

Extending Power BI governance with Microsoft Purview

Power BI Gebruikersdag 2023

De Power BI Gebruikersdagen worden mede mogelijk gemaakt door:



PLATINUM

delaware



ilionx

easydash

GOUD



creates.



Tabular Editor



Voorblijven. Niet bijblijven.

KASPAROV
FINANCE & BI

macaw



rockfeather

GET
RESPONSIVE

ZILVER

VICTA
BUSINESS INTELLIGENCE

Dynamic
People

Motion 10
AN HSO COMPANY

VisionBI
Smart Data Experts

VALID
STAY AHEAD

inergy

valcon

iqb's

Quanto
collective analytics

COMMUNITY

Kimura
data intelligence

ĐashData.

volda;
INFORMATIESPECIALISTEN

Power BI
Connector
by DAVISTA

AZURRO FINANCE

Erwin de Kreuk

Principal Consultant – Data & AI
InSpark

 @ErwinDeKreuk

 linkedin.com/in/ErwinDeKreuk

 ErwinDeKreuk.com





Marc Lelijveld

Solution Architect – Data & Analytics
Macaw Netherlands



@MarcLelijveld



linkedin.com/in/MarcLelijveld



Data-Marc.com



Data-Marc



The background of the image is a stylized, abstract map of the world. It is divided into four horizontal bands of color: red at the top, blue in the middle, yellow on the left side, and green on the right side. The landmasses are represented by irregular shapes in these colors, while the oceans are shown in a lighter shade of each respective color. Overlaid on this map is the word "Kahoot!" in a large, white, sans-serif font. The exclamation mark is replaced by a white pentagon shape. The letters are slightly shadowed, giving them a sense of depth.

Kahoot!

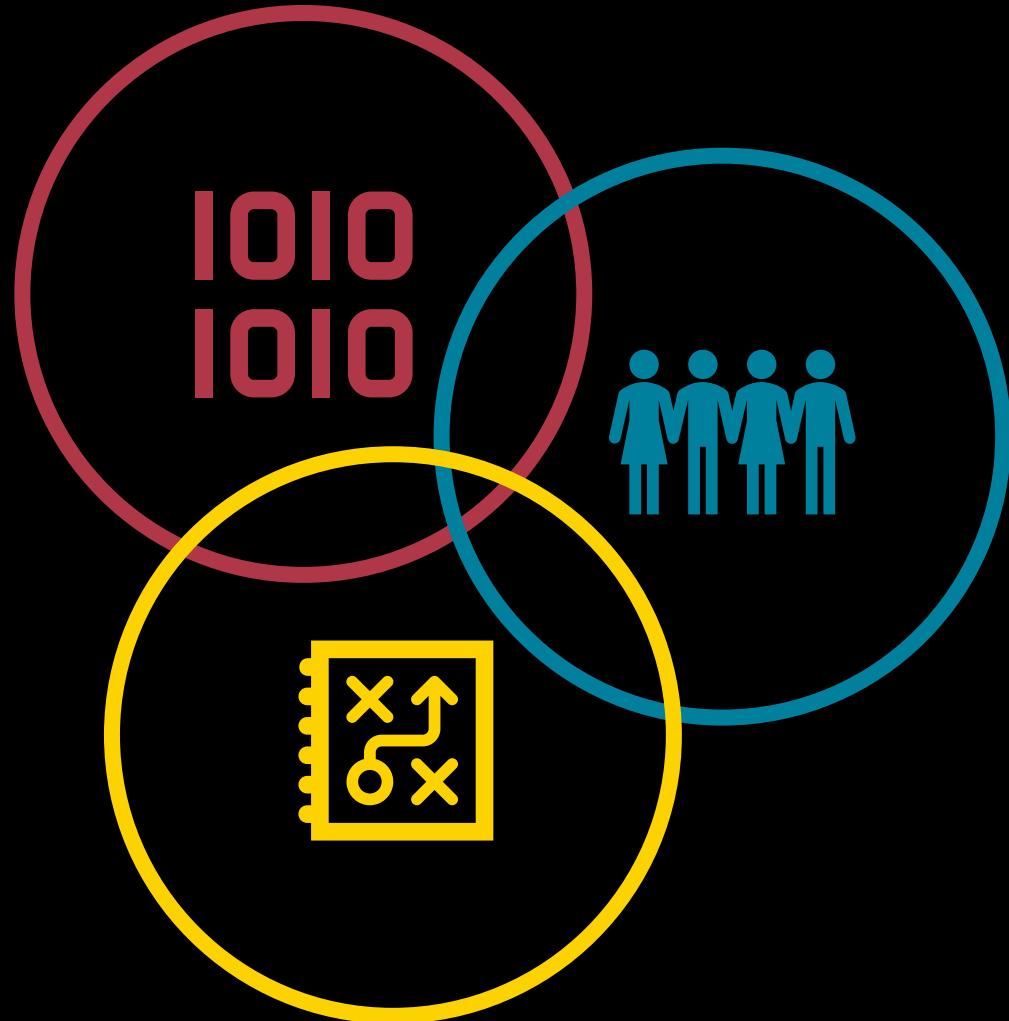
Objectives of today

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



Combination of three components

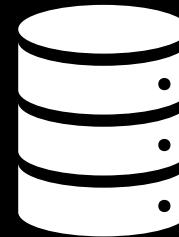
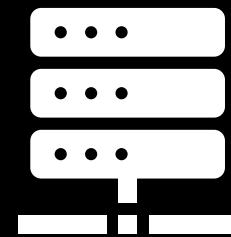
- Data
- Analytics
- People



[data + analytics + people]

[data + analytics + people]

- Cloud
- On-prem
- Hybrid



[data + analytics + people]



Discover

Search for data and combine different sources to one model



Analyze

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



Visualize

Transform millions of rows of data in stunning visuals



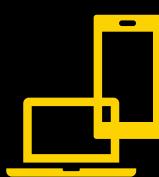
Share

Share insights and analytics across the organization



Find & Explore

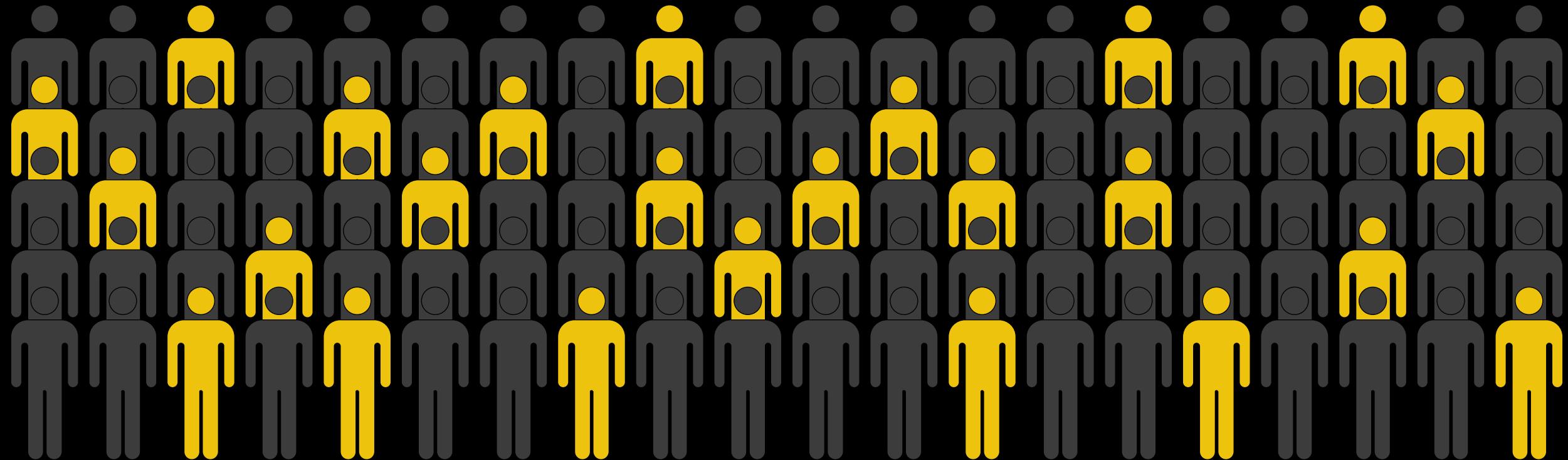
Find answers and explore data in visuals + Q&A capabilities



Anywhere

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

[data + analytics + people]



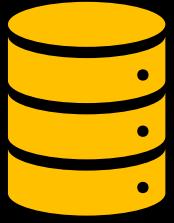
[data + analytics + people]

= competitive advantage

Data driven ambition



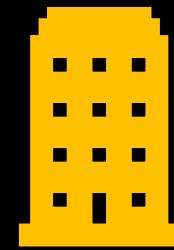
Open ends



Where does the data
come from?



How reliable is the
data?



What do I already have
available?

Overview of Power BI



Part of Power Platform



Power BI
Business analytics



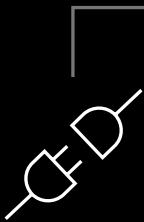
Power Apps
Application development



Power Automate
Process automation



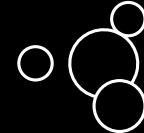
Power Virtual Agents
Intelligent chatbots



