference other measures
 - Report view's Performance Analyzer
- All these features in a bigger DAX query editor similar to VS Code, including more keyboard shortcuts and the ability to improve readability by formatting any DAX query.

Unboxing DAX Query View



<https://www.youtube.com/watch?v=hiBRhmX-pbM>

Copilot in Power BI

Unlock the full potential of your data



Supercharge Productivity

Let AI summarize actions for you, and optimize your time



Uplevel Skills

Be better at what you're good at and master what you've yet to learn



Discover Insights

Harness the power of AI so you never have to start from scratch

Copilot Accelerated Experiences

From

To

Tools

Creative assistant

Product specific

Cross-cutting

Data input

Content generation

Following commands

Provides recommendations,
with human in the loop

Uses specialized languages

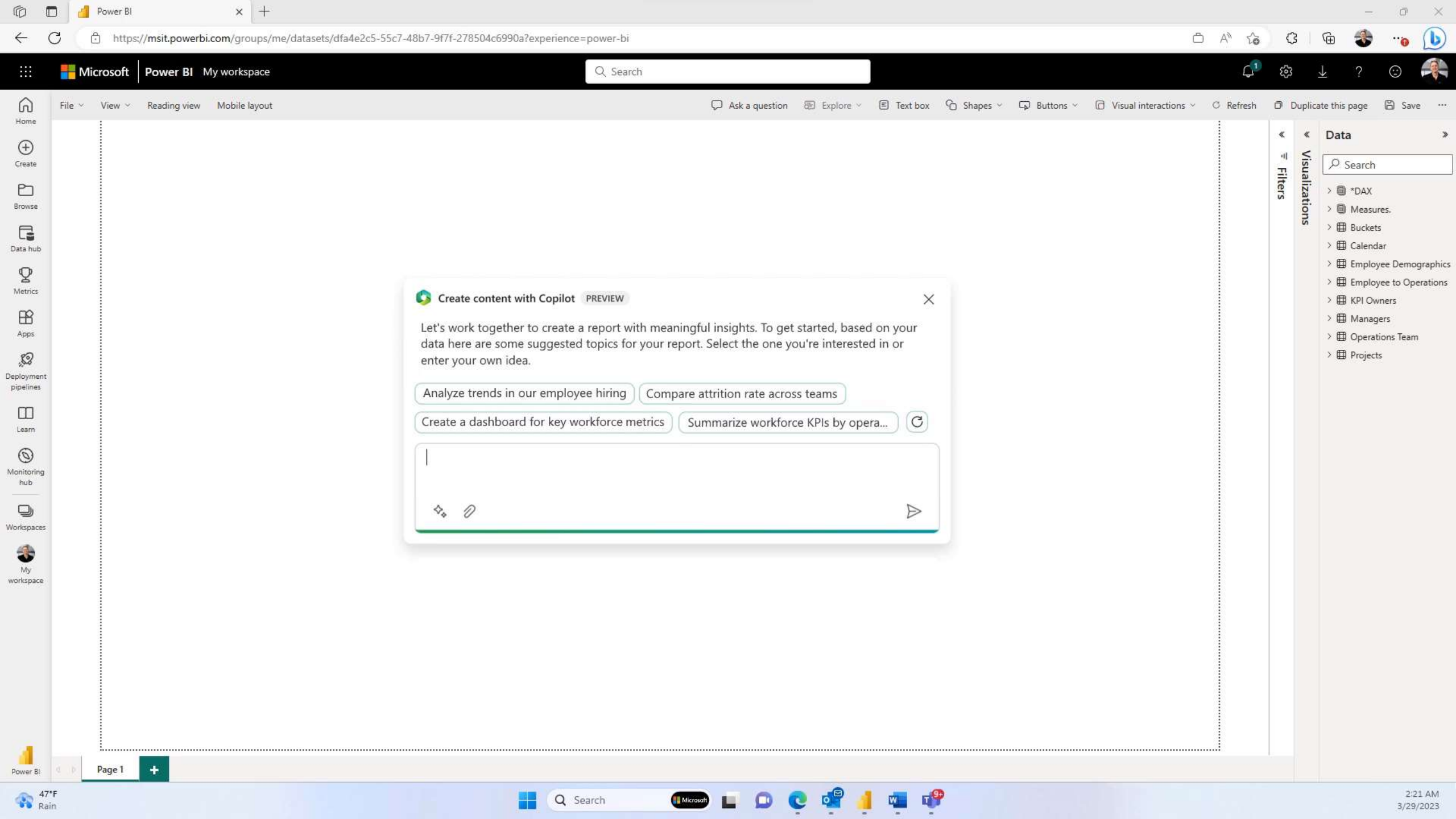
Uses natural language

Copilot for...

