EXTENDING POWER BI GOVERNANCE WITH MICROSOFT PURVIEW

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Microsoft Power Platform

FASTTRACK RECOGNIZED SOLUTION ARCHITECT

2022

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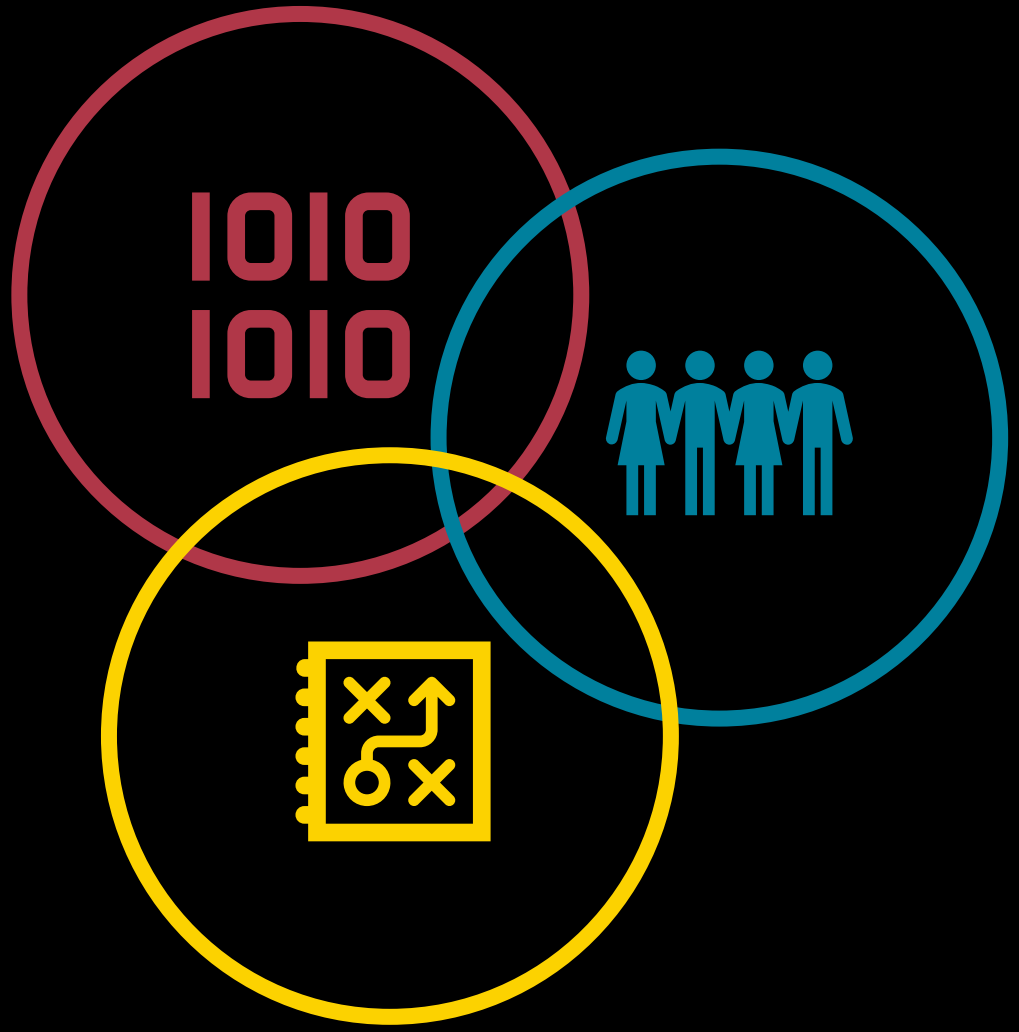
Objectives of today

- What do we understand as Governance
- Governance in Power BI
  - Data classification
  - Sensitivity labels
  - Endorsement
- What is Microsoft Purview
- Magic uncovered
- Strategy
- Findings & experiences

Combination of three components

- Data
- Analytics
- People



[data + analytics + people]

[data + analytics + people]

- Cloud
- On-prem
- Hybrid

[data + analytics + people]

Discover

Search for data and combine different sources to one model

Share

Share insights and analytics across the organization

Analyze

Analyze tons of data in a few clicks and let it add value

Find & Explore

Find answers and explore data in visuals + Q&A capabilities

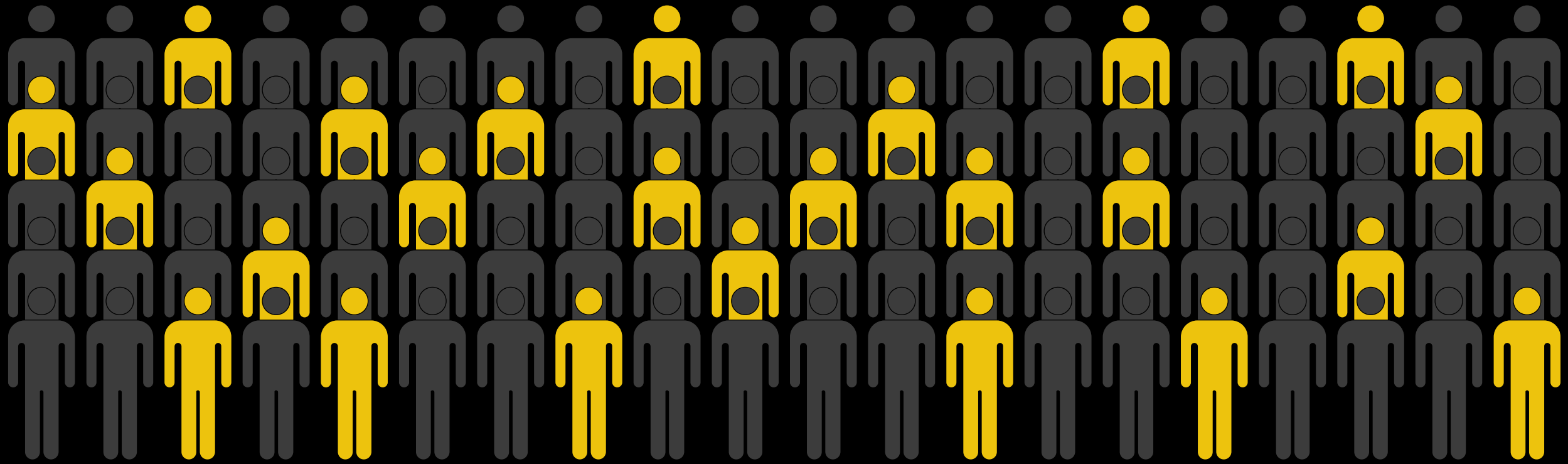
Visualize

Transform millions of rows of data in stunning visuals

Anywhere

Your data on your fingertips on any device wherever you are.

[data + analytics + people]

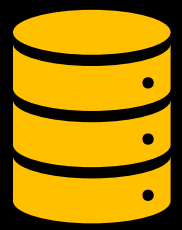


[data + analytics + people]

= competitive advantage

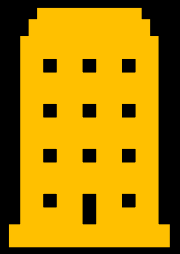
Data driven ambition

Open ends



Where does the data come from?

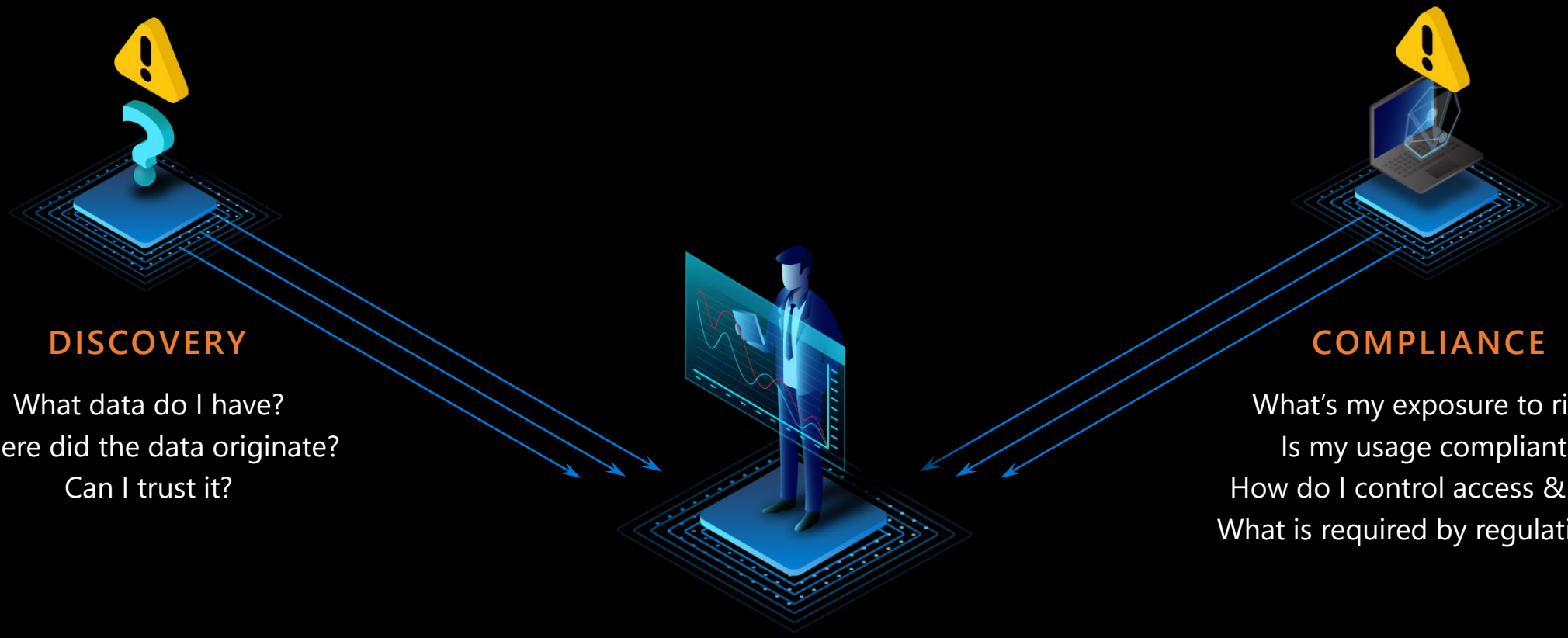
How reliable is the data?



What do I already have available?

Understanding of governance

Data governance
is becoming increasingly interdisciplinary



DISCOVERY

What data do I have?
Where did the data originate?
Can I trust it?

COMPLIANCE

What's my exposure to risk?
Is my usage compliant?
How do I control access & use?
What is required by regulation X?