Data
connectors



Portals

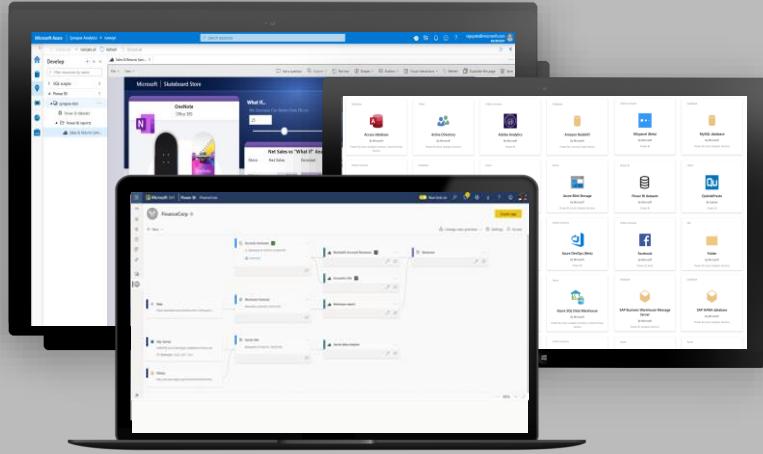


AI Builder



Common Data Service

Power BI



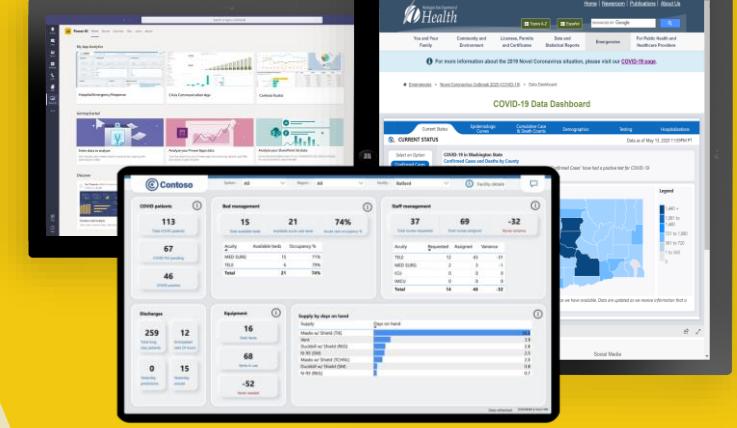
All Data

Break down data silos and enrich your data with intelligence



For Everyone

Create rich-interactive data experiences with AI infused insights

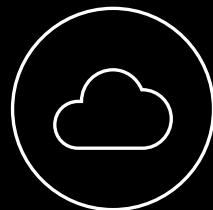


For Every Decision

Integrate trusted and secure BI into the fabric of your organization and apps

Power BI drives a data culture for everyone and every decision

Experience your data



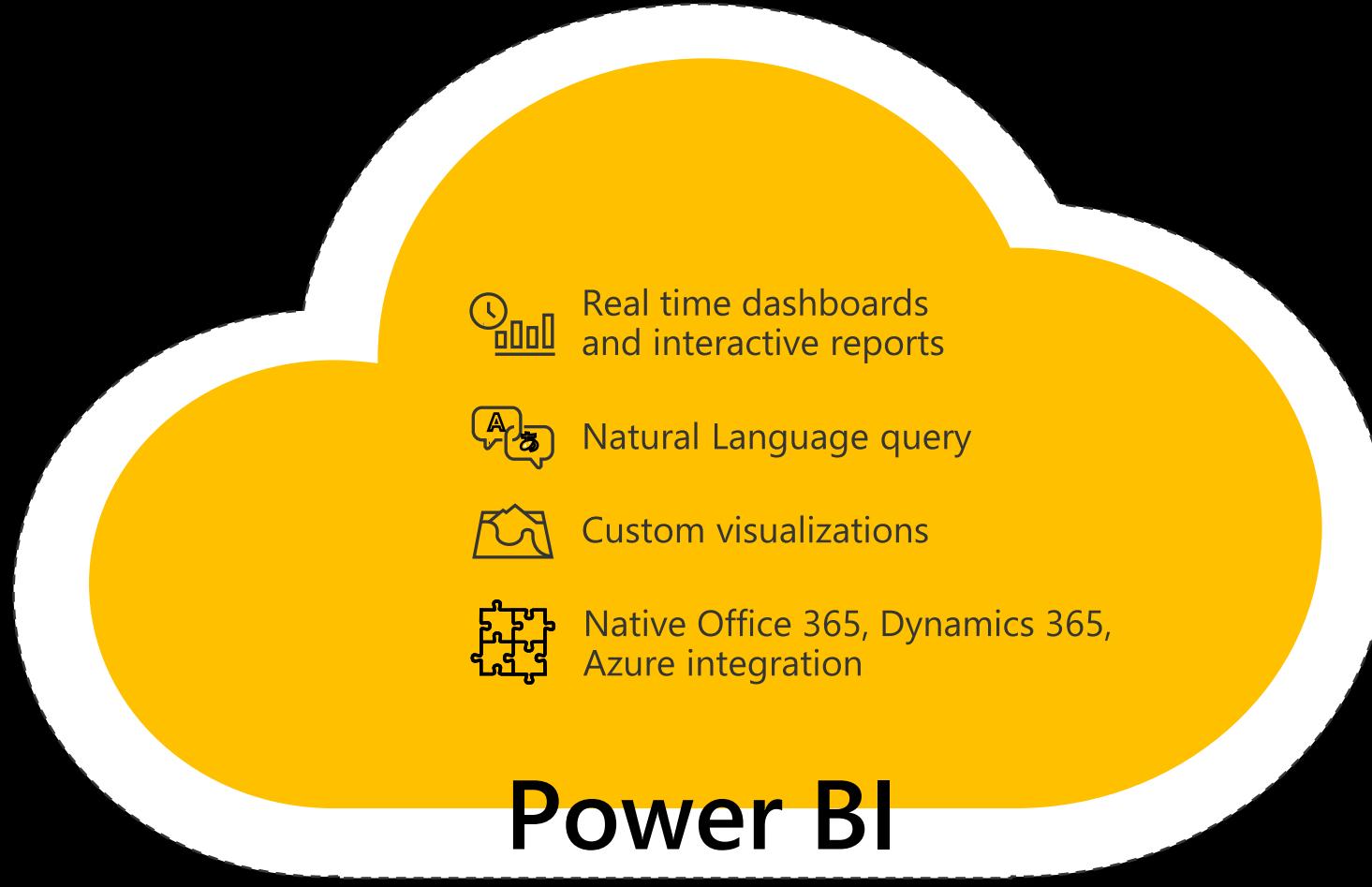
Cloud data



On-premises
data



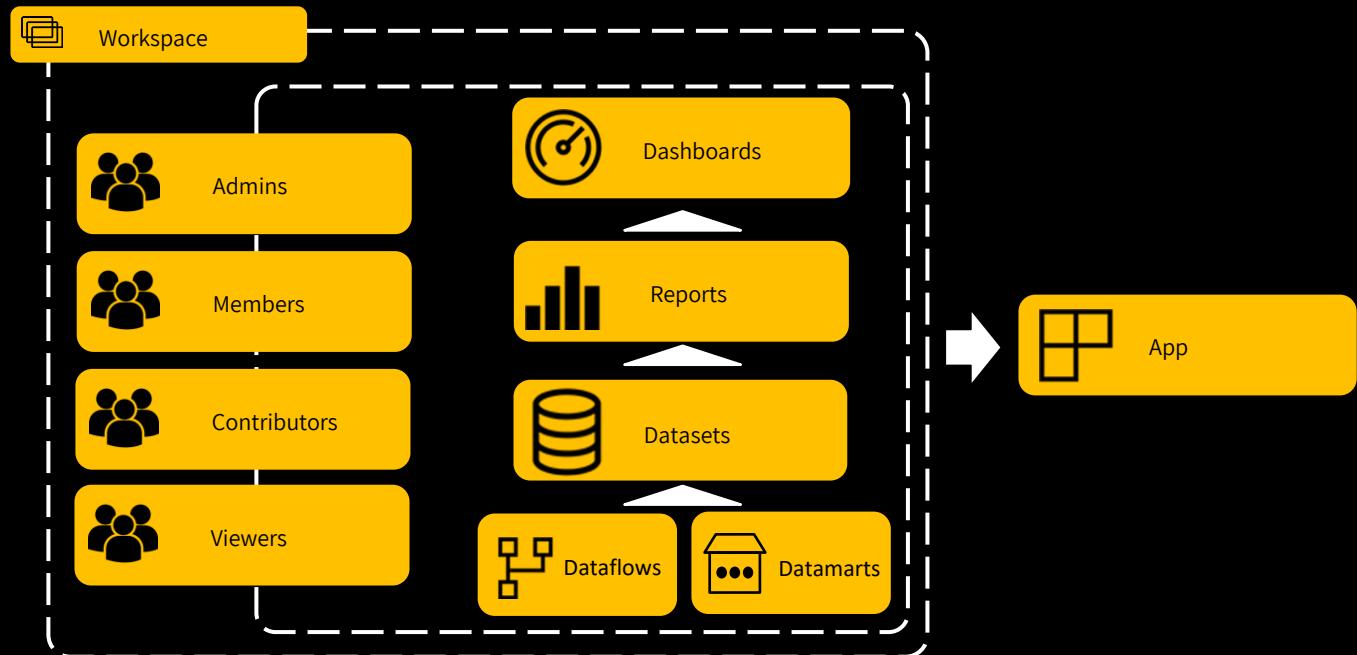
Hybrid
data



- Web
- Mobile
- Excel
- Embedded
- Cortana
-

Structure of the Power BI Service

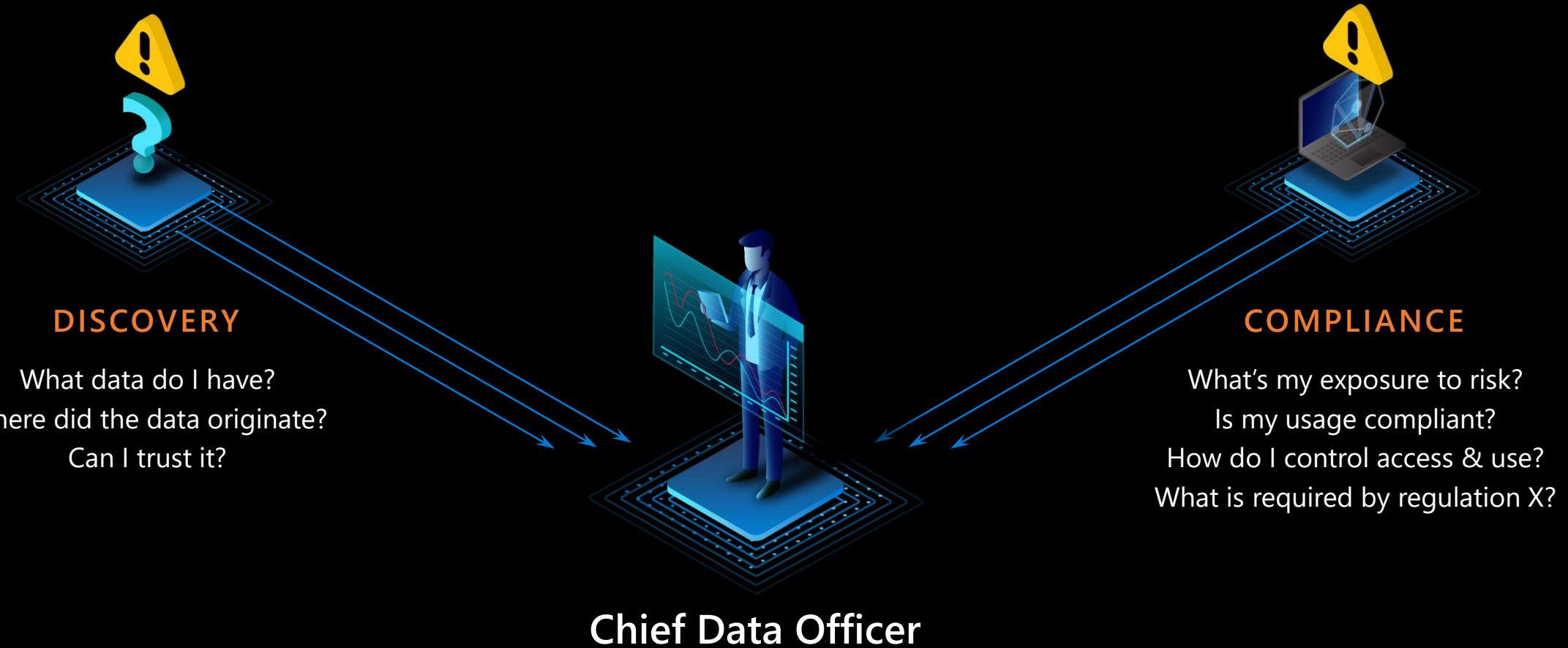
- Workspaces
 - Permission levels
- Content
 - Dataflows
 - Datamarts
 - Datasets
 - (Paginated) Reports
 - Dashboards
- App as output and sharing mechanism



Understanding of governance



Data governance is becoming increasingly interdisciplinary



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



A black and white photograph showing a person walking up a wide, modern staircase with dark treads and light-colored walls. The staircase leads towards a bright opening where a traditional multi-story building with many windows is visible. The scene creates a strong contrast between the dark interior and the bright exterior.