A new way to transform and analyze data, generate insights, and create visualizations and reports

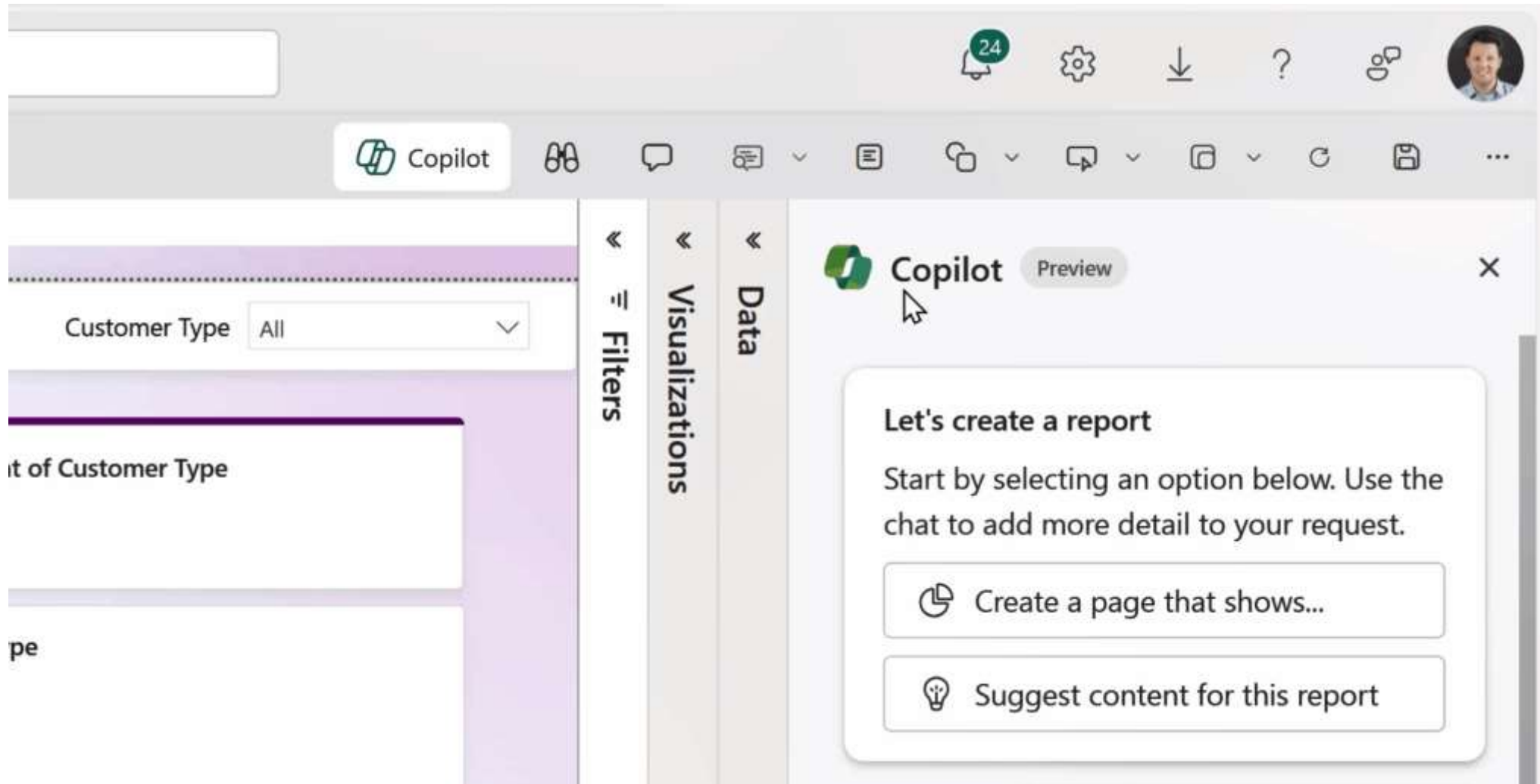
Copilot and other **generative AI** features in preview

- Data Science and Data Engineering
- Data Factory
- Power BI



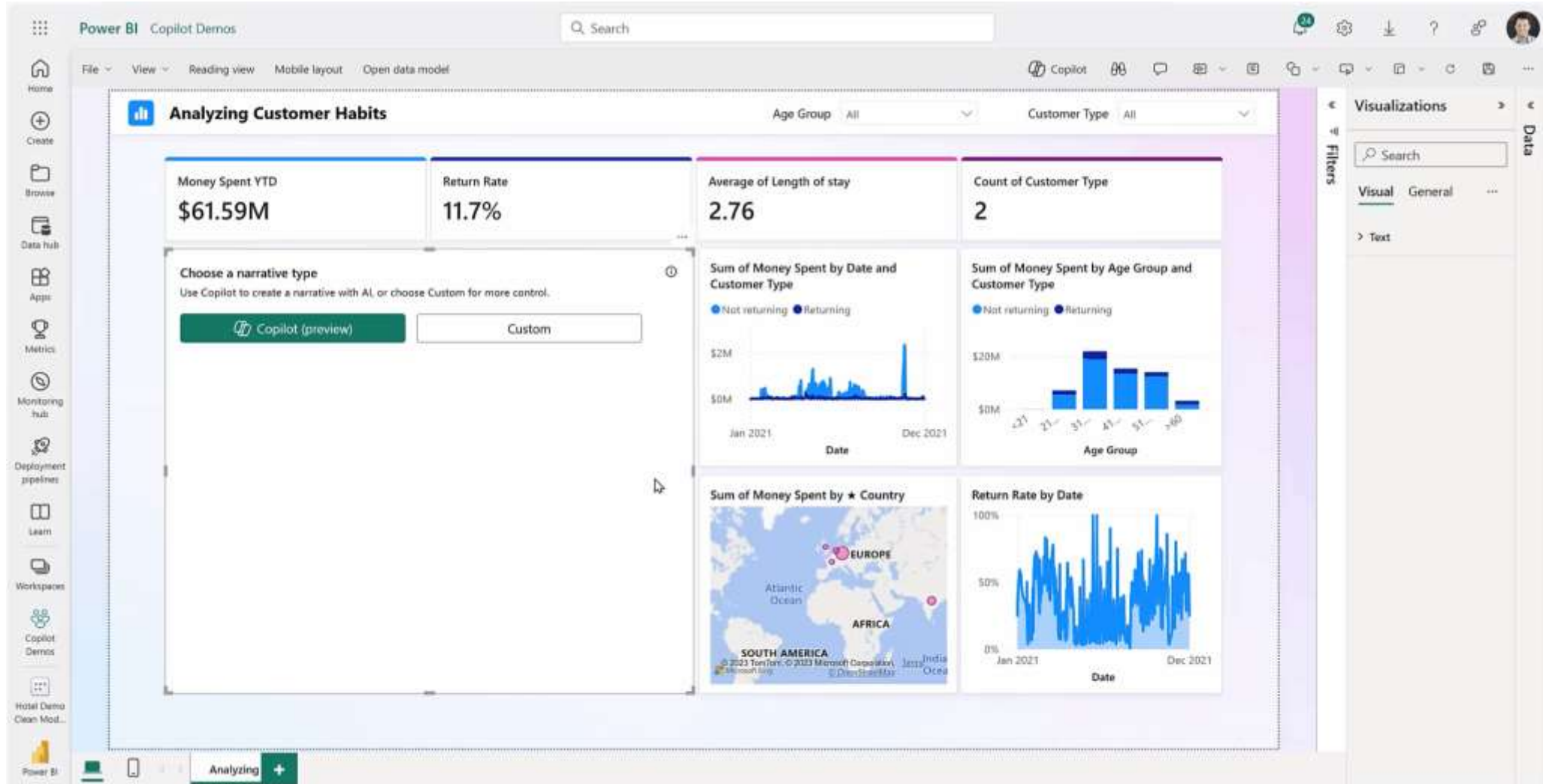
Copilot for...