Chief Data Officer

Challenges for Data Consumers

- There’s no central location to register data sources
- Data-consumption experiences require users to know the connection string or path.
- Data sources and documentation might live in several places
- There's no explicit connection between the data and the experts that understand the data's context.

Challenges for Data Producers

- Annotating data sources with descriptive metadata is often a lost effort. Client applications typically ignore descriptions that are stored in the data source.
- Creating documentation for data sources can be difficult and it's an ongoing responsibility to keep documentation in sync with data sources. Users might not trust documentation that's perceived as being out of date.
- Creating and maintaining documentation for data sources is complex and time-consuming.
- Restricting access to data sources and ensuring that data consumers know how to request access is an ongoing challenge.

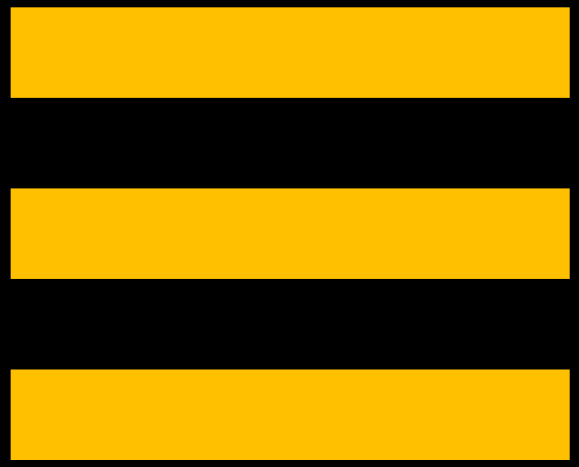
Challenges for security administrators

- Everything just mentioned and:
- An organization's data is constantly growing and being stored and shared in new directions. The task of discovering, protecting, and governing sensitive data is one that never ends.
- How to ensure that the organization's content is being shared with the correct people, applications, and with the correct permissions.
- Understanding the risk levels in an organization's data requires diving deep into the content, looking for keywords, RegEx patterns, and sensitive data types.
- Constantly monitor all data sources for sensitive content, as even the smallest amount of data loss can be critical to your organization.
- Ensuring that an organization continues to comply with corporate security policies is a challenging task as the content grows and changes.

Governance in Power BI

Our scope for Power BI governance today

- Cataloguing of Power BI artifacts
- Ownership / contact information
- Data classification
- Content endorsement



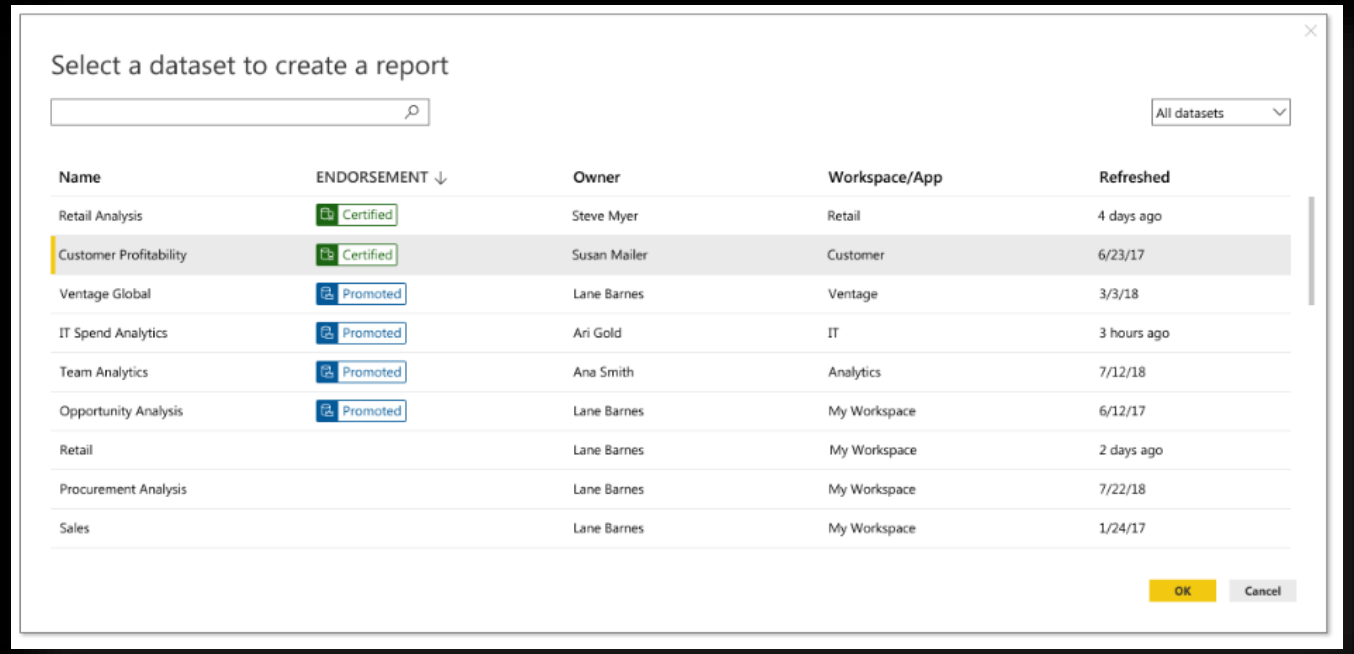
Endorsement

Helps with:

- Reuse of content
  - Certified datasets
  - Promoted datasets
- Indicates a certain quality of the solution
- Works for dataflows, datasets, reports, dashboard and apps
- Makes datasets discoverable

Requires:

- Mail enabled security group, who can grant certified stamp
- Mail enabled security group, who can make datasets discoverable
- Process around certification



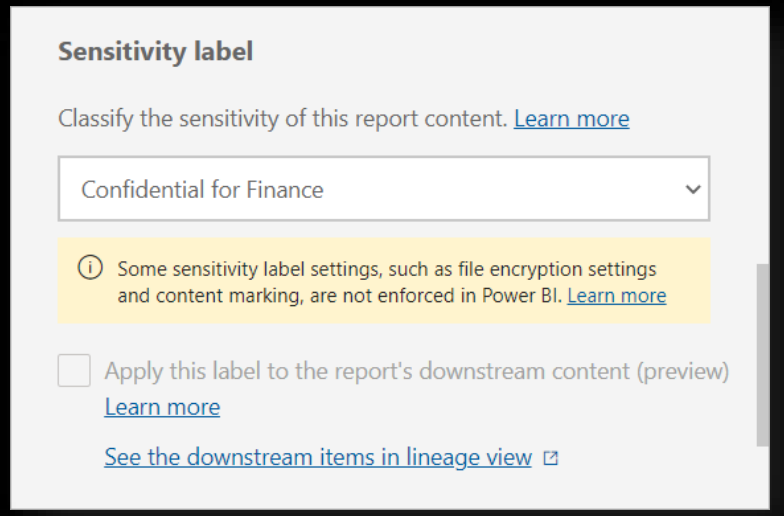
Sensitivity labeling in Power BI

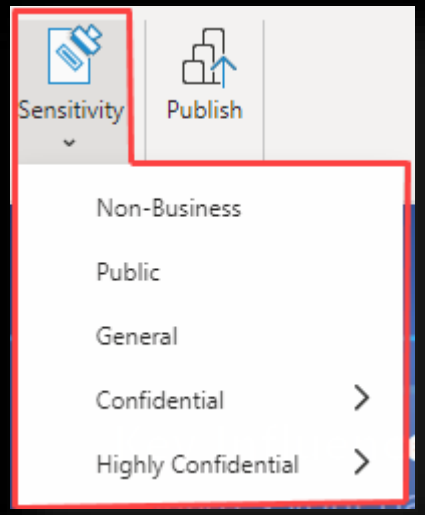
Helps with:

- Data classification on type of data (like compliance of data etcetera)
- Have an idea of the sensitivity of the data (e.g., GDPR compliancy)
- Give an impression on where the data can be used / shared according to assigned policies and labels.
- Has policies assigned to which extend the content can be used.

Requires:

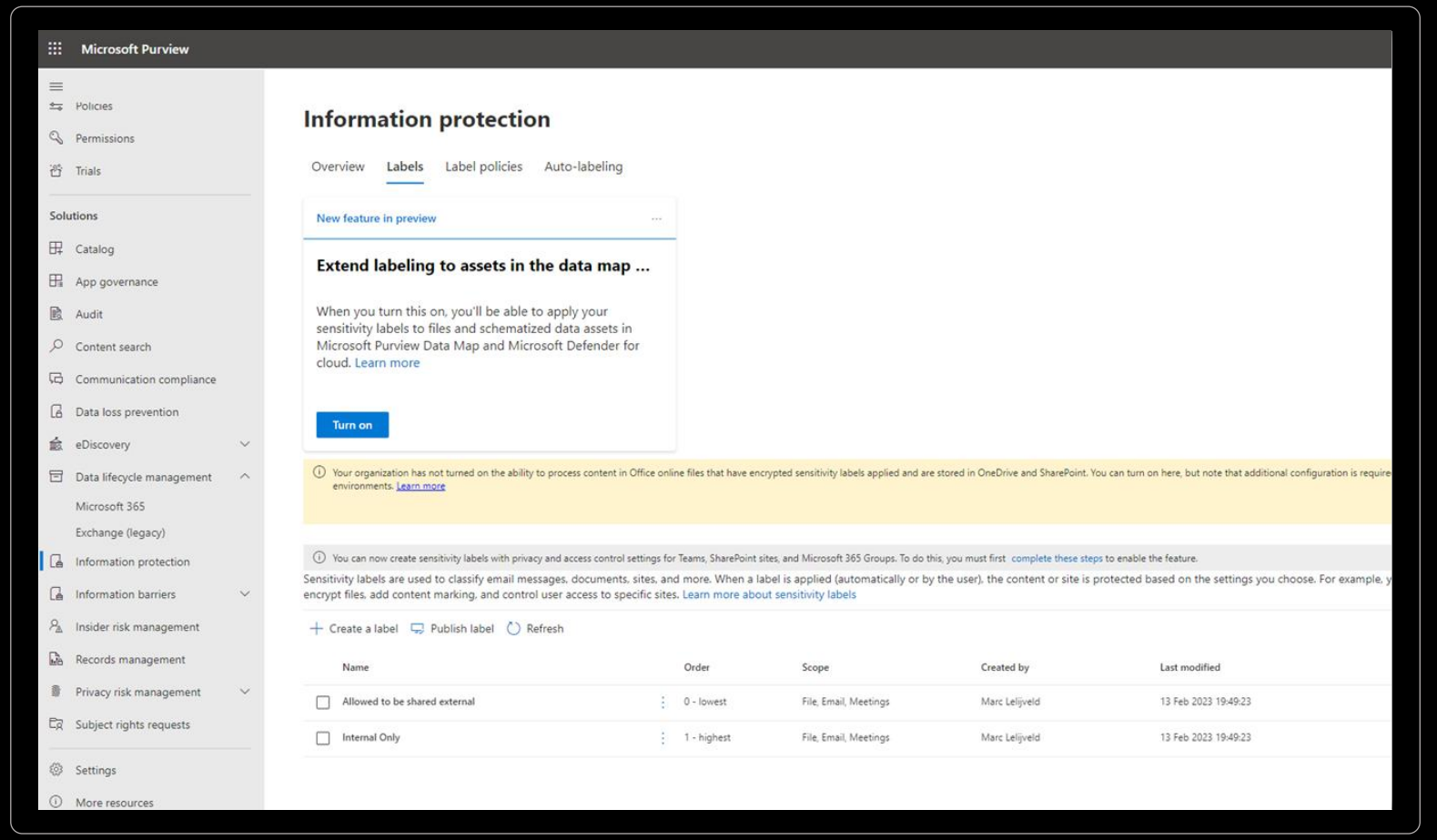
- Right licensing (security and compliance as part of E5)
- Policies to be setup
- (Potentially) force labeling of all content through tenant configuration