What is your
expectation?

Governance can many things

- Workspace creation
- Publish to web
- Exporting data
- Gateway creation / configuration
- Integration settings like ArcGIS
- Access and collaboration with externals

... basically all tenant settings



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

Select a dataset to create a report

All datasets

Name	ENDORSEMENT	Owner	Workspace/App	Refreshed
Retail Analysis	Certified	Steve Myer	Retail	4 days ago
Customer Profitability	Certified	Susan Mailer	Customer	6/23/17
Vantage Global	Promoted	Lane Barnes	Vantage	3/3/18
IT Spend Analytics	Promoted	Ari Gold	IT	3 hours ago
Team Analytics	Promoted	Ana Smith	Analytics	7/12/18
Opportunity Analysis	Promoted	Lane Barnes	My Workspace	6/12/17
Retail		Lane Barnes	My Workspace	2 days ago
Procurement Analysis		Lane Barnes	My Workspace	7/22/18
Sales		Lane Barnes	My Workspace	1/24/17

OK Cancel



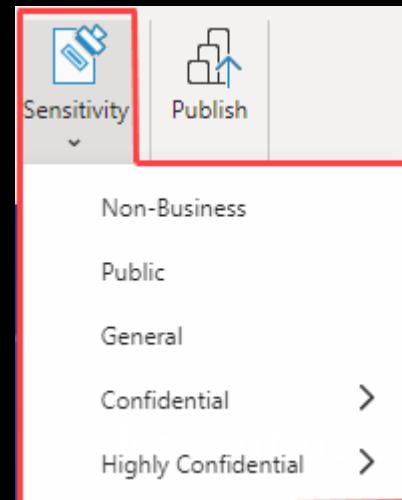
Sensitivity labeling in Power BI

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



Sensitivity label

Classify the sensitivity of this report content. [Learn more](#)

Confidential for Finance ▼

i Some sensitivity label settings, such as file encryption settings and content marking, are not enforced in Power BI. [Learn more](#)

Apply this label to the report's downstream content (preview) [Learn more](#)

[See the downstream items in lineage view](#) ▾

Tenant settings for sensitivity labels



Allow users to apply
sensitivity labels for content



Apply sensitivity labels from
data sources to their data in
Power BI

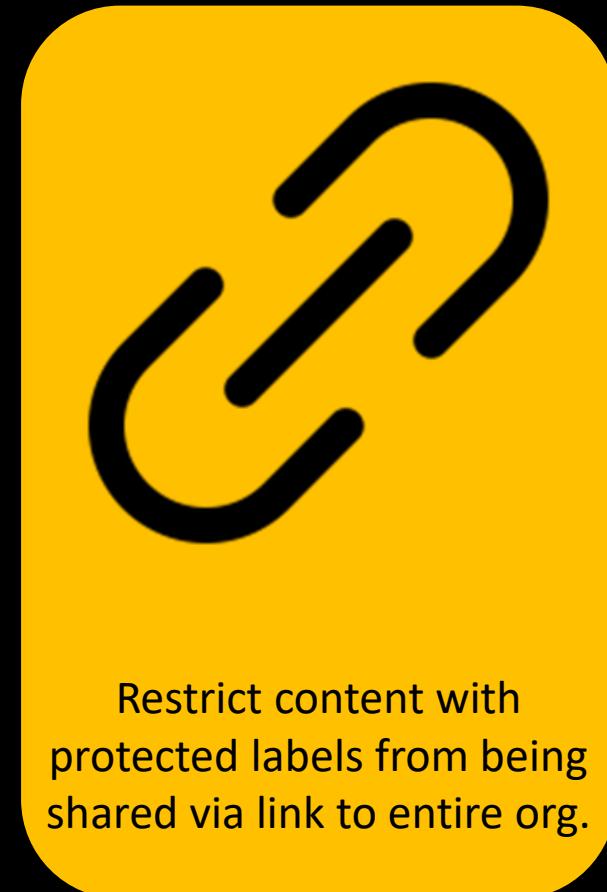


Automatically apply
sensitivity labels to
downstream content

Configurable restrictions



Allow workspace admins to
override automatically
applied sensitivity labels



Restrict content with
protected labels from being
shared via link to entire org.

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.

The screenshot shows the Microsoft Purview Information protection Labels page. The left sidebar lists various compliance solutions: Policies, Permissions, Trials, Catalog, App governance, Audit, Content search, Communication compliance, Data loss prevention, eDiscovery, Data lifecycle management, Microsoft 365, Exchange (legacy), Information protection (which is selected and highlighted in blue), Information barriers, Insider risk management, Records management, Privacy risk management, Subject rights requests, Settings, and More resources. The main content area has a title 'Information protection' with tabs for Overview, Labels (which is active and underlined), Label policies, and Auto-labeling. A 'New feature in preview' banner for 'Extend labeling to assets in the data map ...' is visible. Below it, a 'Turn on' button is shown with a note: 'Your organization has not turned on the ability to process content in Office online files that have encrypted sensitivity labels applied and are stored in OneDrive and SharePoint. You can turn on here, but note that additional configuration is required.' A detailed note below explains that sensitivity labels can now be created for Teams, SharePoint sites, and Microsoft 365 Groups, and provides instructions to enable the feature. The 'Labels' table at the bottom lists two entries: 'Allowed to be shared external' (Order: 0 - lowest, Scope: File, Email, Meetings, Created by: Marc Lelijveld, Last modified: 13 Feb 2023 19:49:23) and 'Internal Only' (Order: 1 - highest, Scope: File, Email, Meetings, Created by: Marc Lelijveld, Last modified: 13 Feb 2023 19:49:23).

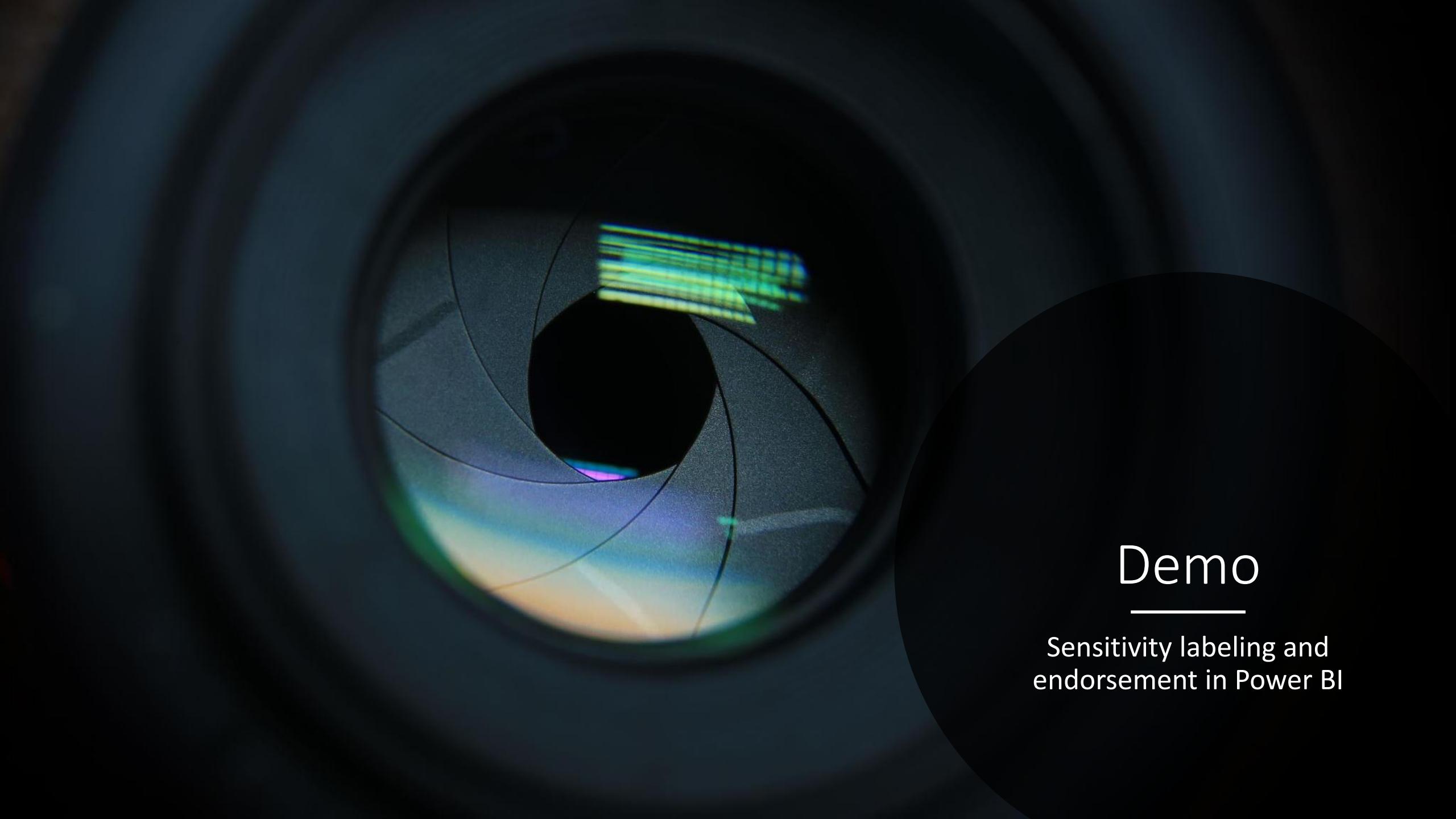
Name	Order	Scope	Created by	Last modified
Allowed to be shared external	0 - lowest	File, Email, Meetings	Marc Lelijveld	13 Feb 2023 19:49:23
Internal Only	1 - highest	File, Email, Meetings	Marc Lelijveld	13 Feb 2023 19:49:23

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.

The screenshot shows the Microsoft Purview interface with the 'Policies' section selected in the sidebar. The main content area is titled 'Policy settings' and contains the following configuration options:

- Users must provide a justification to remove a label or lower its classification**
Users will need to provide a justification before removing a label or replacing it with one that has a lower-order number. You can use activity explorer to review label changes and justification text.
- Require users to apply a label to their emails and documents**
Users will be required to apply labels before they can save documents or send emails (only if these items don't already have a label applied).
(i) Support and behavior for this setting varies across apps and platforms. [Learn more about managing sensitivity labels](#)
- Require users to apply a label to their Power BI content**
Users will be required to apply labels to unlabeled content they create or edit in Power BI. [Learn more about mandatory labeling in Power BI](#)
- Provide users with a link to a custom help page**
If you created a website dedicated to helping users understand how to use labels in your org, enter the URL here. [Learn more about this help page](#)



Demo

Sensitivity labeling and
endorsement in Power BI

A large, three-dimensional yellow question mark is positioned in the center of the frame, slightly angled towards the viewer. It is surrounded by numerous smaller, dark gray question marks of various sizes, creating a sense of depth and repetition.