A new way to transform and analyze data, generate insights, and create visualizations and reports



Copilot for...

A new way to transform and analyze data, generate insights, and create visualizations and reports



Narrative visual with Copilot

Create a narrative with Copilot

Describe the summary you want and the visuals it should reference. AI-generated content can contain mistakes, so review your summary carefully. [Read terms](#)

Give an executive summary

Answer likely questions from leadership

Create a bulleted list of insights

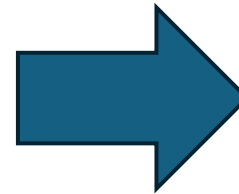
Tell me what's happening with bikes in this [report](#)

50/300

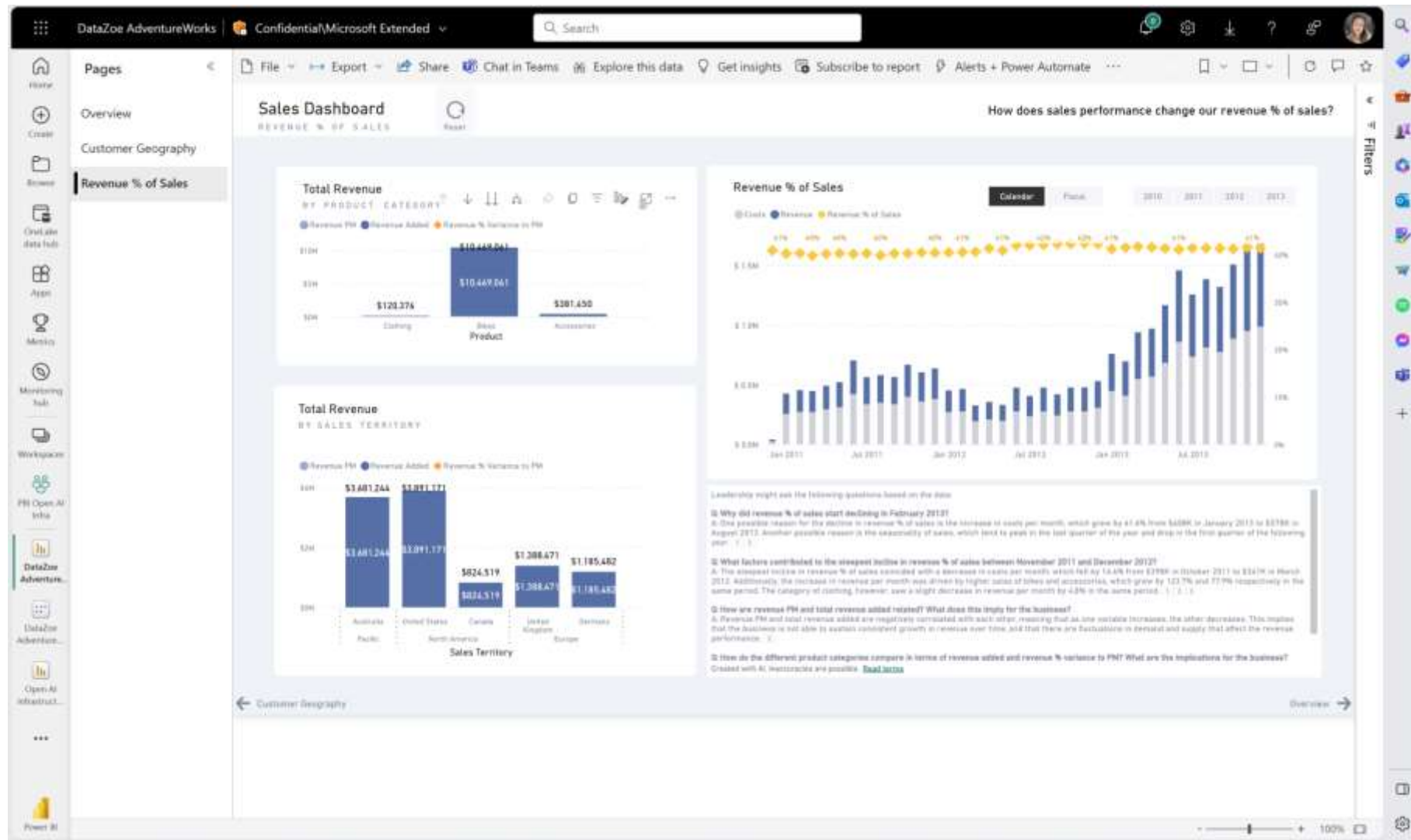
Reference visuals

19 visuals

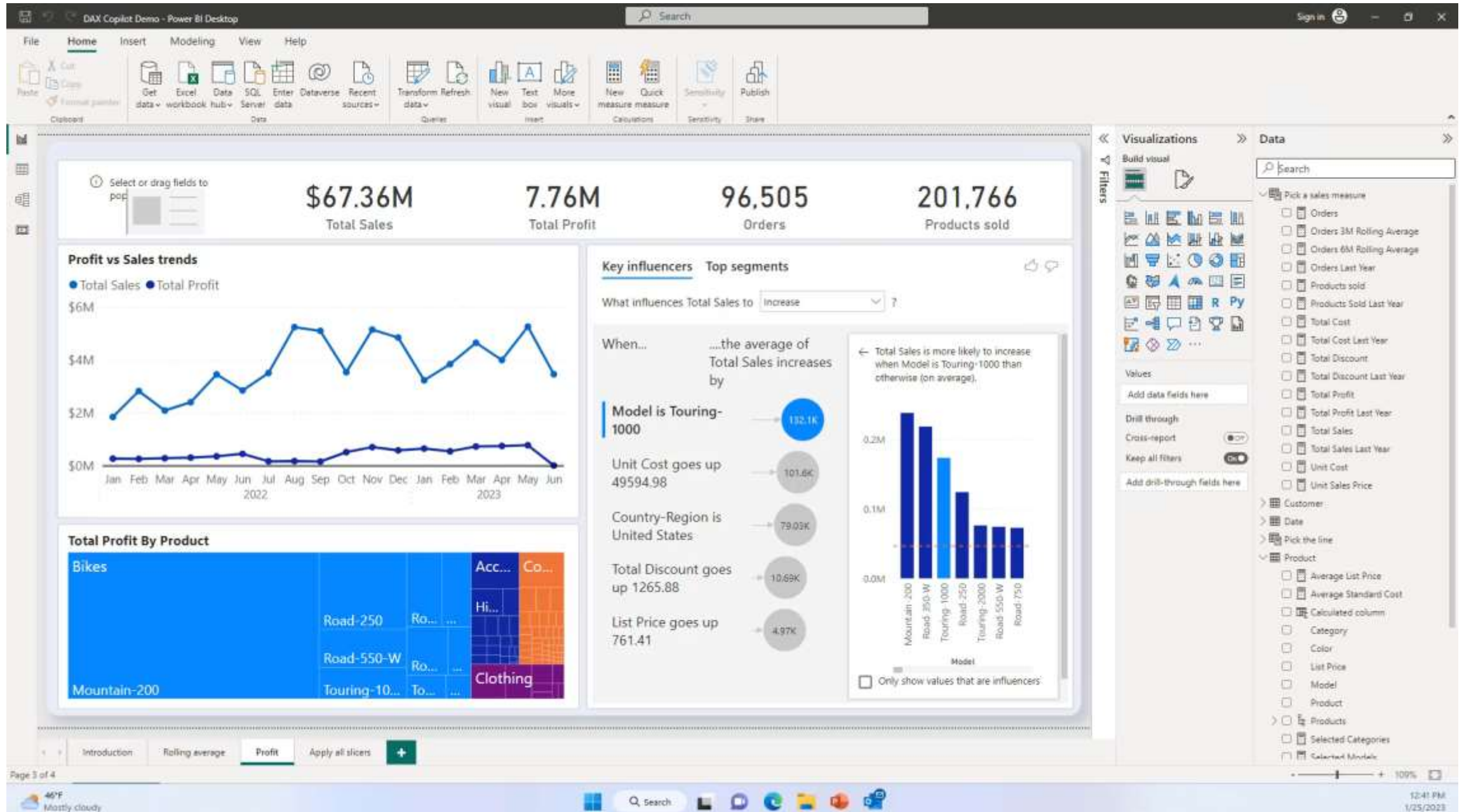
Create

[illegible]