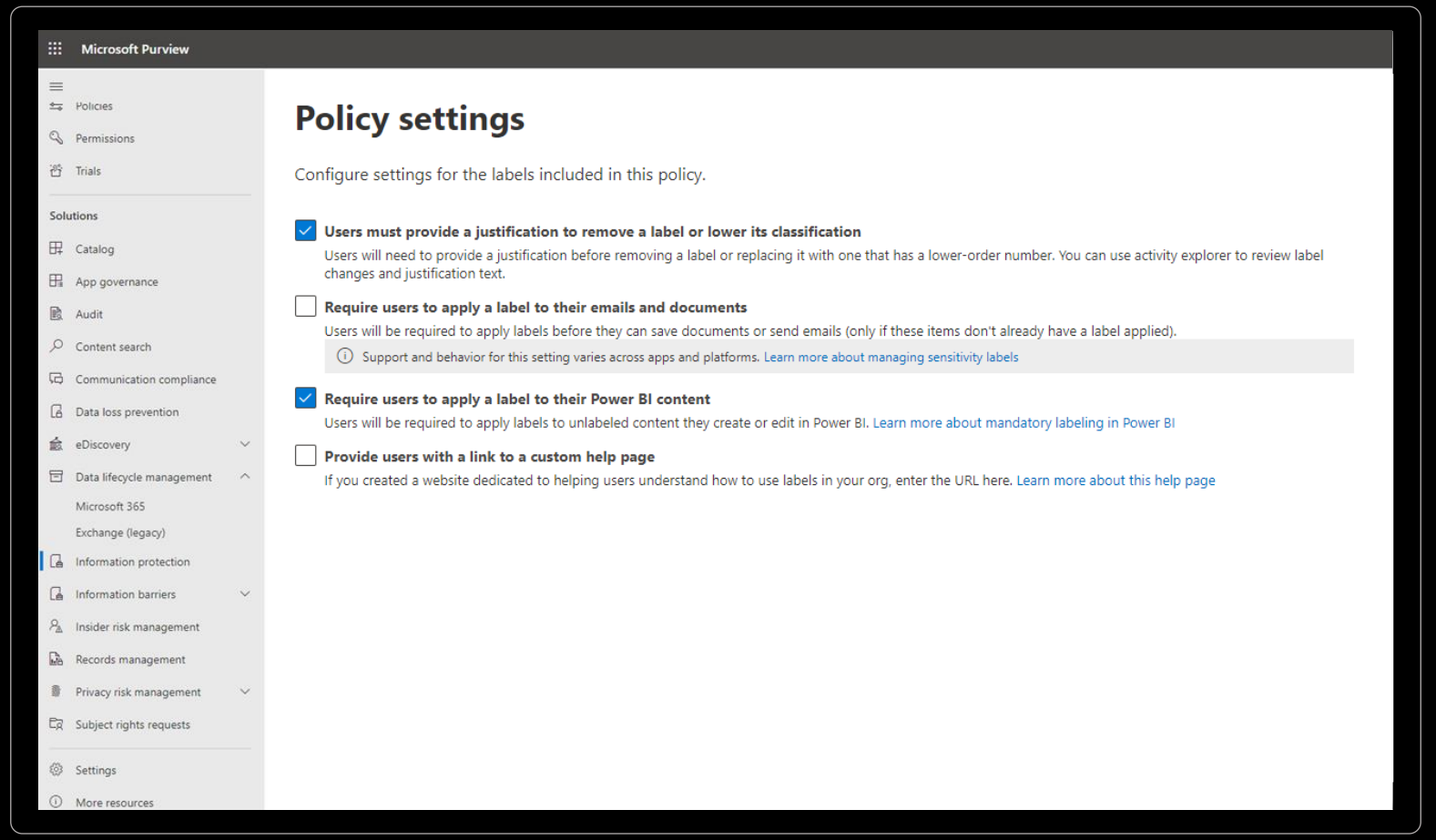
Setting up sensitivity labels

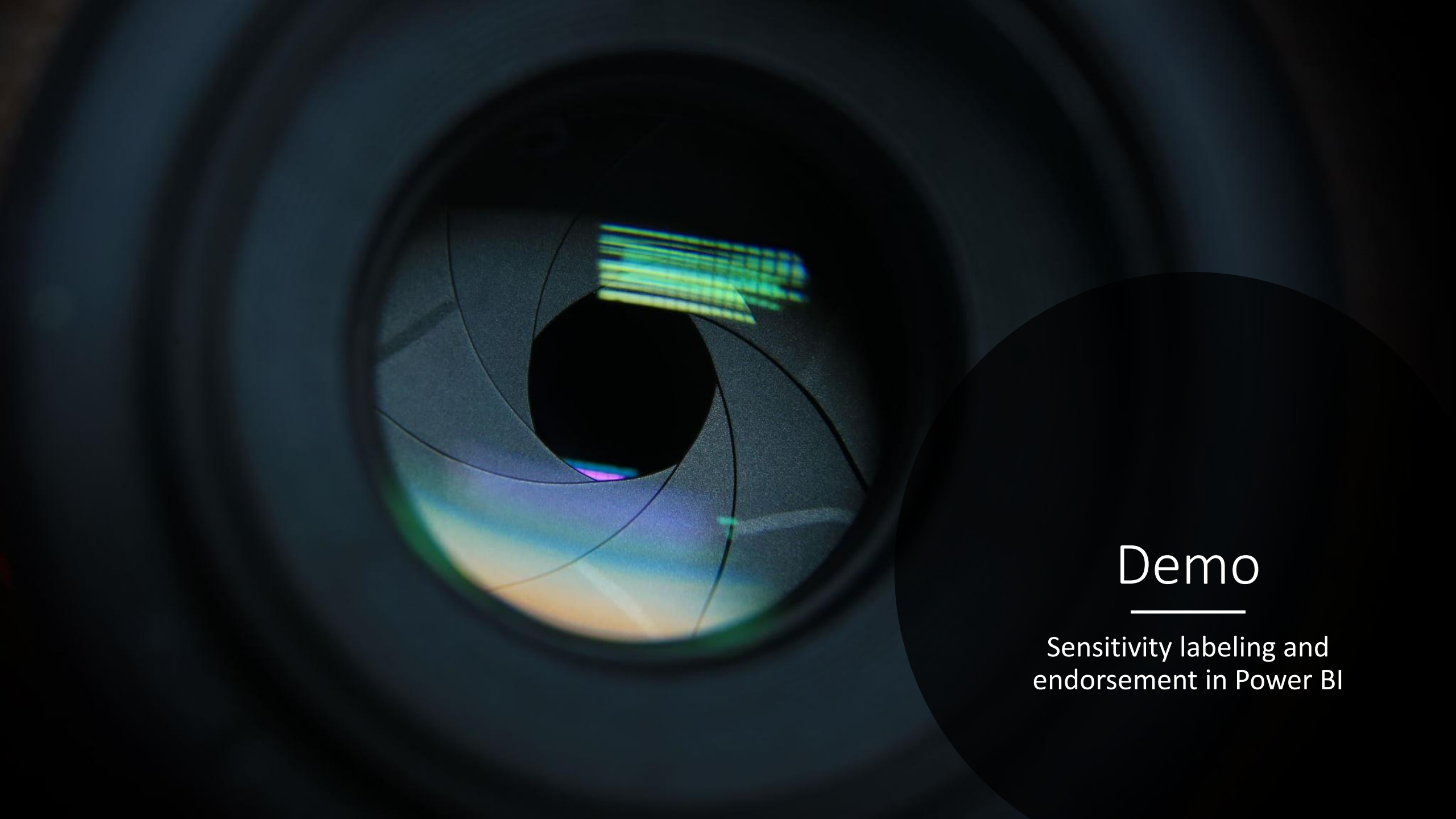
- Navigate to the compliance & security center, recently rebranded to Microsoft Purview.
- This center is only accessible for compliance admins. Power BI Service admin permissions will not suffice.



Create policies

- After creating a label, you must set policies to labels.
- Labels can be setup for all Microsoft 365 content, as well as Power BI specific.
- Label enforcement can be configured for all Power BI content.