Any questions so far?

Overview of Purview



History



- ADC Gen 1



- BlueTalon Acquisition june 2019



- ADC Gen 2



- Azure Purview sept 2021



- Microsoft Purview april 2022

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

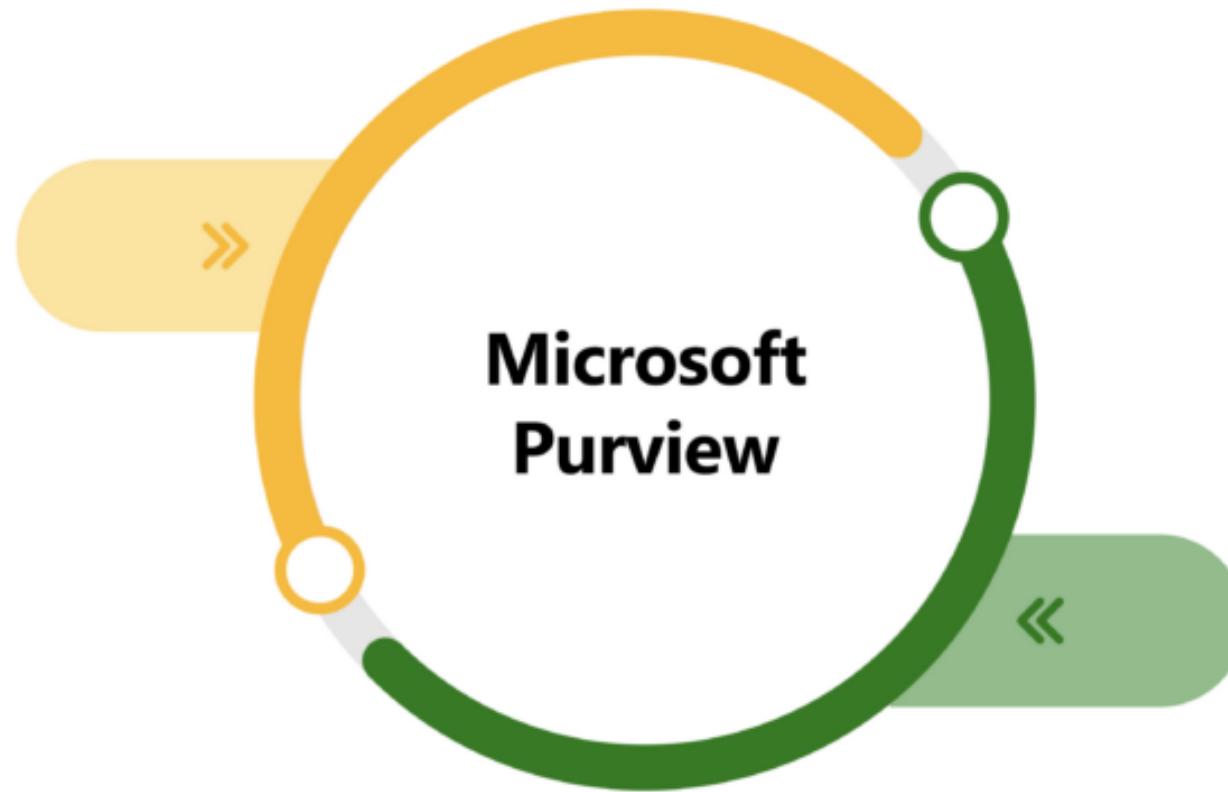
The future of compliance and data governance

Risk & compliance

For risk, compliance, and legal teams

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

Microsoft Purview



Unified data governance

For data consumers, data engineers, data officers

Identity data
landscape

Govern
data
lifecycle

Data

Protect
sensitive
data

Prevent
data loss

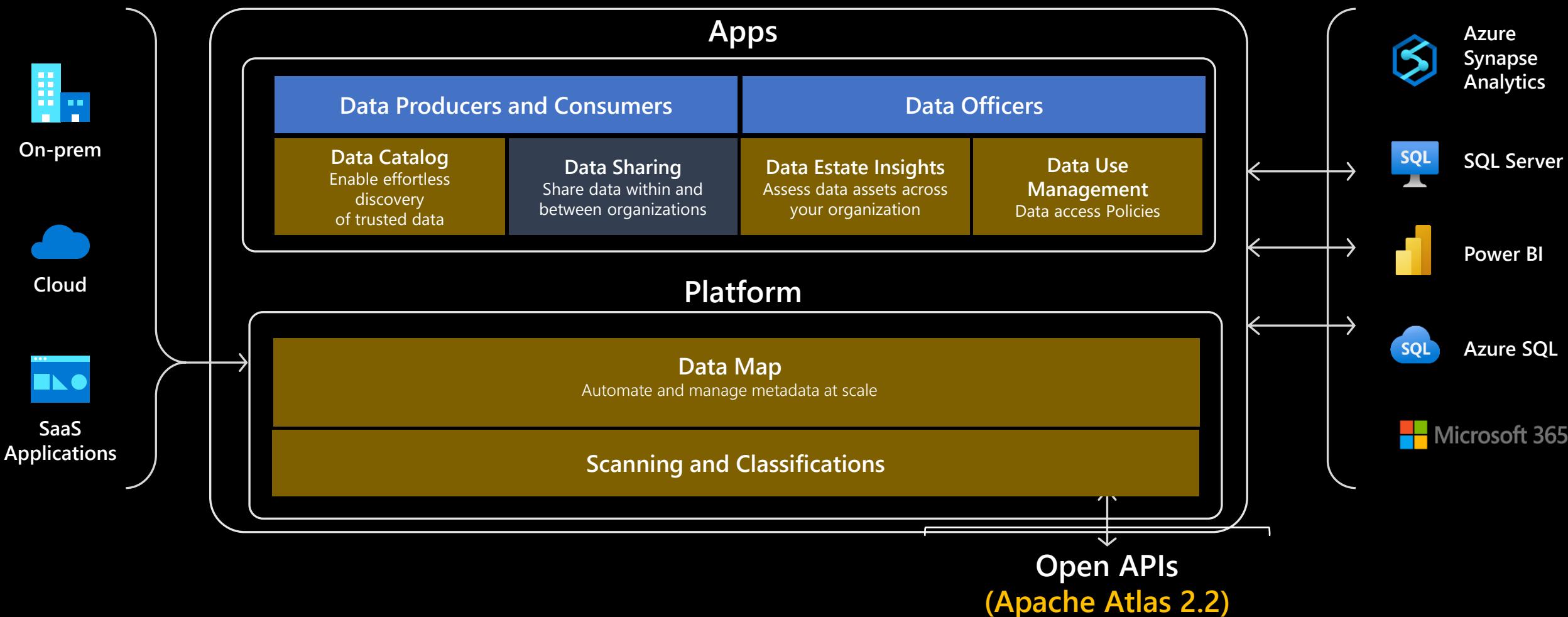
Manage
risks

Generally Available

Preview

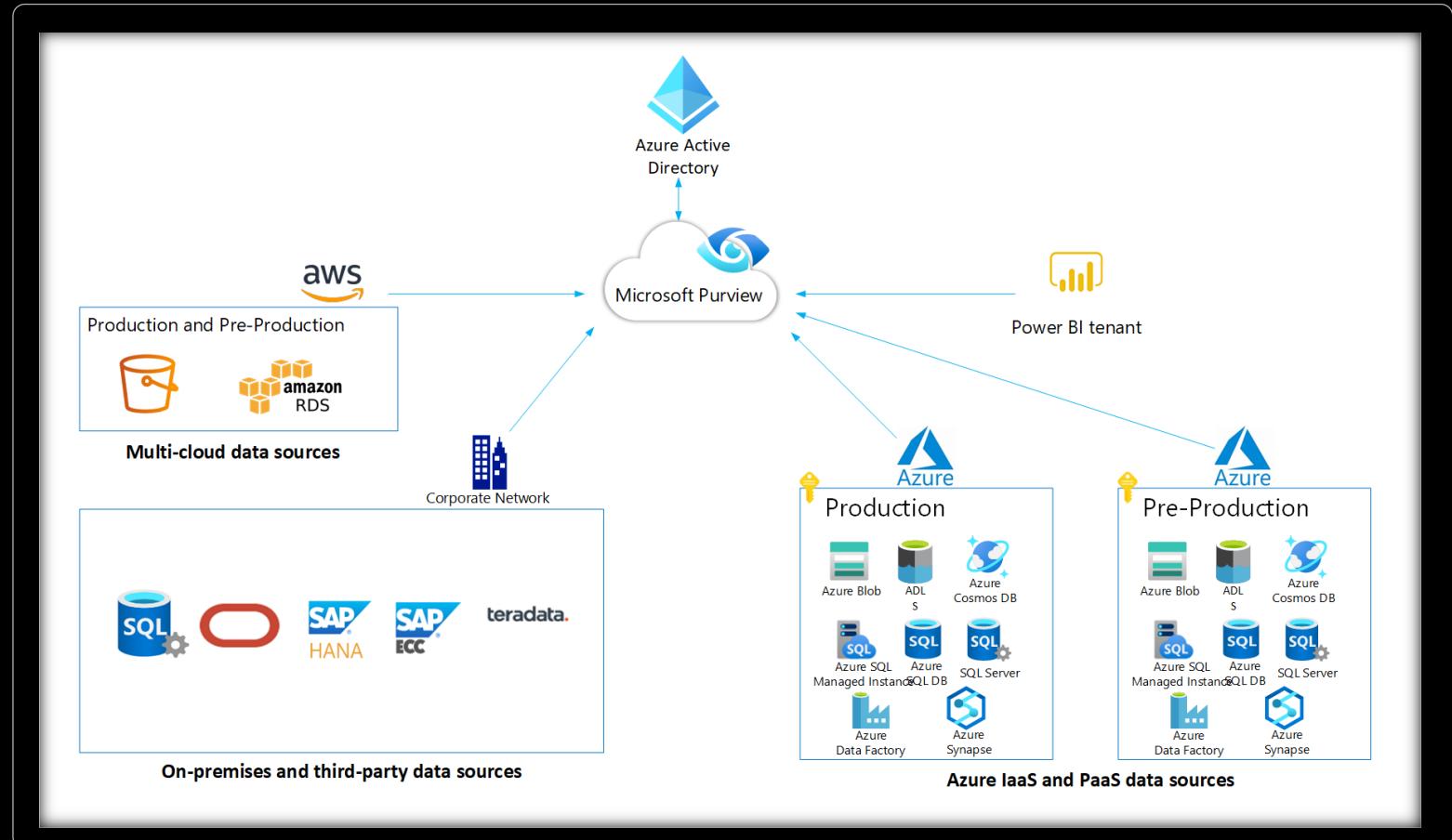
Microsoft Purview

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

- Enhance admin APIs responses with DAX and mashup expressions

Enabled for the entire organization

Users and service principals eligible to call Power BI admin APIs will get detailed metadata about queries and expressions comprising Power BI items. For example, responses from GetScanResult API will contain DAX and mashup expressions. [Learn more](#)