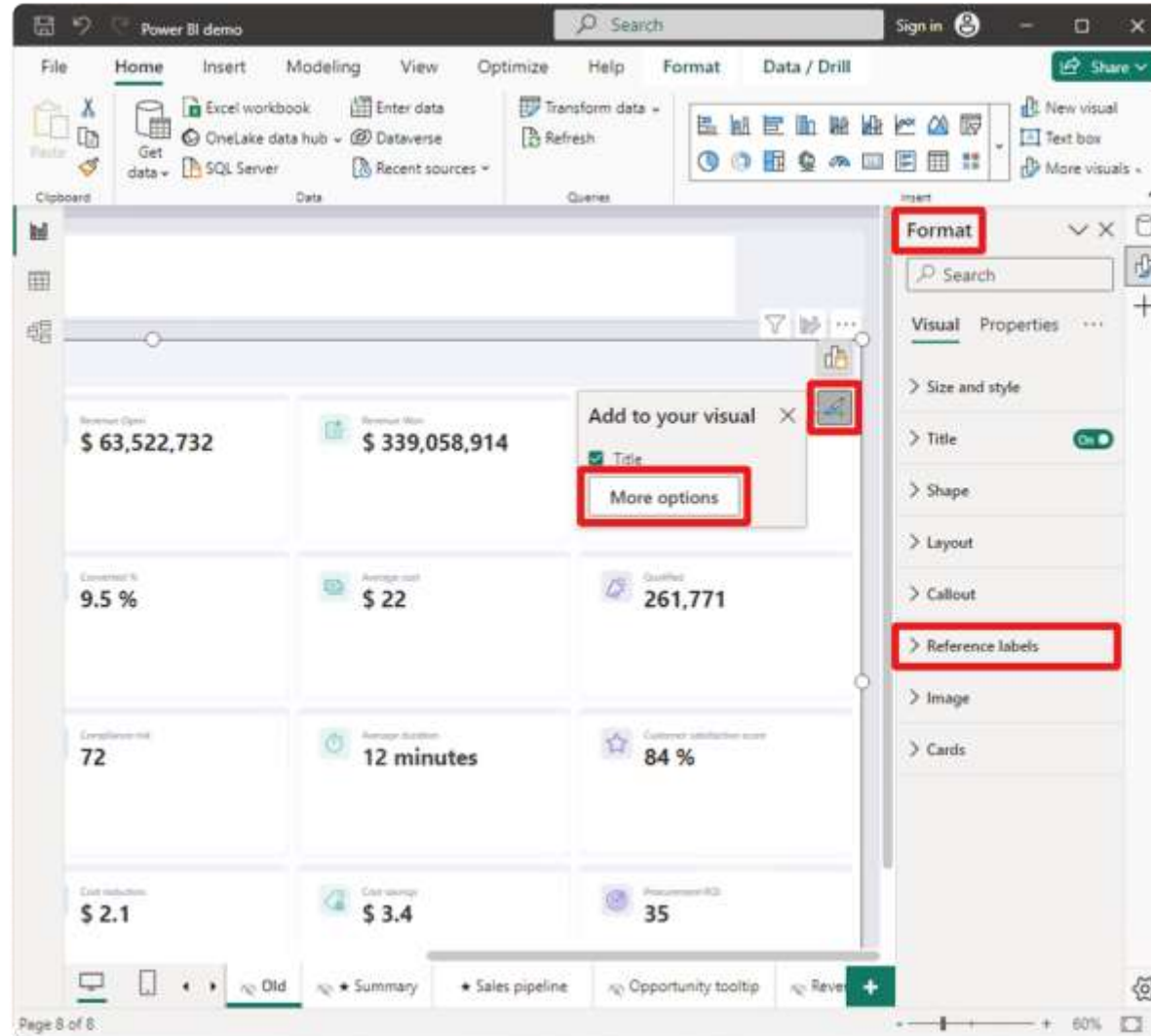
Narrative visual with Copilot



Power BI + Azure Open AI



New card's reference labels



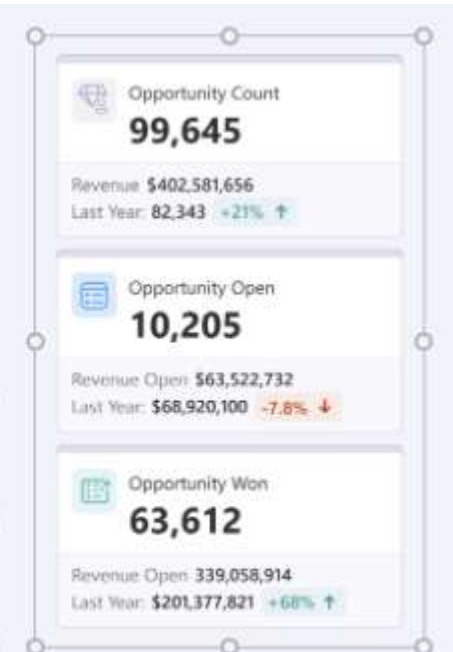
New card's reference labels



NEW CARD VISUAL REFERENCE LABELS

\$402,581,646	99,645	82,345	+21% ↑
Revenue	Opportunity Count	Last year	Y/Y
\$63,522,732	10,205	\$68,920,100	-7.8% ↓
Revenue Open	Opportunities Open	Last year	Y/Y
339,058,914	63,612	\$201,377,821	+68% ↑
Revenue Won	Opportunities Won	Last year	Y/Y