Demo

Sensitivity labeling and endorsement in Power BI

Overview of Purview

History

- Microsoft Purview april 2022

- Azure Purview sept 2021

- ADC Gen 2

- BlueTalon Acquisition june 2019

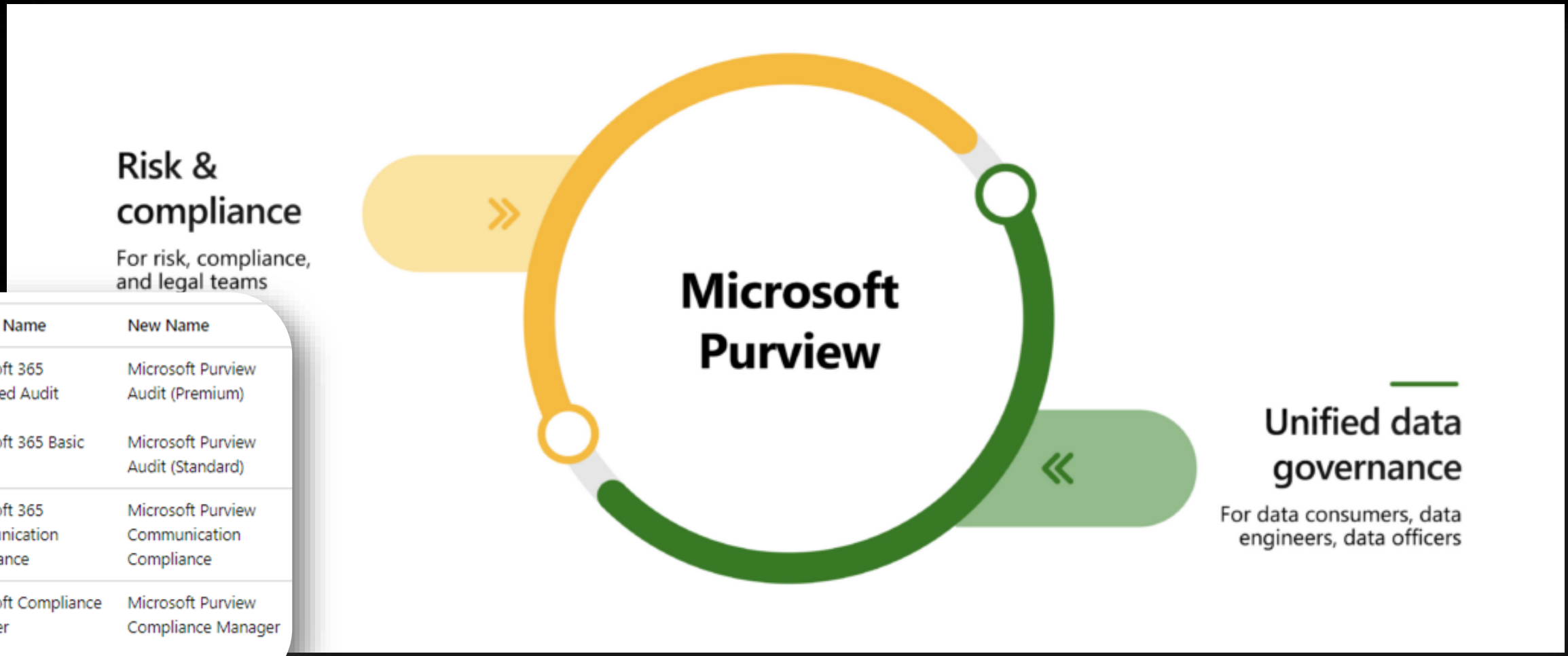
- ADC Gen 1

Azure Purview is now Microsoft Purview

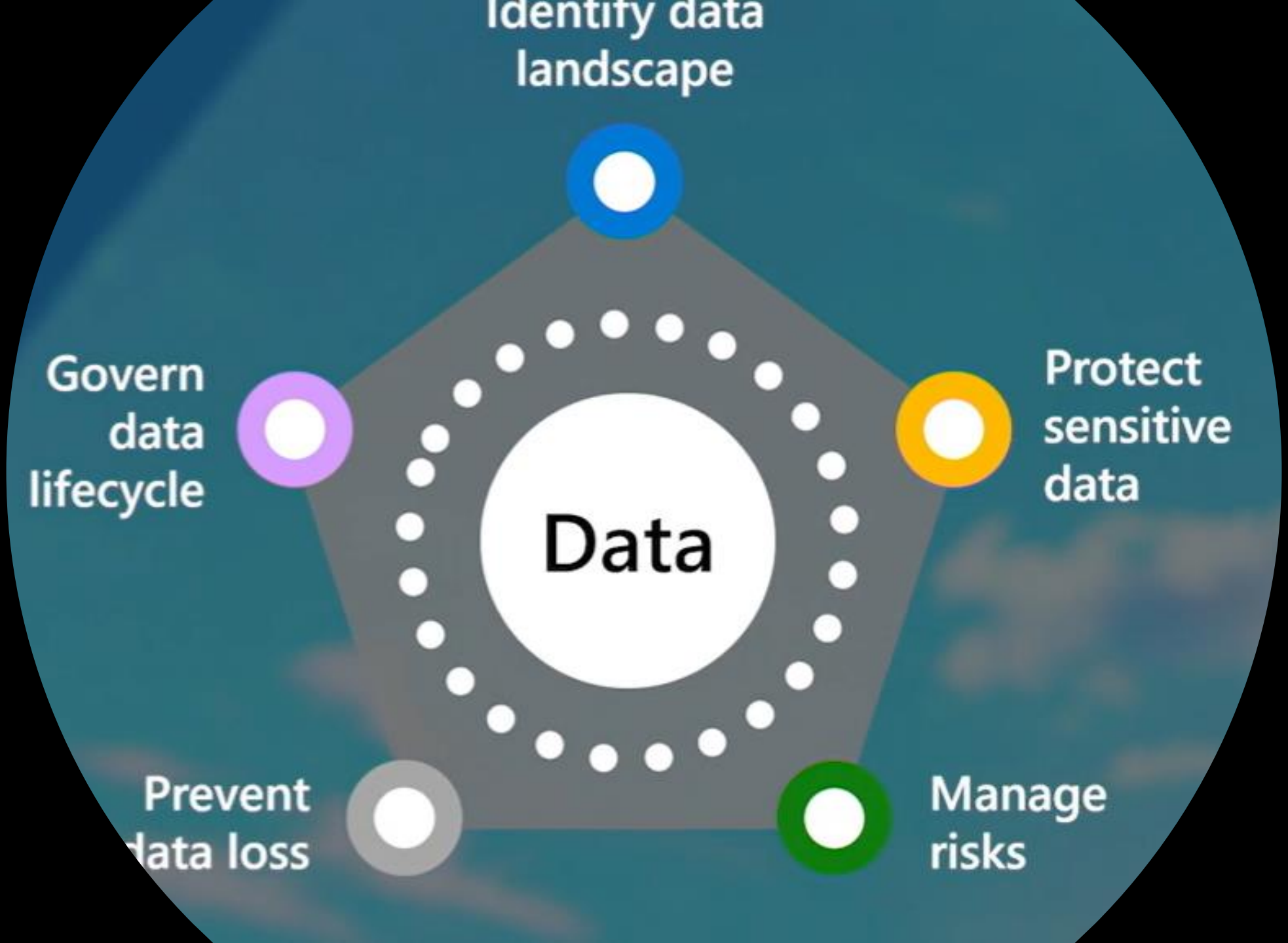
Microsoft Purview brings together trusted products for governance and compliance under one umbrella so it's easier to manage all of your data.

Microsoft Purview

The future of compliance and data governance



Former Name	New Name
Microsoft 365 Advanced Audit	Microsoft Purview Audit (Premium)
Microsoft 365 Basic Audit	Microsoft Purview Audit (Standard)
Microsoft 365 Communication Compliance	Microsoft Purview Communication Compliance
Microsoft Compliance Manager	Microsoft Purview Compliance Manager

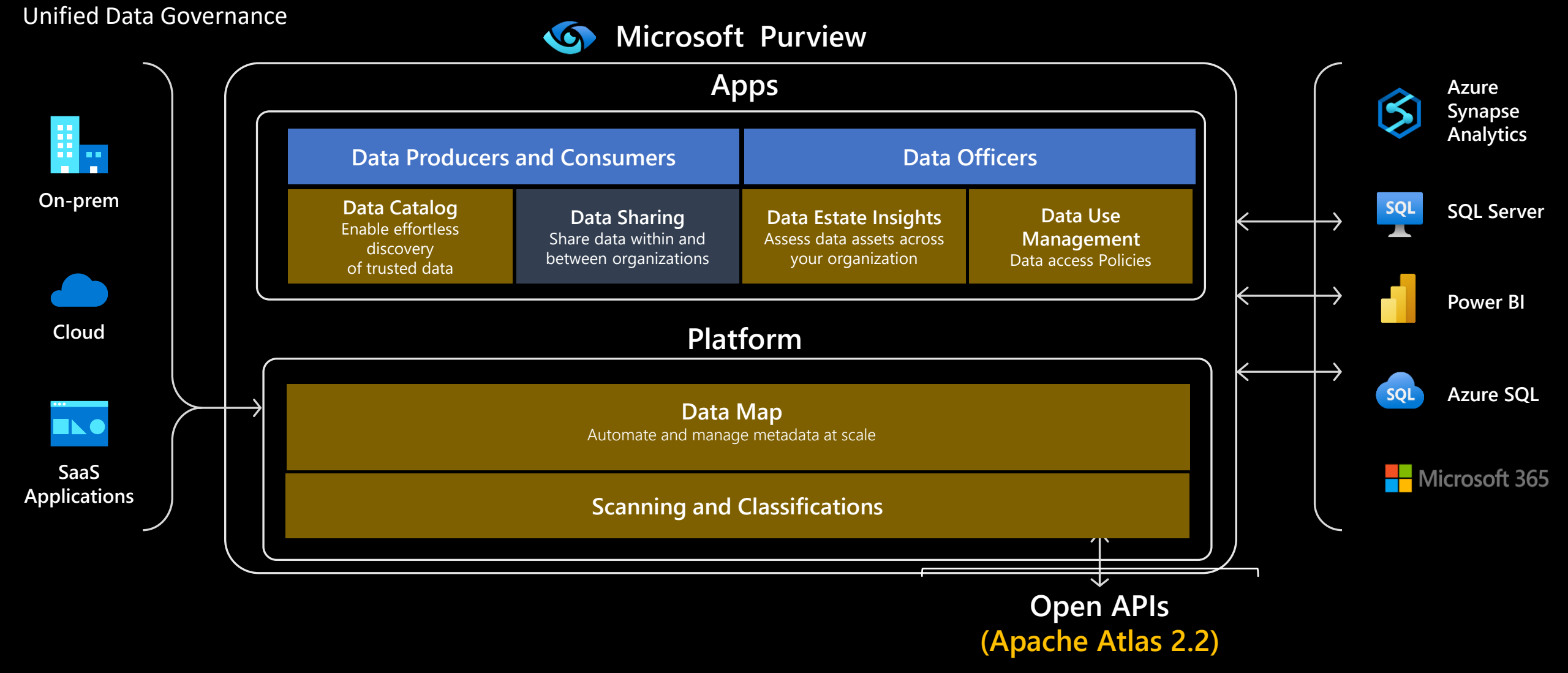

Identify data landscape
Protect sensitive data
Manage risks
Prevent data loss
Govern data lifecycle
Data