Note: For this setting to apply to service principals, make sure the tenant setting allowing service principals to use read-only admin APIs is enabled. [Learn more](#)



Enabled

Apply to:

- The entire organization
- Specific security groups
- Except specific security groups

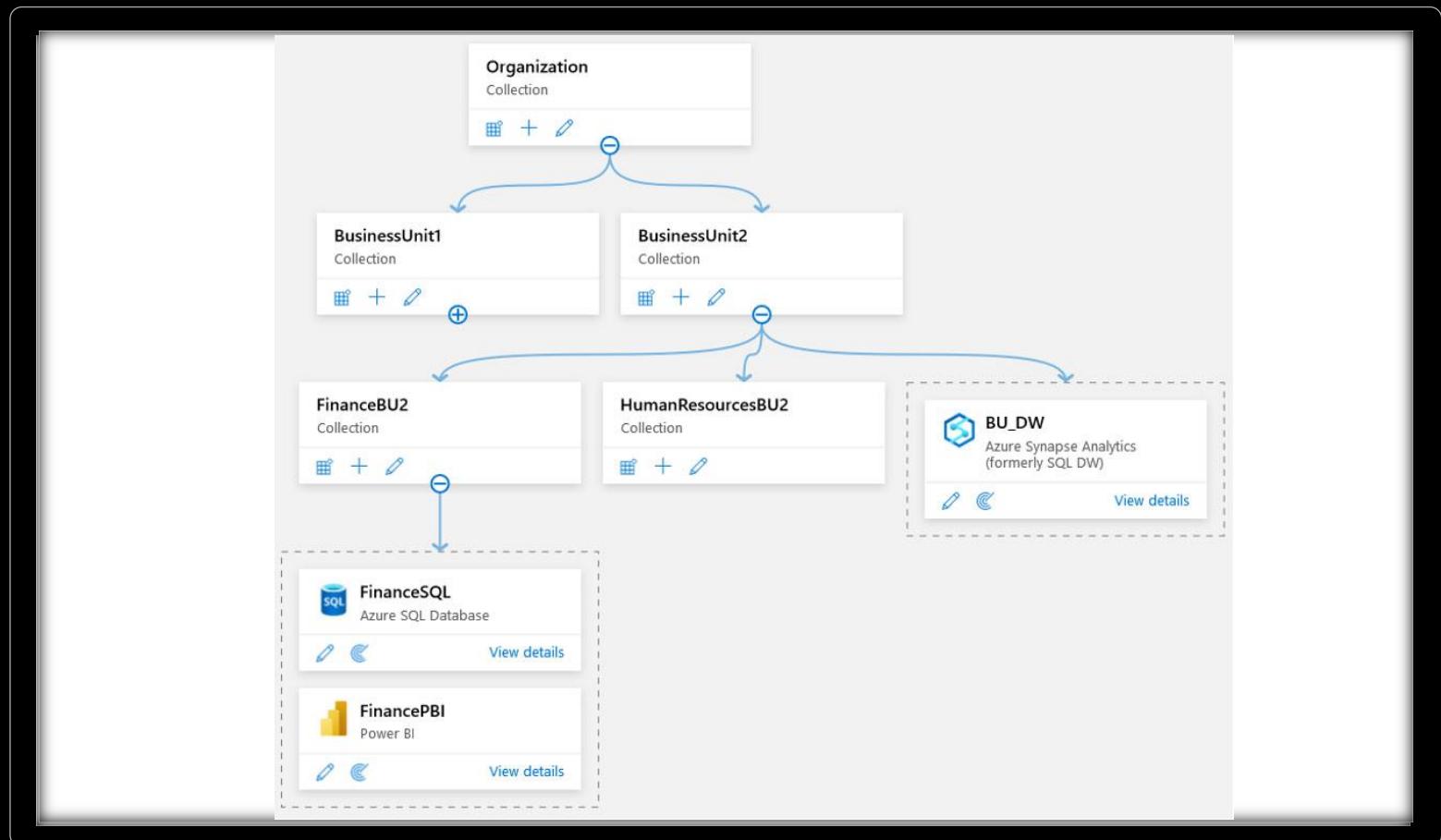
Scan Power BI

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)

Set a scan trigger

Set a scan trigger to run the scan at specific dates and times. If once, the scan will start after set up is completed. If recurring, the scan will start at a date and time you choose. The initial scan is a full scan and every subsequent scan is incremental.

Recurring Once

Time zone * ⓘ

Recurrence *
Every Month(s)

Month days Week days

Select day of the month to scan

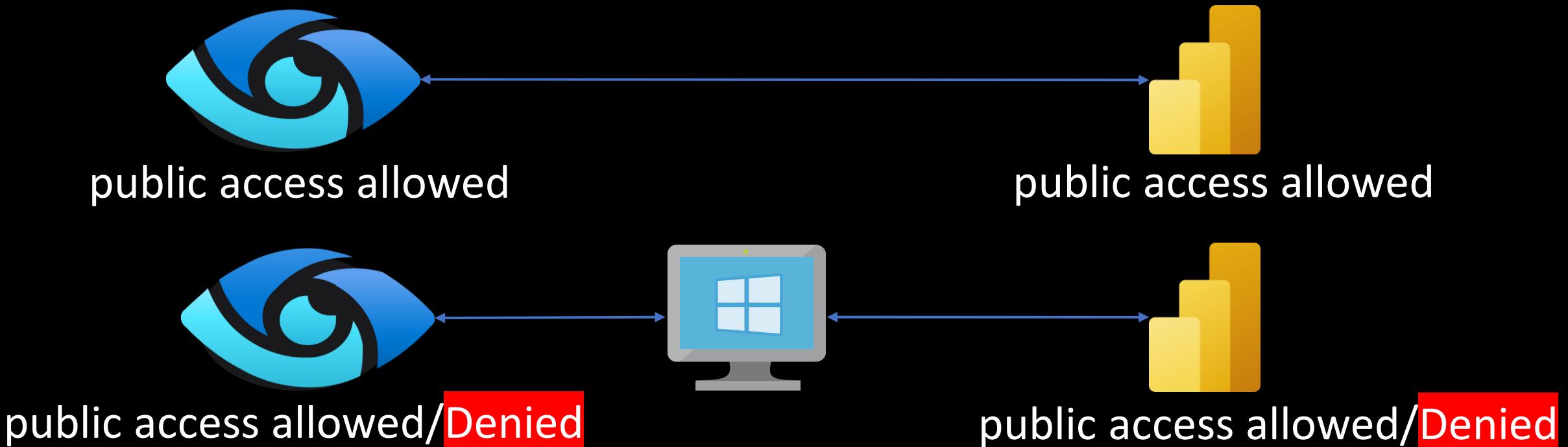
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	Last			

Schedule scan time (UTC)

Supported capabilities

- ✓ • Metadata Extraction → • Workspaces
- ✓ • Full Scan → • Dashboards
- ✓ • Incremental Scan → • Reports
- ✓ • Lineage → • Datasets including tables and columns
- ✗ • Scoped Scan → • Dataflows
- ✗ • Classification → • Datamarts
- ✗ • Access Policy
- ✗ • Data Sharing

Supported Scenarios (security wise)



- 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

How to link Power BI to Purview (Cross Tenant)

- Register Power BI as a new source

Register sources (Power BI)

Name *

Tenant ID *

Select a collection * ⓘ

ededeuwvdvImpviewoxgn01 > West Europe > Power BI

ⓘ All assets under this source will belong to the collection you select.

How to link Power BI to Purview (Cross Tenant)

- All interfacing authenticates via Application Registration
- Person setting up the connection requires to have sufficient permissions to create Application registrations in Azure Active Directory.

The screenshot shows the 'Register an application' page in the Microsoft Azure portal. The left sidebar lists various Azure services: Create a resource, Home, Dashboard, All services, Favorites, Azure Active Directory, Subscriptions, Resource groups, All resources, Azure Synapse Analytics, App Services, Function App, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, and Monitor. The main content area is titled 'Register an application'. It has a 'Name' field with placeholder text 'The user-facing display name for this application (this can be changed later.)'. Below it is a section for 'Supported account types' with four radio button options: 'Accounts in this organizational directory only (Marc Lelijveld only - Single tenant)' (selected), 'Accounts in any organizational directory (Any Azure AD directory - Multitenant)', 'Accounts in any organizational directory (Any Azure AD directory - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbox)', and 'Personal Microsoft accounts only'. There is also a 'Help me choose...' link. At the bottom, there is a 'Redirect URI (optional)' section with a note about returning authentication responses and a 'Select a platform' dropdown set to 'e.g. https://example.com/auth'.

Single / Cross-tenant config

- Make sure the app registration is configured as multi-tenant in case you want to connect from another tenant.

The screenshot shows the 'Register an application' page in the Microsoft Azure portal. On the left is a sidebar with various service links like Create a resource, Home, Dashboard, All services, and Favorites. The main area has a breadcrumb path: Home > Marc Lelijveld | App registrations > Register an application. The title is 'Register an application'. Below it is a 'Name' field containing 'PBI_Admin_PurviewScan' with a green checkmark icon. The next section is 'Supported account types' with the heading 'Who can use this application or access this API?'. There are four options:

- Accounts in this organizational directory only (Marc Lelijveld only - Single tenant)
- Accounts in any organizational directory (Any Azure AD directory - Multitenant) (This option is selected)
- Accounts in any organizational directory (Any Azure AD directory - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbox)
- Personal Microsoft accounts only

A link 'Help me choose...' is also present.

App registration permissions

- Delegated permissions are required.
- OpenId permission needs to be assigned and configured.
- You would expect specific Power BI permissions, but those are not required.

The screenshot shows the 'Request API permissions' page for Microsoft Graph in the Microsoft Azure portal. The left sidebar lists various Azure services. The main area shows the Microsoft Graph API with its documentation link. It asks for the type of permissions: 'Delegated permissions' (for signed-in users) or 'Application permissions' (for background services). A search bar at the bottom finds 'openid'. A note explains that 'Admin consent required' is the default value and can be customized. The 'OpenId permissions (1)' section shows a checked checkbox for 'openid' with the description 'Sign users in', and it indicates 'No' for 'Admin consent required'.

Permission	Admin consent required
✓ OpenId permissions (1)	No
openid ⓘ Sign users in	No

App registration – redirect URI

- Redirect URI looks superfluous at first.
- Though, without redirect URI it does not show options necessary in the App Registration authentication menu.
- Randomly add a redirect URI like <https://contoso.com/> or anything else to find the relevant settings.