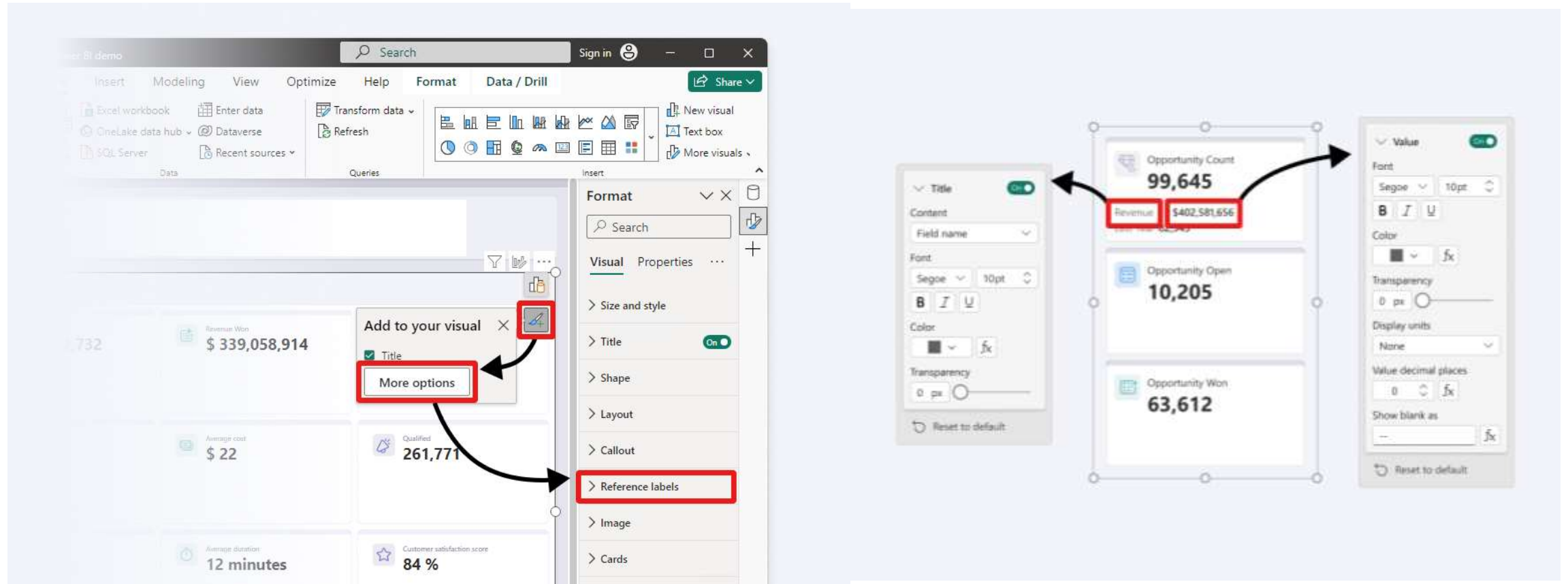
Multi-row card



New card visual
with reference labels

New

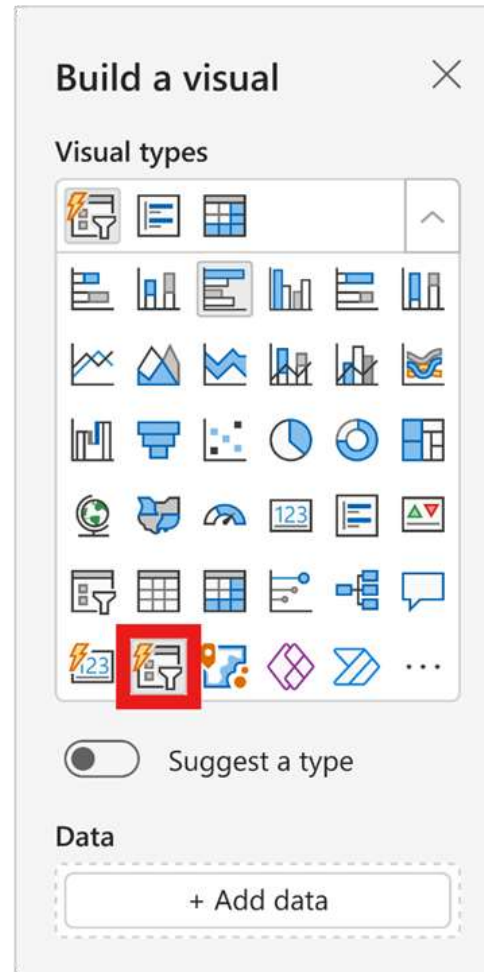