Microsoft Purview

Generally Available

Preview

Unified Data Governance



Microsoft Purview Overview

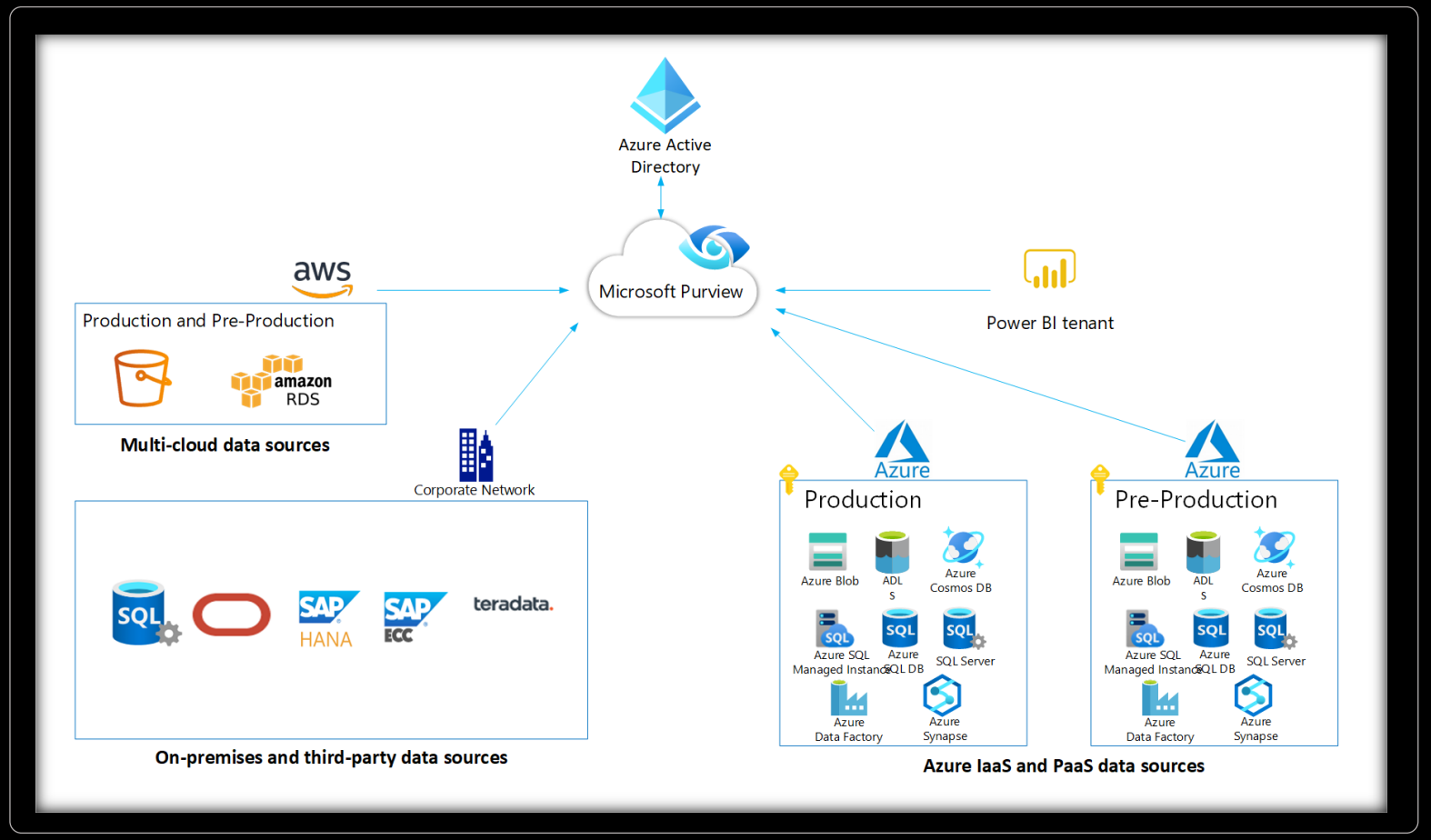
Power BI

Azure IaaS and PaaS Data sources

AWS

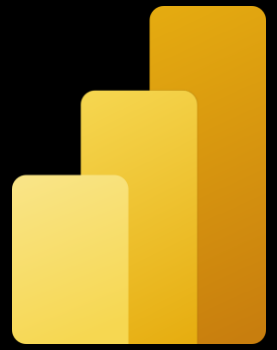
On-Premise data sources

Third-Party datasource



Connect Power BI To Microsoft Purview

Same Tenant

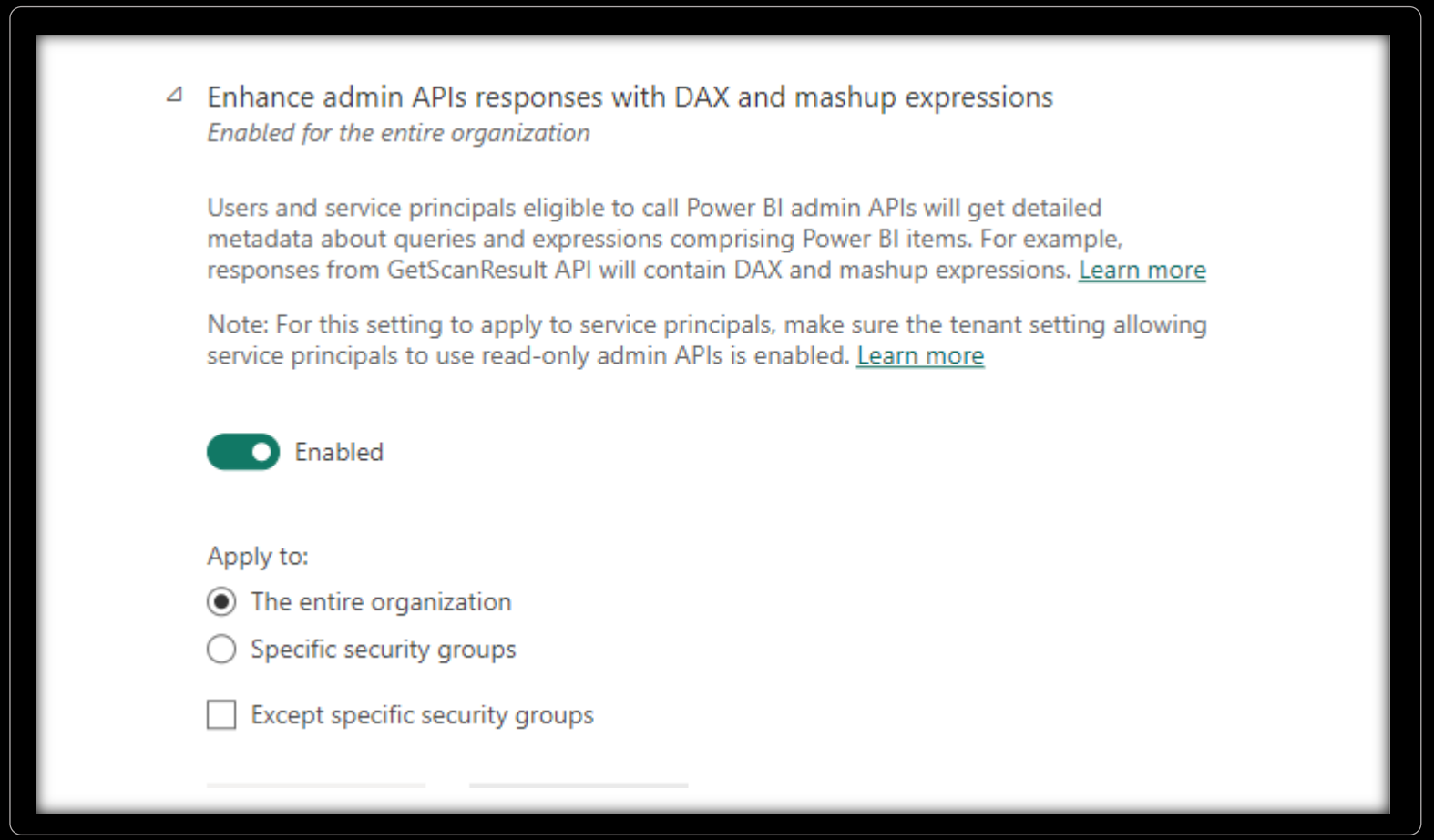


Cross Tenant

Scan Power BI

Admin Portal

- Allow Service Principal
- Detailed Metadata
- Dax and Mashup Expressions



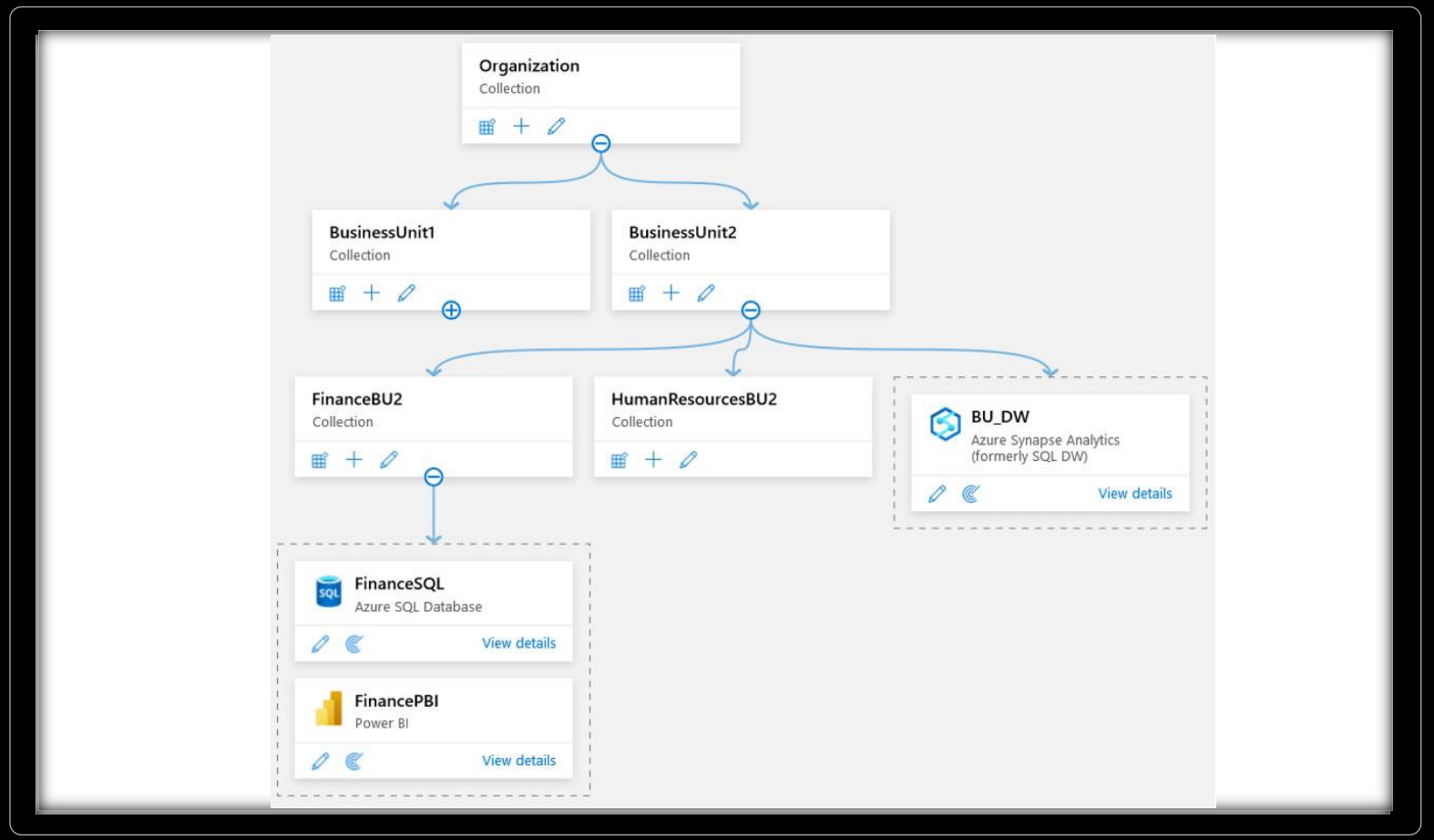
Scan Power BI

Admin Portal

- Allow Service Principal
- Detailed Metadata
- Dax and Mashup Expressions

Register Power BI as a Source

- Tenant ID
- Collections



Scan Power BI

Admin Portal

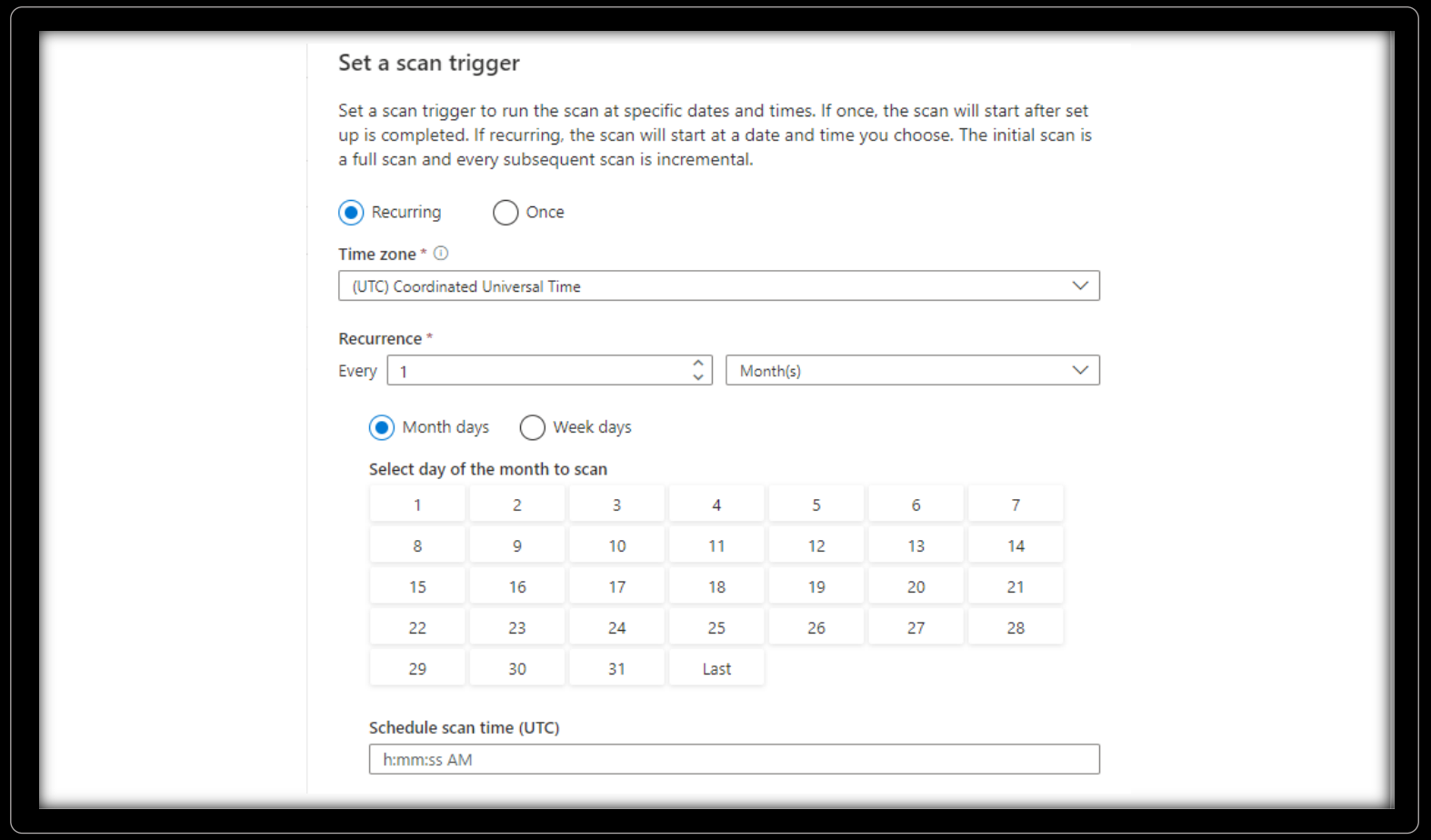
- Allow Service Principal
- Detailed Metadata