The screenshot shows the Microsoft Azure portal interface. On the left, there is a sidebar with various service icons: Create a resource, Home, Dashboard, All services, FAVORITES (with Azure Active Directory selected), Subscriptions, Resource groups, All resources, Azure Synapse Analytics, App Services, Function App, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, and Monitor. The main content area is titled "PBI_Admin_PurviewScan | Authentication". It includes a search bar, a "Got feedback?" link, and a section for "Implicit grant and hybrid flows". Below this, there is a note about requesting tokens directly from the authorization endpoint. A section titled "Select the tokens you would like to be issued by the authorization endpoint" contains two checkboxes: "Access tokens (used for implicit flows)" (unchecked) and "ID tokens (used for implicit and hybrid flows)" (checked). There is also an "Advanced settings" section, an "Allow public client flows" link, and a "Yes" button. At the bottom, there is a list of mobile and desktop flows with checkboxes: "App collects plaintext password (Resource Owner Password Credential Flow)", "No keyboard (Device Code Flow)", and "SSO for domain-joined Windows (Windows Integrated Auth Flow)".

Scan Power BI Cross-Tenant

Setup Scan

- [Create Credential](#)
- [Connect via SHIR](#)
- [Add Credential](#)

Scan "LS_POWERBI_DATA-MARC"

Name *

Personal workspaces *

Include Exclude

ⓘ Changes to the scan configuration will reset the upcoming scan to be a full scan for this data source. [Learn more](#) X

Connect via integration runtime * ⓘ

SHIR-PURVIEW (Running)

Credential *

PowerBI-Data-Marc

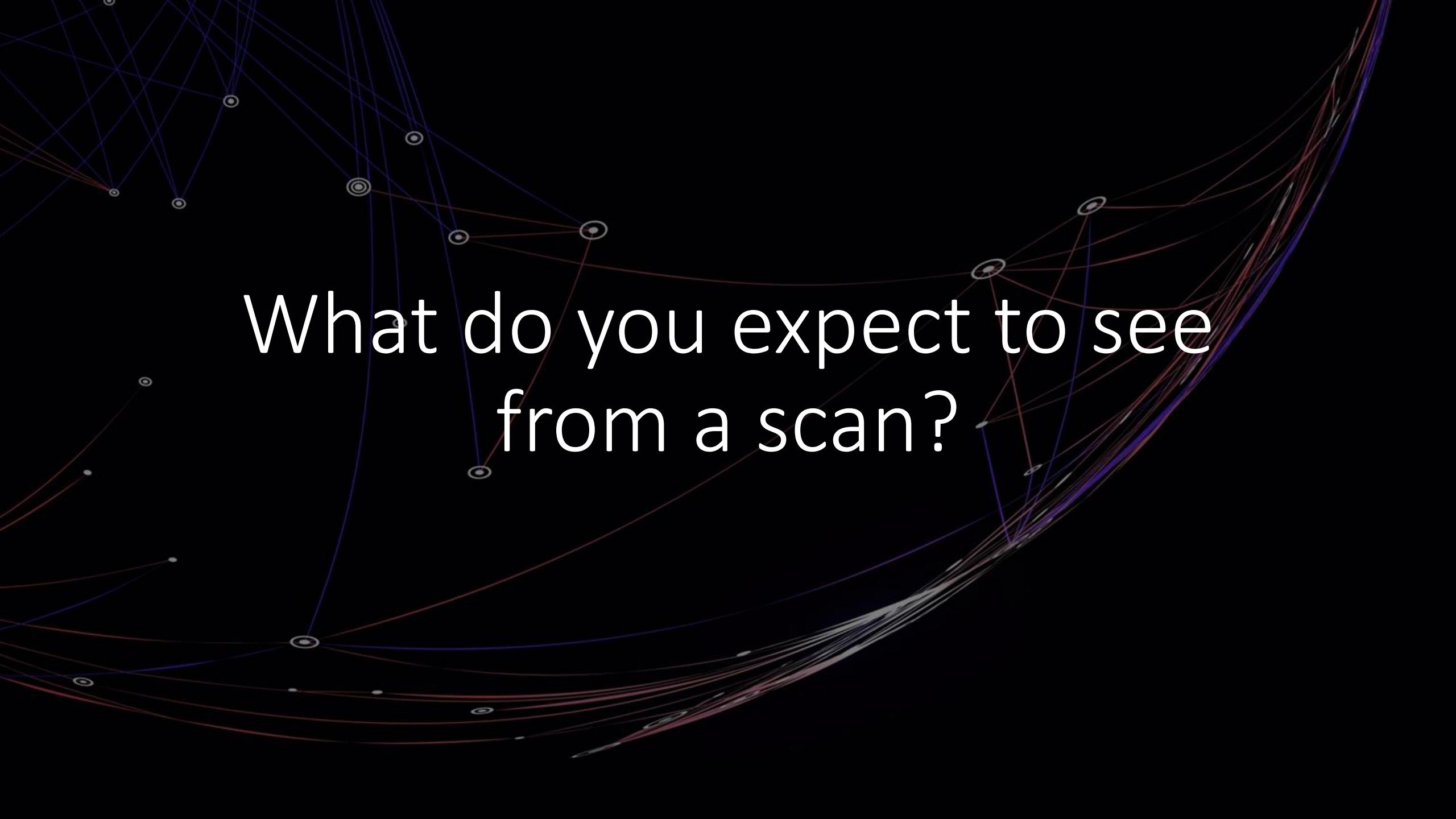
Select a collection

ededeuwvdvlpviewoxgn01 > Data-Marc

ⓘ All assets scanned will be included in the collection you select.

Observations

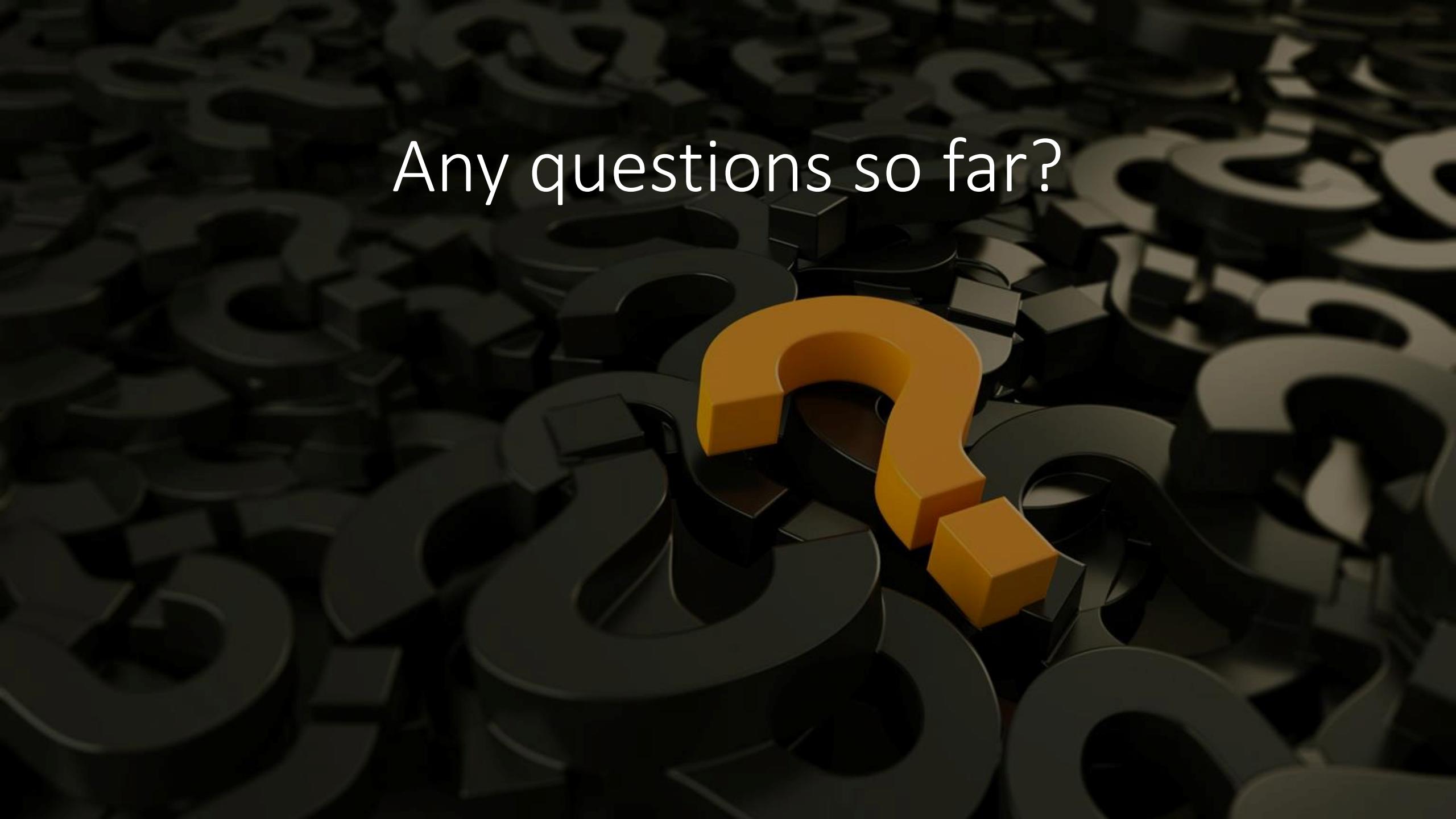
- When scanning **without** SHIR, user account with PBI Service Admin permissions + App Registration is required.
- Scanning **with** SHIR an App Registration will suffice.



What do you expect to see
from a scan?



- Demo Microsoft Purview

A large, three-dimensional yellow question mark is positioned in the center of the frame, slightly angled towards the viewer. It is surrounded by numerous smaller, dark gray question marks of various sizes, creating a sense of depth and repetition.

Any questions so far?

Policies



Policies

Resource:

- IAM Owner
- IAM Contributor and IAM User
- Access Administrator

Purview Resource:

- Data Source Admin
- Policy authors

The screenshot shows the Azure Purview Data Catalog interface. On the left, there's a navigation pane with a 'Filter resources' search bar and a tree view of resources under 'ededeuwvdvImpviewoxgn01'. The tree includes 'DataCenter' (with 'AzureSQL' as a child), 'West Europe' (with 'ededeuwvdvlm' and 'Power BI' as children). On the right, the main area is titled 'ededeuwvdvImpviewoxgn01' with tabs for 'Overview' and 'Role assignments'. The 'Role assignments' tab is selected. It features a 'Edit role assignments' button and a 'Filter by name' input field. At the bottom, a section titled 'Policy authors' is highlighted with a red box. This section contains a sub-section for 'Name' with a user card for 'Erwin de Kreuk' (EK).

ededeuwvdvImpviewoxgn01

+ Add a collection Refresh

Overview Role assignments

Edit role assignments

Filter by name

Policy authors

Policy authors can create, view, update and delete policies through the Policy management app.