New card's reference labels



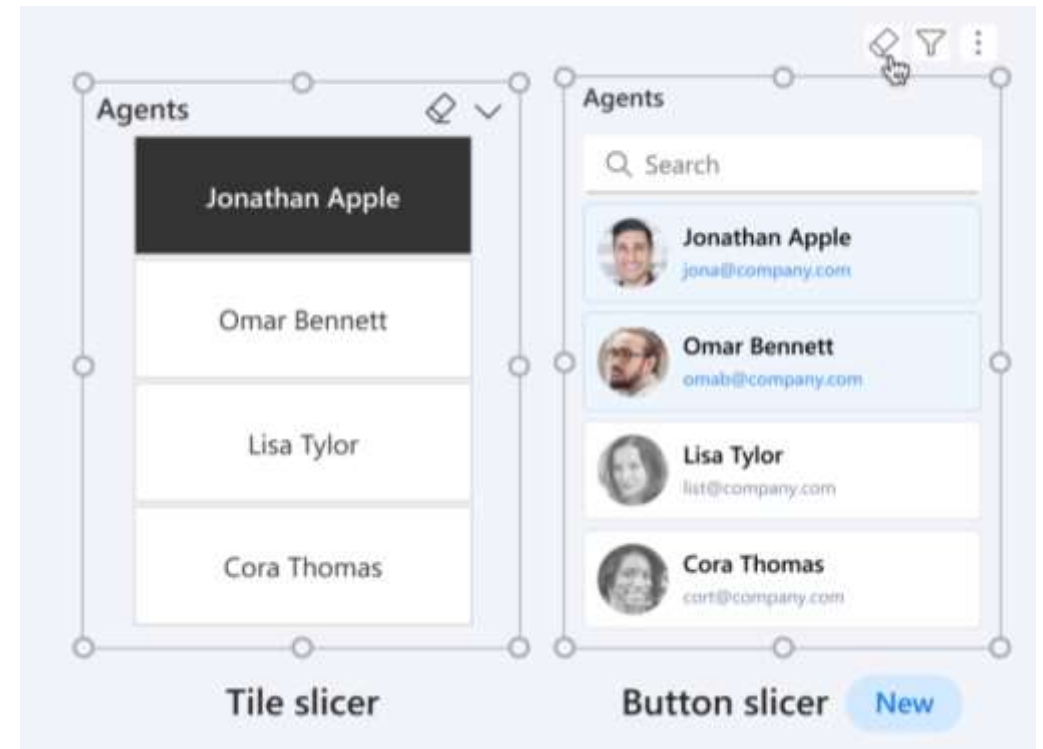
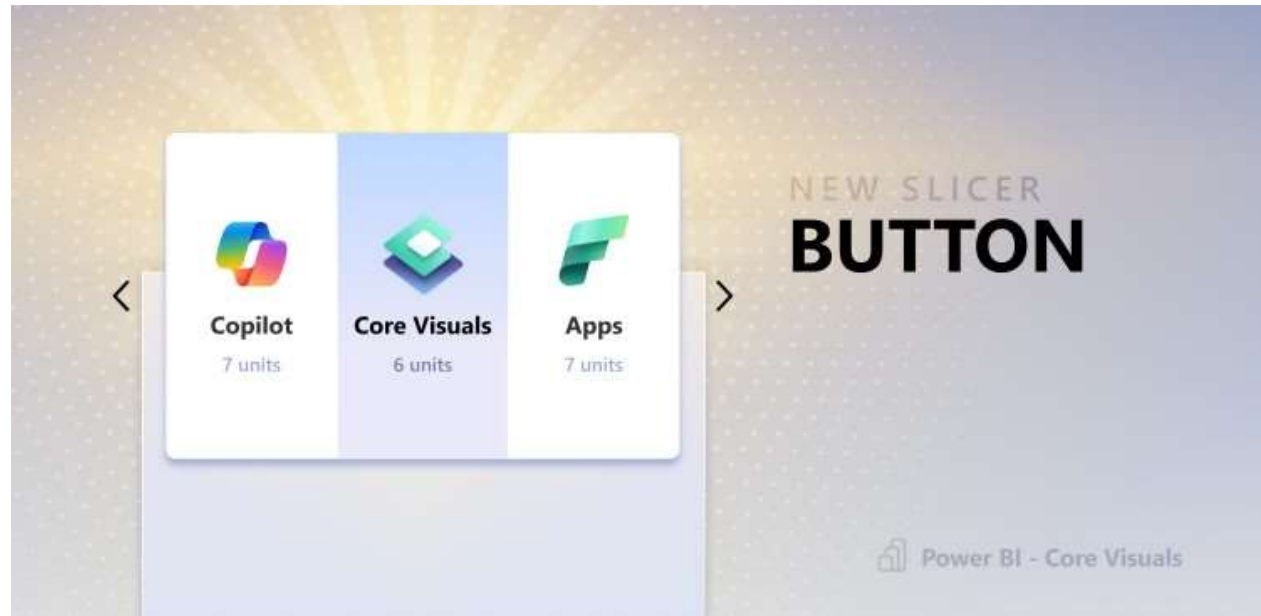
New button slicer