- Dax and Mashup Expressions

Register Power BI as a Source

- Tenant ID
- Collections

Setup Scan

- **Personal Workspace (in- / excluded)**



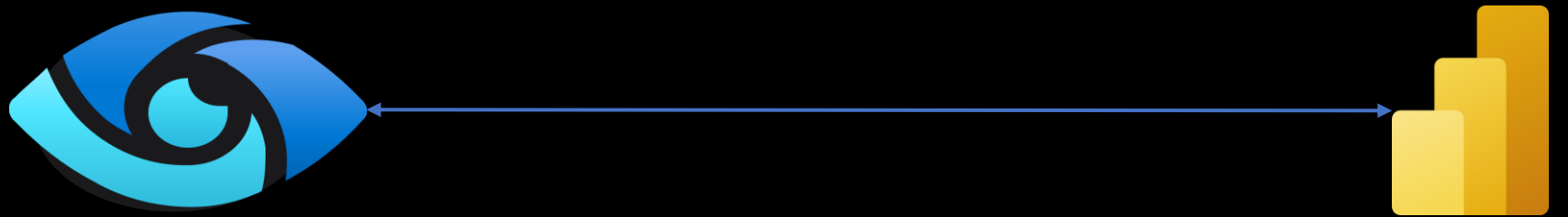
Supported capabilities

- ✓ Metadata Extraction
- ✓ Full Scan
- ✓ Incremental Scan
- ✓ Lineage
- ✗ Scoped Scan
- ✗ Classification
- ✗ Access Policy
- ✗ Data Sharing

→

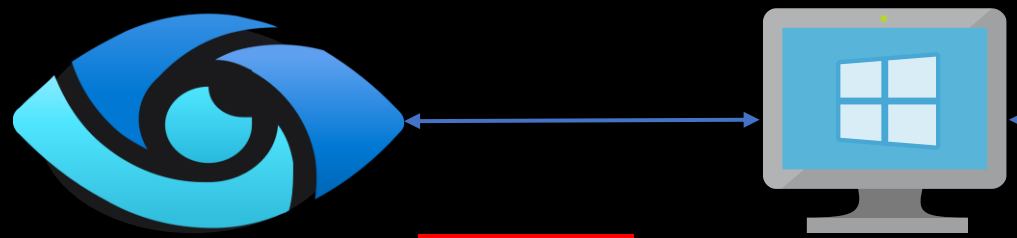
- Workspaces
- Dashboards
- Reports
- Datasets including tables and columns
- Dataflows
- Datamarts

Supported Scenarios (security wise)



public access allowed

public access allowed



public access allowed/Denied

public access allowed/Denied

Disabled from all networks
Public network access will be disabled for Purview account, portal, and ingestion.

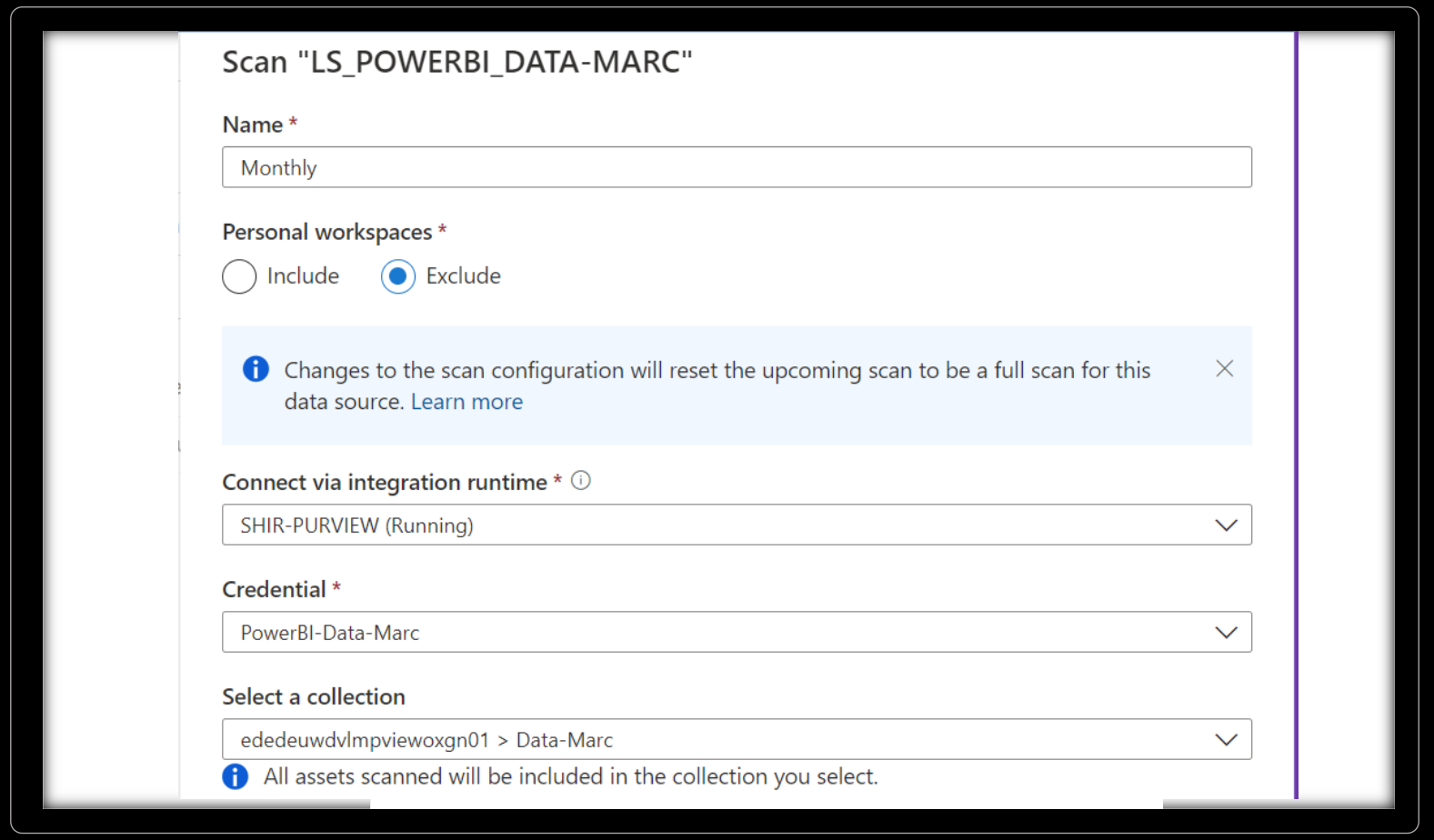
Azure Private Link
Enabled for the entire organization