Name

Erwin de Kreuk

Policies

- Data owner access
- Dev Ops
- Self Service

Enable on Resources Level

Edit source (Azure Resource Group)

Name *

Management group

Select a management group

Subscription

ededeuwvdlmpviewoxgn01 (e65d3c17-0581-403d-916c-b4d0733auct1)

Resource group

LS_SUB_RG_DVLM

Select a collection * ⓘ

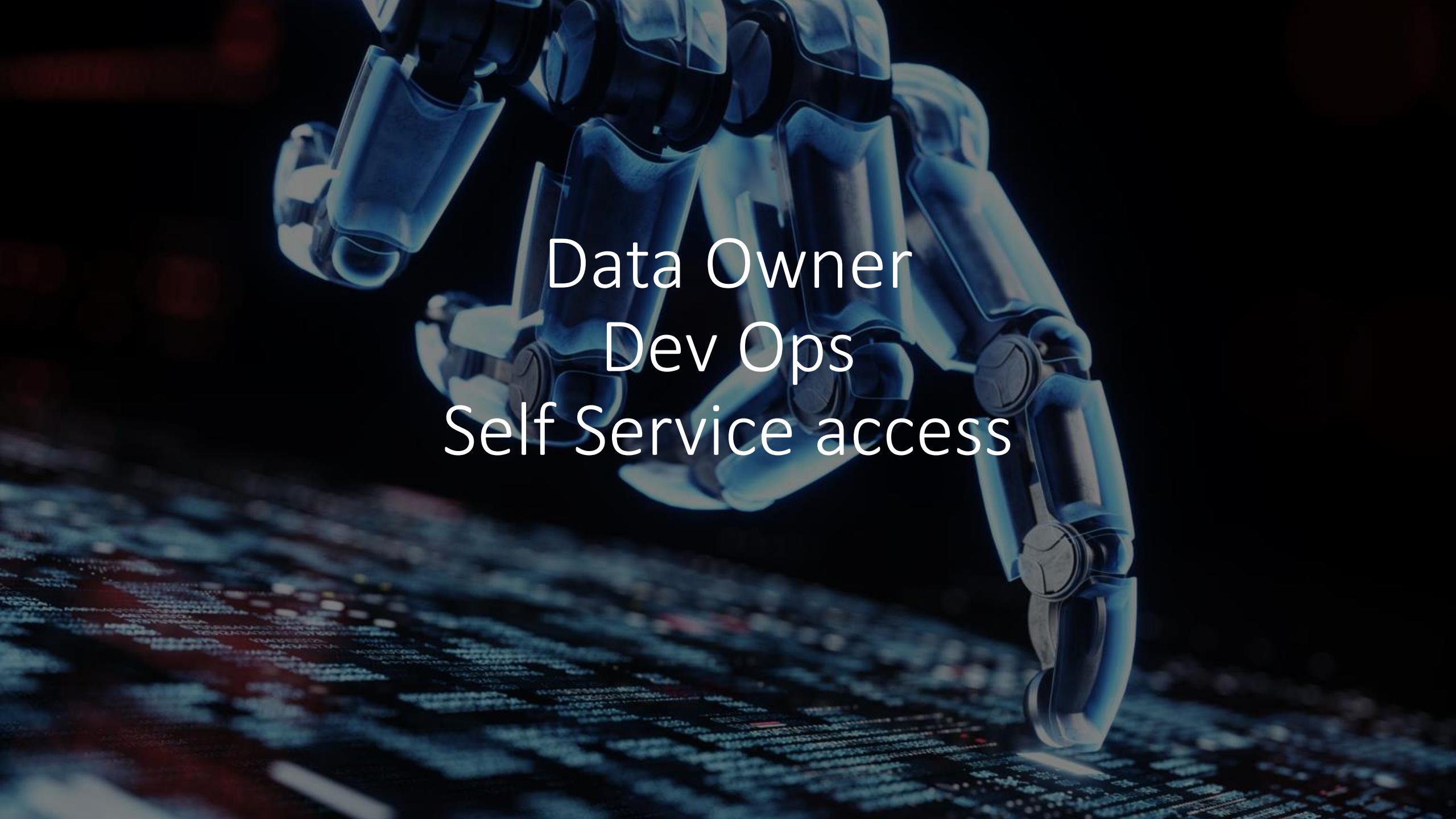
ededeuwvdlmpviewoxgn01 > West Europe > ededeuwvdlm

i All assets under this source will belong to the collection you select.

Data use management

Allow data access policies to be assigned to this source. [Learn more](#)

Enabled



Data Owner
Dev Ops
Self Service access

Data Owner policies

Currently in Preview

- **Azure Storage**
- **Azure SQL**
- **Azure Arc Enabled**
- **Resource Groups**
- **Subscription**

Data resources
Select a type of data resource to apply your policy statement to.

Data sources
Systems where data is stored. Sources can be hosted in various places such as a cloud or on-premises.

Assets
Individual objects stored within the data catalog.

Data source type *

Select data source type

- Azure Blob Storage
- Azure Data Lake Storage Gen2
- Azure SQL Database

Dev Ops policies

Manage Access to System Metadata

SQL Performance Monitoring

SQL Security Auditing

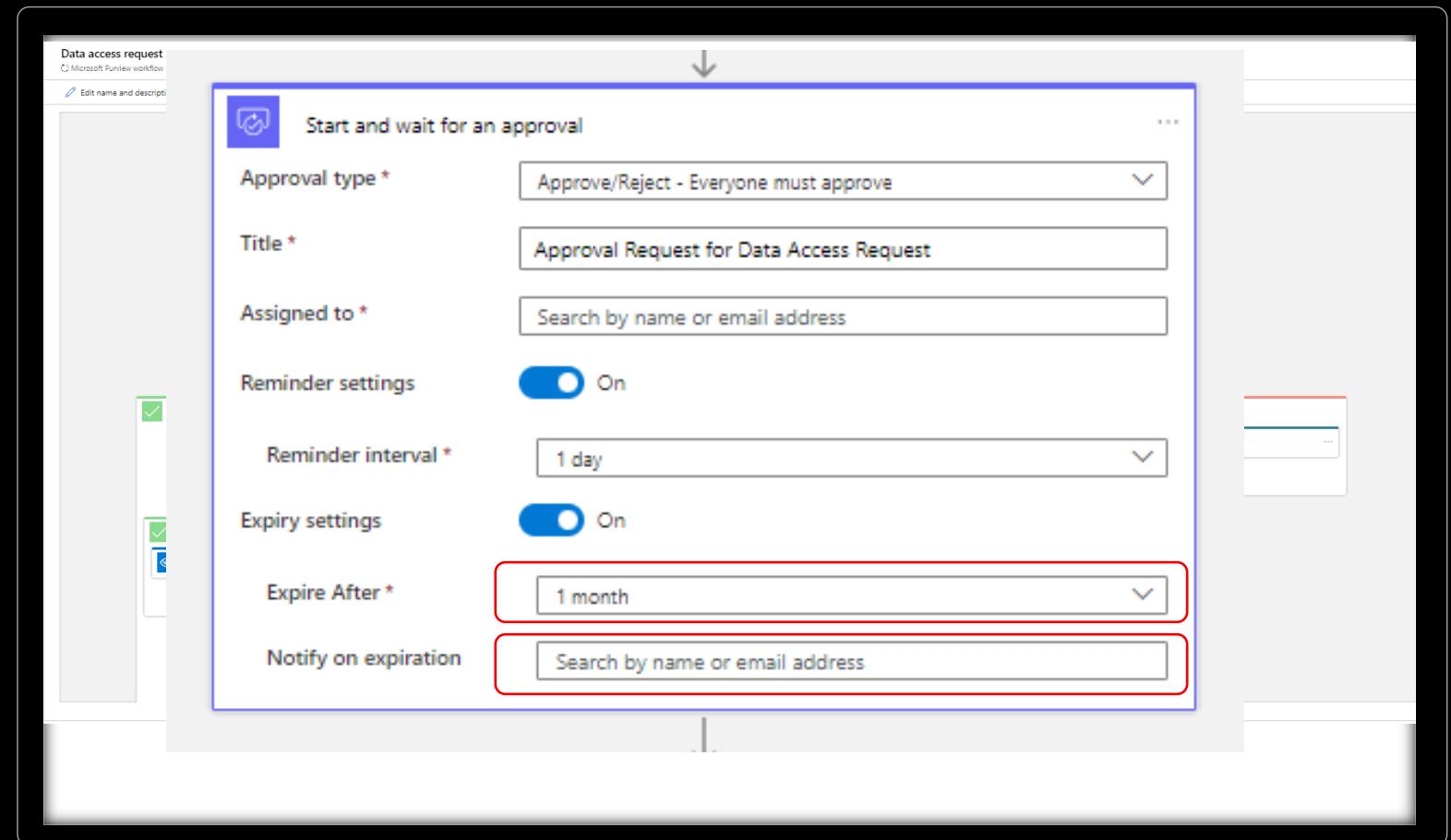
The screenshot shows the SSMS Object Explorer on the right side of the interface. The tree view displays the following structure:

- WideWorldImportersDW
 - Database Diagrams
 - Tables
 - System Tables
 - External Tables
 - Graph Tables
 - Views
 - System Views
 - INFORMATION_SCHEMA.CHECK_CONSTRAINTS
 - INFORMATION_SCHEMA.COLUMN_DOMAIN_USAGE
 - INFORMATION_SCHEMA.COLUMN_PRIVILEGES
 - INFORMATION_SCHEMA.COLUMNS
 - INFORMATION_SCHEMA.CONSTRAINT_COLUMN_USAGE
 - INFORMATION_SCHEMA.CONSTRAINT_TABLE_USAGE
 - INFORMATION_SCHEMA.DOMAIN_CONSTRAINTS
 - INFORMATION_SCHEMA.DOMAINS
 - INFORMATION_SCHEMA.KEY_COLUMN_USAGE
 - INFORMATION_SCHEMA.PARAMETERS
 - INFORMATION_SCHEMA.REFERENTIAL_CONSTRAINTS
 - INFORMATION_SCHEMA.ROUTINE_COLUMNS
 - INFORMATION_SCHEMA.ROUTINES
 - INFORMATION_SCHEMA.SCHEMATA
 - INFORMATION_SCHEMA.SEQUENCES
 - INFORMATION_SCHEMA.TABLE_CONSTRAINTS
 - INFORMATION_SCHEMA.TABLE_PRIVILEGES
 - INFORMATION_SCHEMA.TABLES
 - INFORMATION_SCHEMA.VIEW_COLUMN_USAGE
 - INFORMATION_SCHEMA.VIEW_TABLE_USAGE
 - INFORMATION_SCHEMA.VIEWS

Self-service access policies

Data Access (Governance)

- Azure SQL Database
- Azure Storage
- Expiration Functionality



Self-service access policies

Data Access (Governance)

- Azure SQL Database
- Azure Storage
- Expiration Functionality
- Approval

The screenshot shows a Microsoft Purview governance interface. At the top left is the Microsoft logo. Below it, a blue bar contains the text "Action required". The main content area displays a message: "Approve or reject the Microsoft Purview request for mssql://ededeudv1mmssql01.database.windows.net/[WideWorldImportersDW/Fact](#)". Below this, smaller text reads: "Required action: Approve or reject the following Microsoft Purview request for Data Engineer." Further down, it says "Item: [mssql://ededeudv1mmssql01.database.windows.net/](https://ededeudv1mmssql01.database.windows.net/)[WideWorldImportersDW/Fact](#)". The date "Date submitted: February 20, 2023 11:55 UTC" is also shown. At the bottom, there are two buttons: a blue "Approve >" button and a grey "Reject >" button. A note at the very bottom encourages users to "View all requests and approvals in Microsoft Purview. [Open Microsoft Purview Governance Portal](#) to learn more."