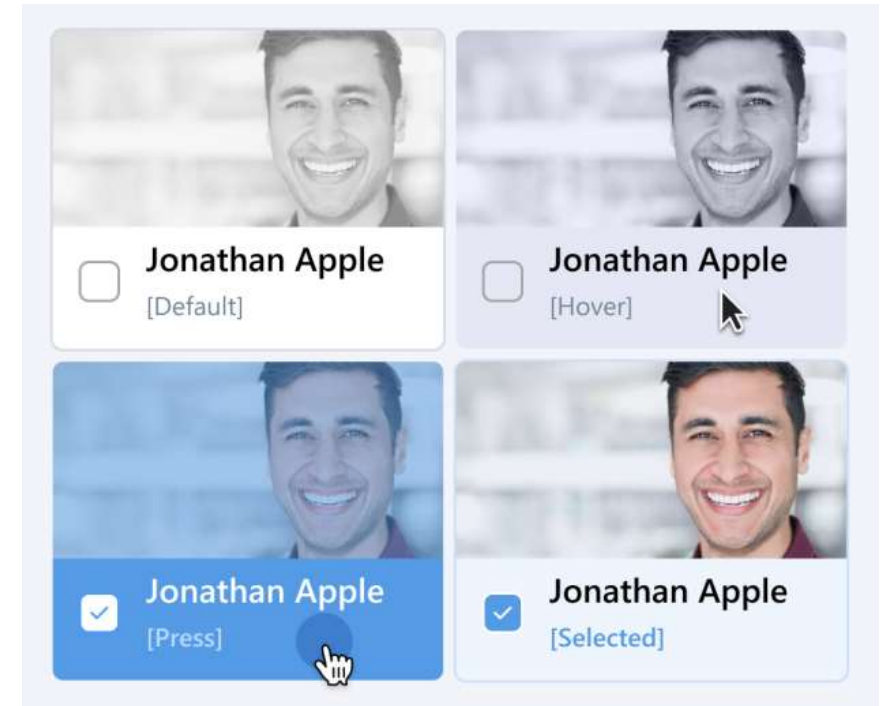
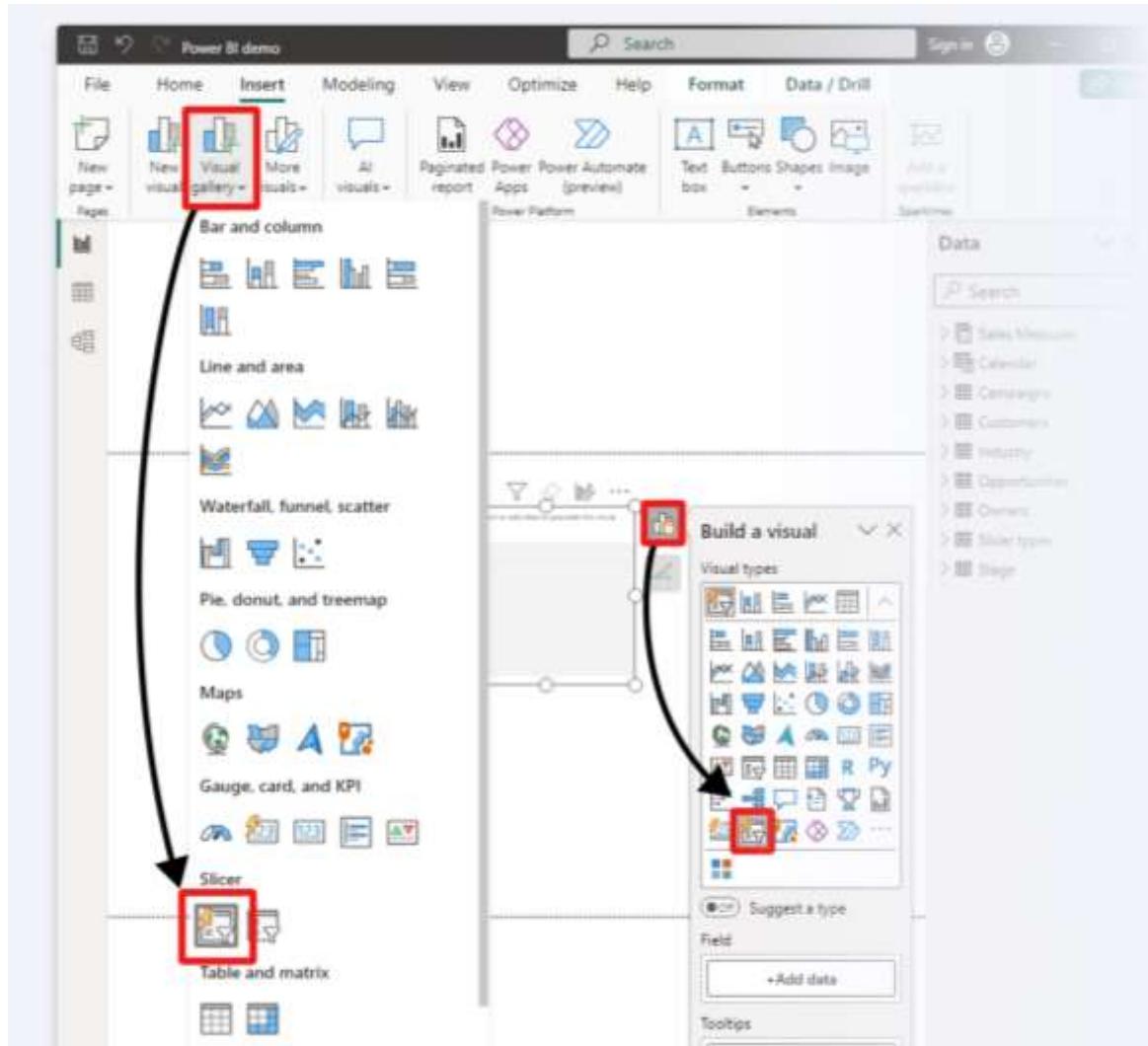
New slicer icon



New button slicer



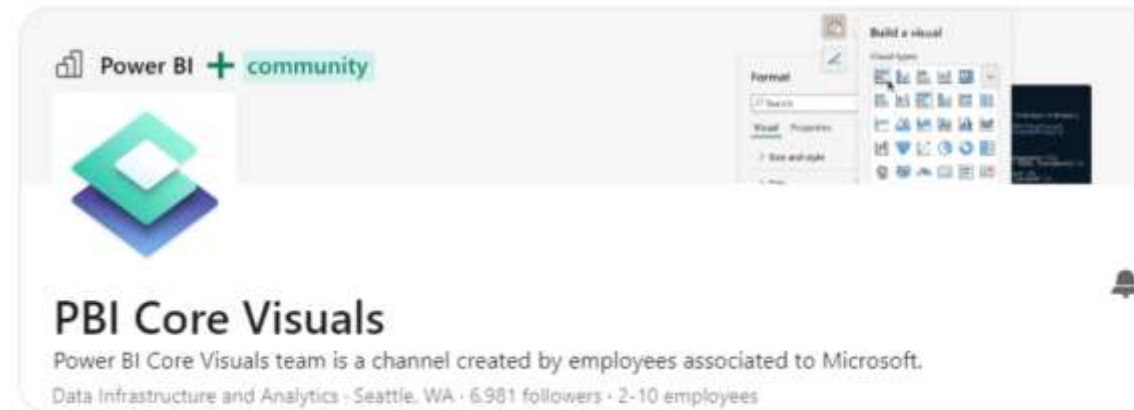
New button slicer





If you are on @LinkedIn and assuming most people are and are using #PowerBI then make sure you follow #PBICoreVisuals because Miguel and team have some great content there you don't want to miss;) [linkedin.com/company/pbicor...](https://www.linkedin.com/company/pbicorevisuals/) #MicrosoftFabric

[Traduci post](#)



<https://www.linkedin.com/company/pbicorevisuals/>

Grazie!

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