Block Public Internet Access
Enabled for the entire organization

Scan Power BI Cross-Tenant

Setup Scan

- **Create Credential**
- **Connect via SHIR**
- **Add Credential**



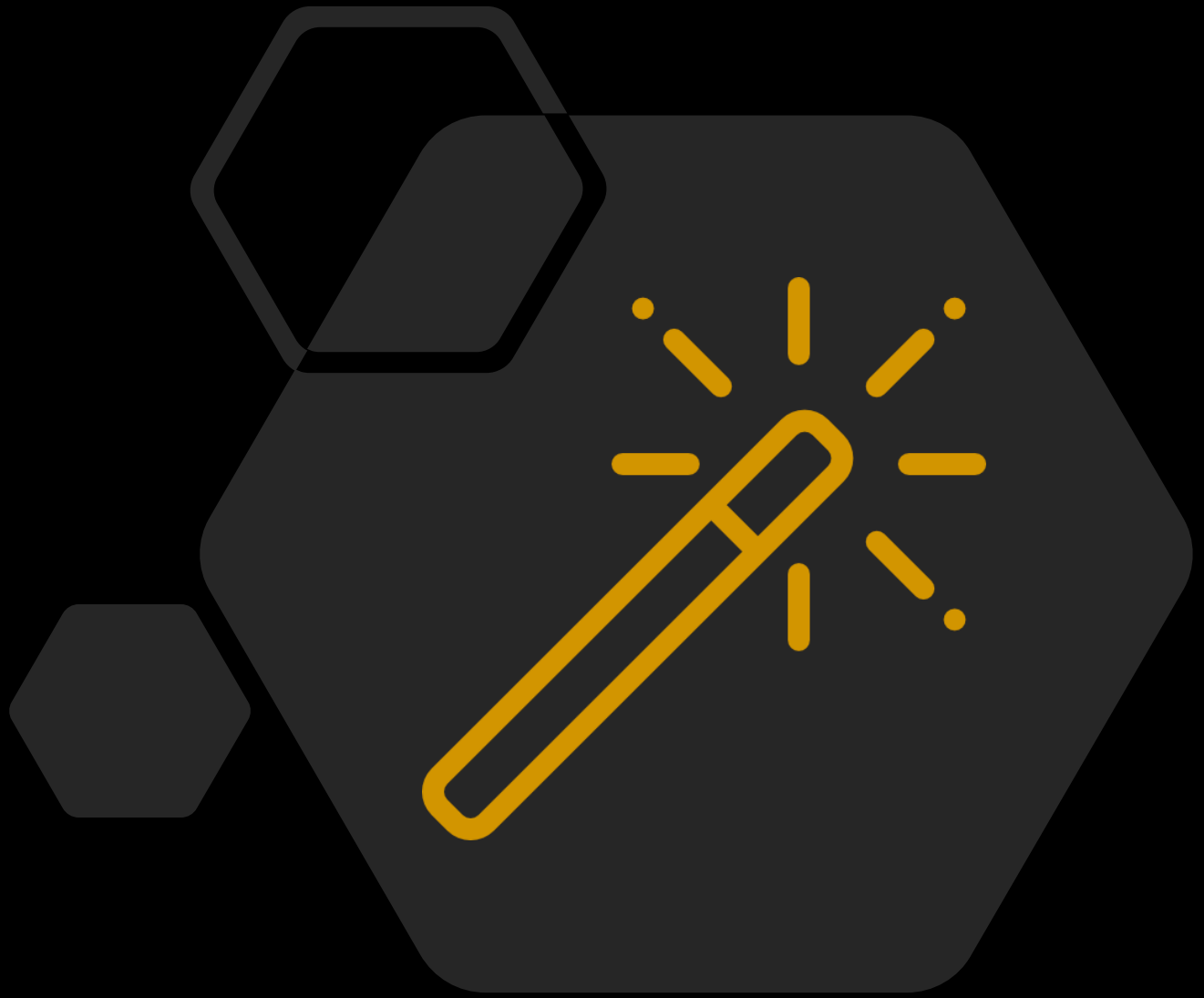
Observations

- When scanning **without** SHIR, user account with PBI Service Admin permissions + App Registration is required.

- Scanning **with** SHIR an App Registration will suffice.

- Demo Microsoft Purview

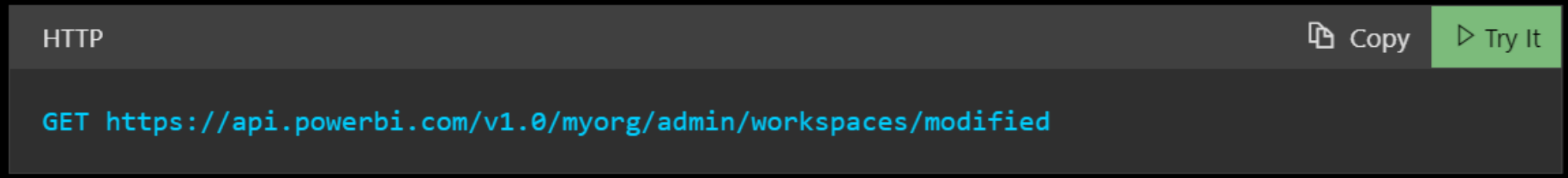
Magic uncovered?



Scanner API

Set of 4 APIs to get all Admin Insights

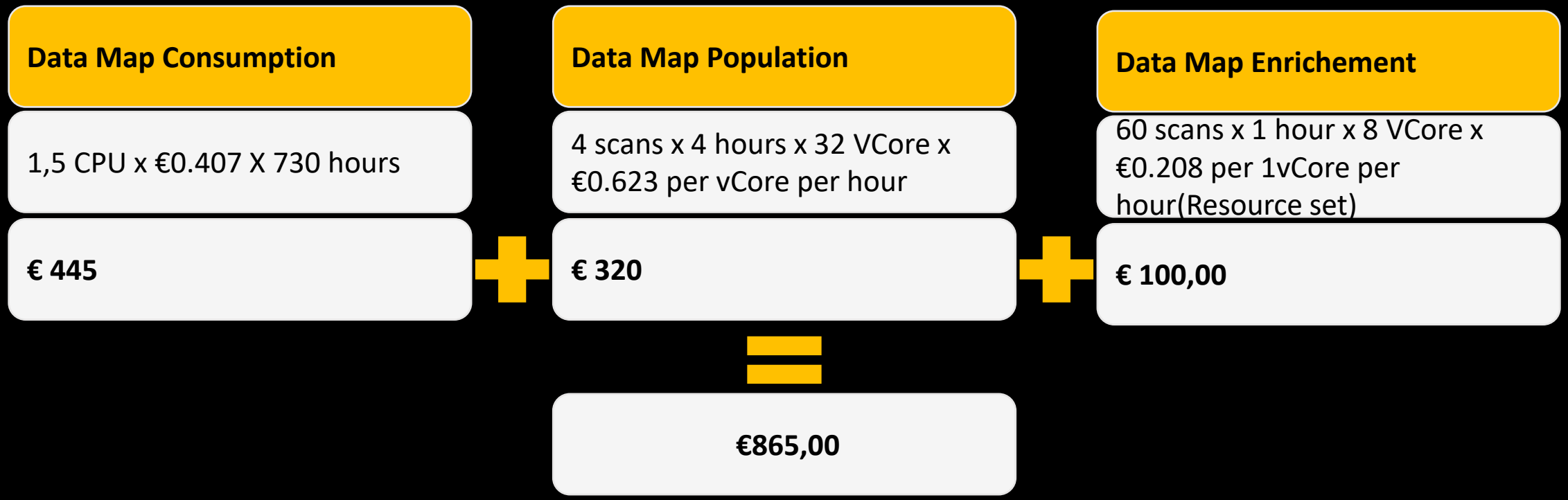
• GET Modified Workspaces	To list all workspaces with changes
• POST Workspace Info	To start a scan
• GET Scan Status	To start polling till scan is ready
• GET Scan Results	To get the results of the scan



Cost

- Purview cost
  - Incremental scans
  - Full scans
- Creating your own solution
  - Development effort