Workflows

Data Catalog

- **Create Glossary Term**
- **Delete Glossary Term**
- **Import Term**
- **Update Glossary Term**
- **Update Asset Attributes**

Apply "Create glossary term" workflow

Which items would you like to use this workflow on? [ⓘ](#)

Each item is in one of the four status below:

- Selected and enabled. Current workflow is applied on this item directly.
- Selected and disabled. Current workflow is applied on this item through inheritance, or you do not have permission to unapply workflow on this item.
- Non-selected and enabled. Current workflow can be applied on this item by checking the checkbox
- Non-selected and disabled. Current workflow can not be applied on this item, because another workflow of same type is applied on this item directly, or you do not have permission to apply workflow on this item.

Workflow scope

- ▽ Glossary
- > Business Owners
- > Workplace Analytics

Demo



Demo Use Case

I want to give a user or a group of users access to a specific schema in an Azure SQL Server.

I want to start building a dataset in Power BI but have no access to the data. I need to have access to a certain server.

Key takeaways

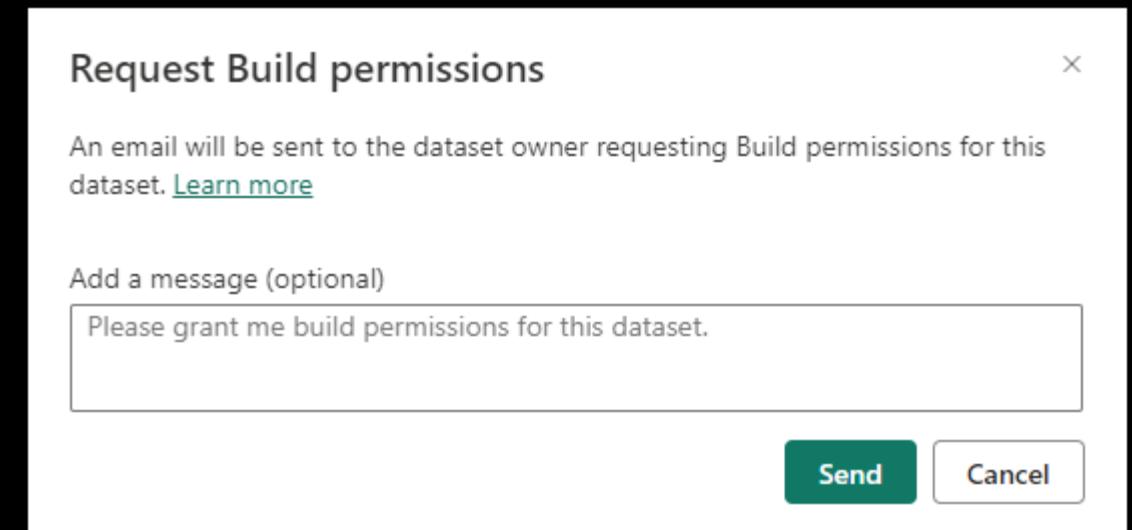
Microsoft Purview data policies provide:

- A single-pane of glass, cloud-based experience
- Seamless integration with Microsoft Purview Data Map and Catalog
- At-scale access provisioning
- Visibility into who has access
- Reduced need for privileged accounts to configure access

Request access to Power BI content

In order to start building new reports on top of a dataset, build permissions are required.

Permission request can be initiated from within 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

HTTP

Copy

Try It

```
GET https://api.powerbi.com/v1.0/myorg/admin/workspaces/modified
```

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

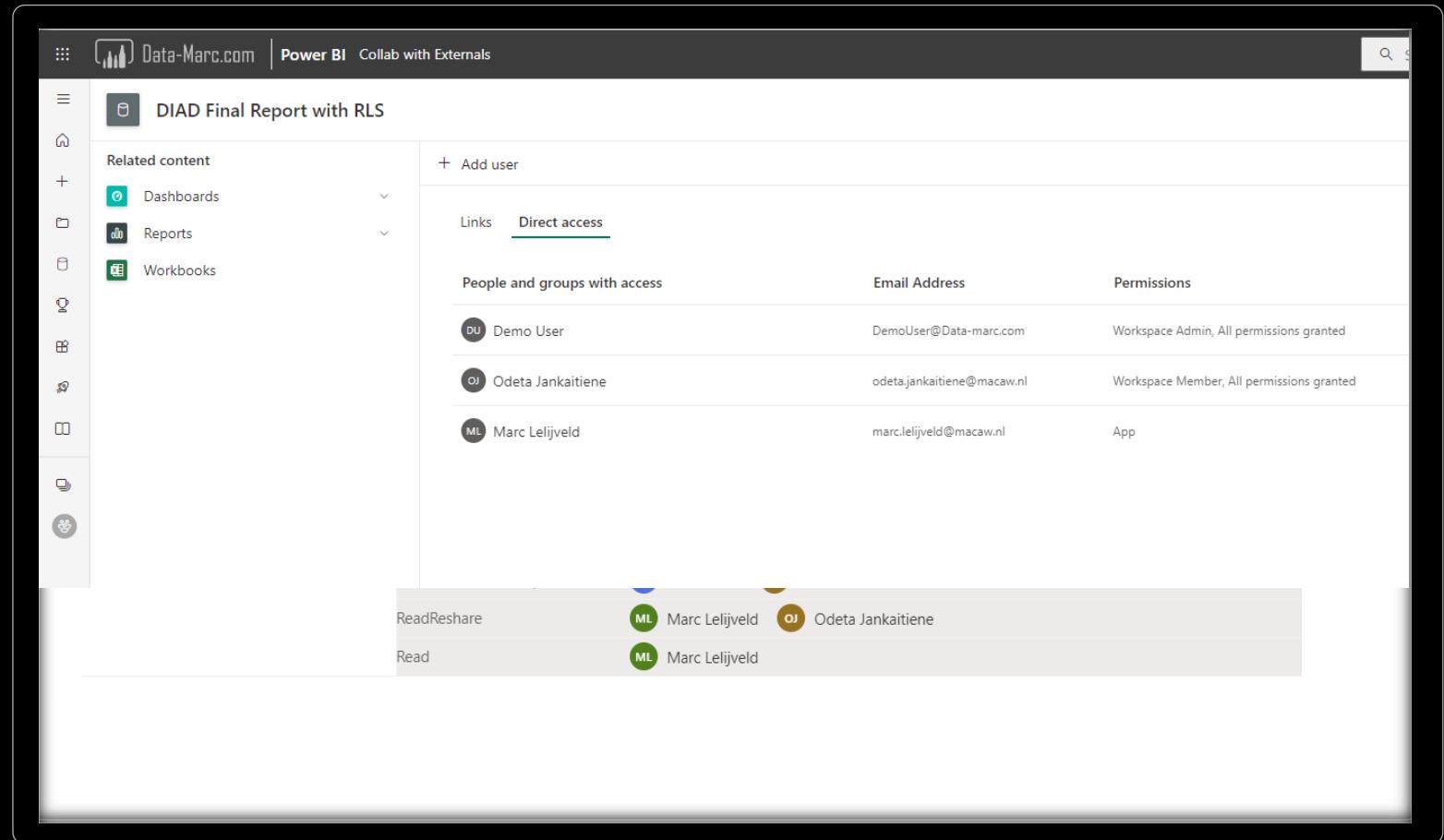
- Roles (RLS/OLS) are not visible within Purview.

The screenshot shows the 'Row-Level Security' page in Power BI. On the left, a sidebar lists roles: Australia Role (0), Canada Role (0), Germany Role (2), Japan Role (0), Mexico Role (0), Nigeria Role (0), and USA Role (0). The 'Germany Role (2)' item is selected and highlighted with a grey background. The main area is titled 'Members (2)' and contains a list of users: 'Marc Lelijveld' and 'Odetta Jankaitiene'. Below this list is a button labeled 'Add'.

The screenshot shows the 'Properties' tab for a dataset named 'DIAD Final Report with RLS'. The properties listed include: configuredBy (DemoUser@Data-marc.com), contentProviderType (PbixInImportMode), createdDate (Monday, February 13, 2023 at 3:20 PM Central European Standard Time), qualifiedName (https://app.powerbi.com/groups/19e1ef1e-878d-4061-8499-e61efef32c9d/datasets/eab1b679-006d-45b0-bc09-fdde4370d8e1), targetStorageMode (Abf), and users (ReadWriteReshareExplore, ReadReshare, Read). The users listed are 'Demo User' (ML), 'Odetta Jankaitiene' (DU), 'Marc Lelijveld' (ML), and 'Odetta Jankaitiene' (OJ). At the bottom, under 'Related assets', there are links to 'Workspace' and 'Collab with Externals'.

Some unclear aspects

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



The screenshot shows the Power BI service interface for a dataset named "DIAD Final Report with RLS". On the left, there's a sidebar with navigation icons and a "Related content" section listing "Dashboards", "Reports", and "Workbooks". The main area displays a table titled "People and groups with access" under the "Direct access" tab. The table includes columns for "Email Address" and "Permissions". Three users are listed:

People and groups with access	Email Address	Permissions
Demo User	DemoUser@Data-marc.com	Workspace Admin, All permissions granted
Odetta Jankaitiene	odetta.jankaitiene@macaw.nl	Workspace Member, All permissions granted
Marc Lelijveld	marc.lelijveld@macaw.nl	App

At the bottom, there are two buttons: "ReadReshare" and "Read". The "ReadReshare" button is associated with Marc Lelijveld (ML) and Odetta Jankaitiene (OJ). The "Read" button is associated with Marc Lelijveld (ML).

Some unclear aspects

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

Edit "Power BI Wide World Importers"

Overview Schema Lineage Contacts

Select contacts to add to this asset.

Experts
Experts are often business process or subject matter experts in different business areas or departments.

Select user or group
Search by name or email address.

Owners
Owners are often senior executives or business area owners that define governance or business processes over certain data areas.

Select user or group
Search by name or email address.

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.

Security & compliance

- Classification
- Sensitivity labels (Power BI + other MSFT services)
- Endorsement
- User management
 - Policies in Purview
 - Link to IAM
- PBI Admin portal settings to get started

A large, three-dimensional yellow question mark is positioned in the center of the frame, slightly angled towards the viewer. It is surrounded by numerous smaller, dark gray question marks of various sizes, creating a sense of depth and repetition.

Any questions left?

Thank you for attending!



Marc Lelijveld

Solution Architect – Data & Analytics
Macaw Netherlands

- @MarcLelijveld
- linkedin.com/in/MarcLelijveld
- Data-Marc.com
- Data-Marc



Erwin de Kreuk

Principal Consultant – Data & AI
InSpark

- @ErwinDeKreuk
- linkedin.com/in/ErwinDeKreuk
- ErwinDeKreuk.com