Pricing - Example



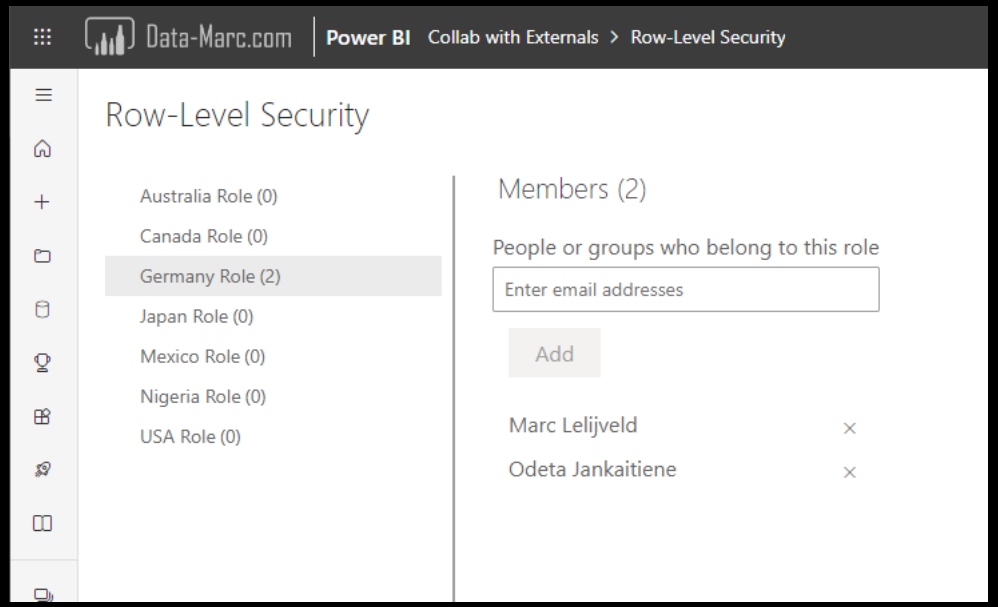
Findings and experiences

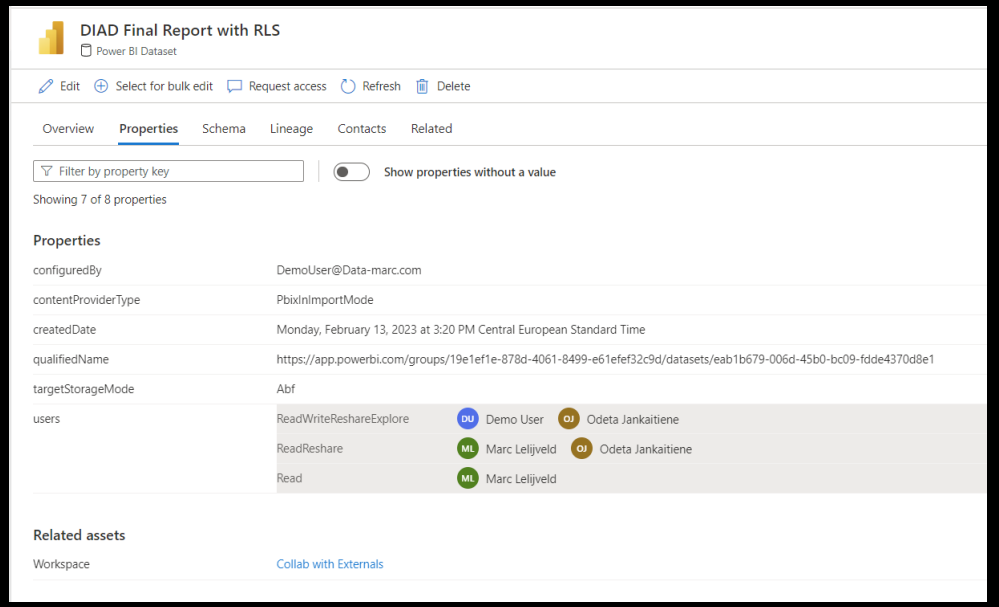
Endorsement

- None / Promoted / Certified
- Purview has its own version of certified for non-Power BI artifacts.
- Power BI artifacts cannot be endorsed within Purview
- Policies in Power BI tenant settings define who can certify.

Power BI dataset security

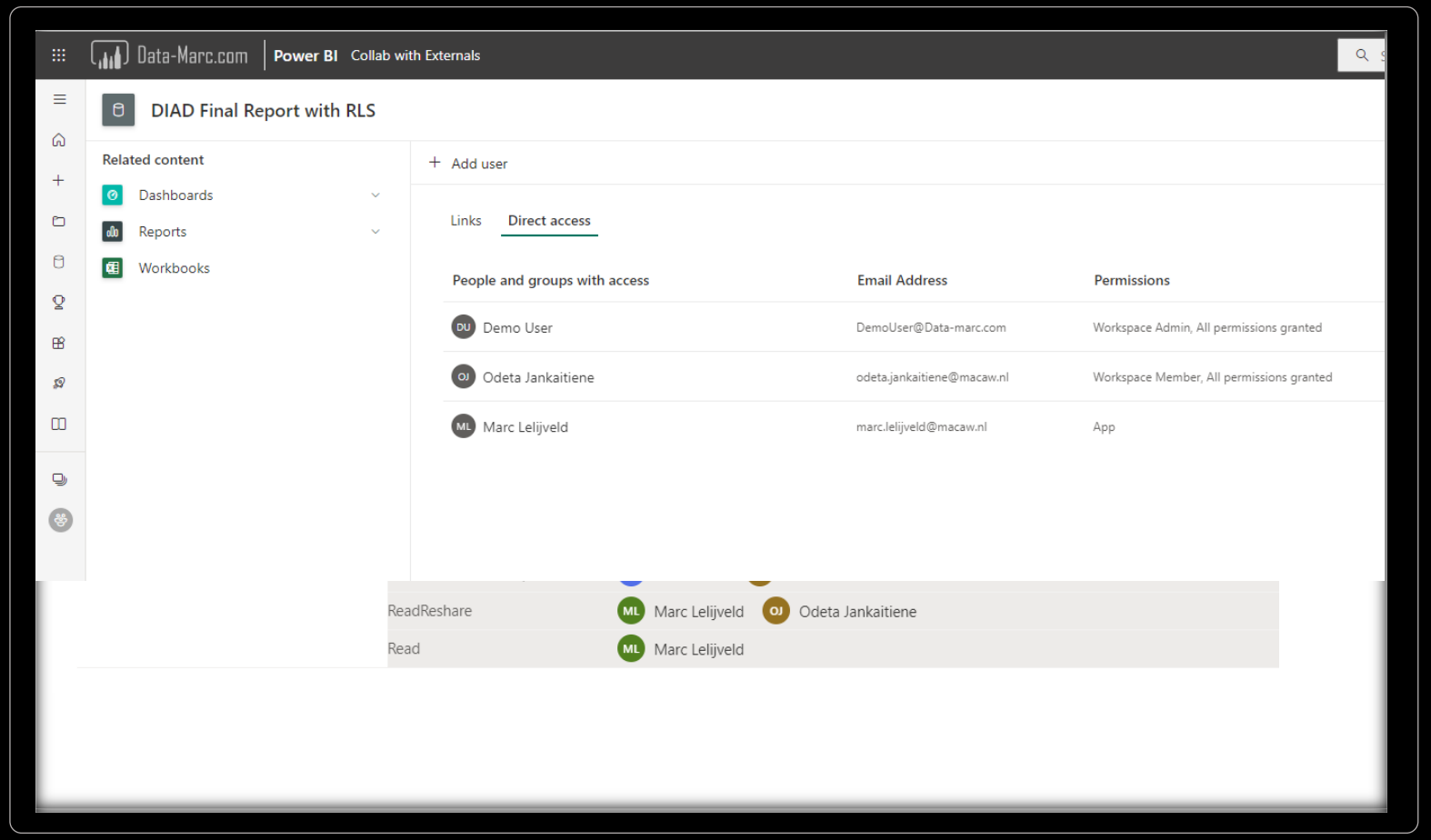
- Roles (RLS/OLS) are not visible within Purview.





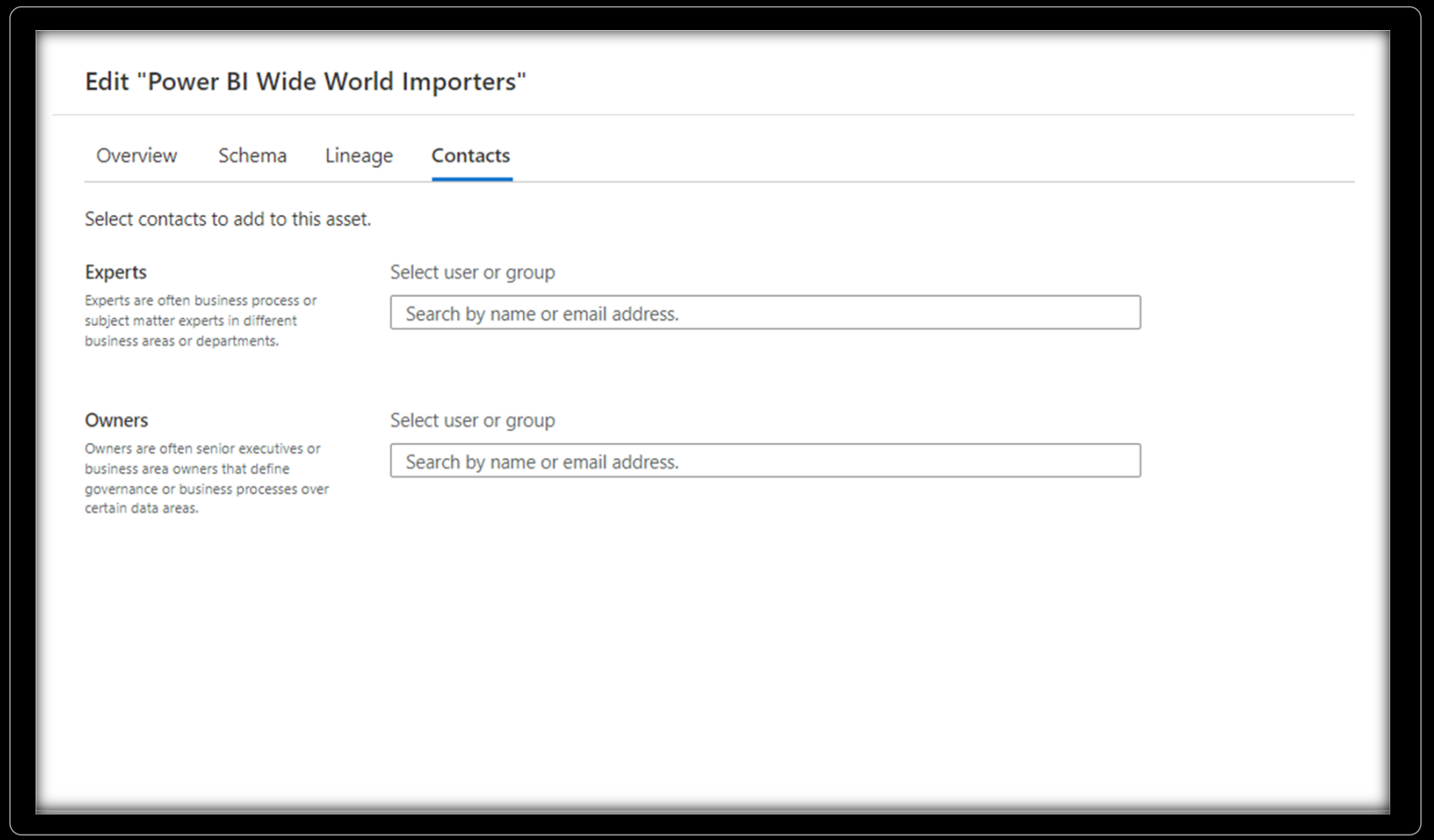
Some unclear aspects

Ownership and permissions on dataset cannot be matched with what we see in Power BI.



Some unclear aspects

Contact information from Power BI reports and solutions is not shared to Purview.



Impact on Power BI

- Purview gives a glossary of Power BI artifacts
- Might decrease duplication of solutions
- Most valuable when enriched with
  - Sensitivity Labels (requires E5)
  - Endorsement
  - Additionals like contact information
- Purview primarily focusses on meta data – leaves out usage & adoption aspects.

Any questions left?

Thank you for attending!

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