Successfully Collaborate with Externals in Power BI

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Intro to Our Use Case

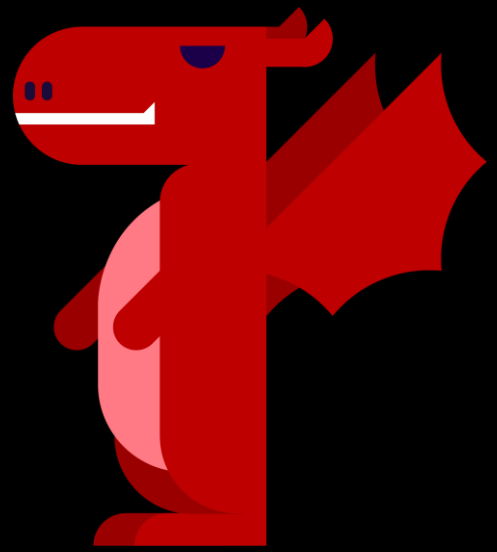
- Fictive company “Data-Marc.com”
- Consultancy firm doing work for this company
- All following demos will use these personas

Power Bier

- Fictive company as part of “Data-Marc.com” concern selling beer.
- Short on staff, therefore hired a consultancy firm for Data Analysis

Personas

Company representative



Consulting company representative

Challenge

- Get accounts for my external consultants takes too long…
  - IT is slow
  - I don’t want to pay their licenses (hey, I’m Dutch 🤑)
- My project is in a rush, business needs insights!
- I want them to be able to start working on the solution RIGHT NOW!
- I want to share my supplier performance reports with the suppliers so they can review and improve their own services.
- I don’t have premium, what other options do I have?

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Microsoft Power Platform
FASTTRACK RECOGNIZED SOLUTION ARCHITECT
2022

MVP Microsoft® Most Valuable Professional

Microsoft MCT

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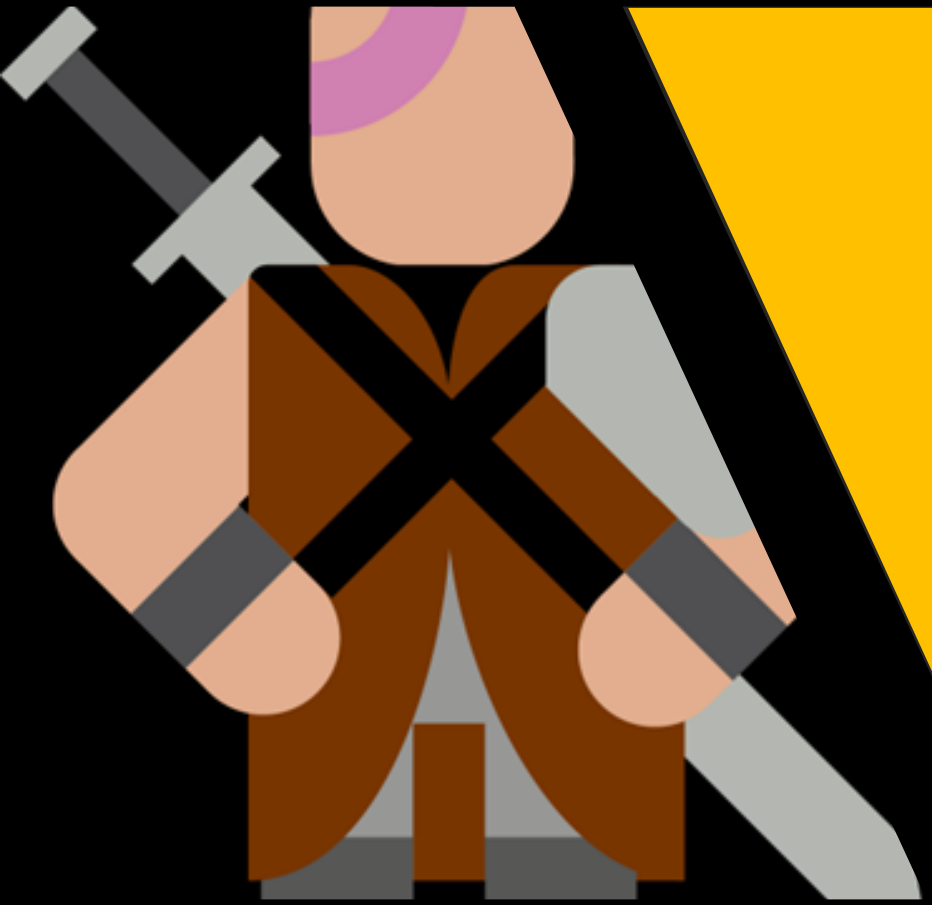
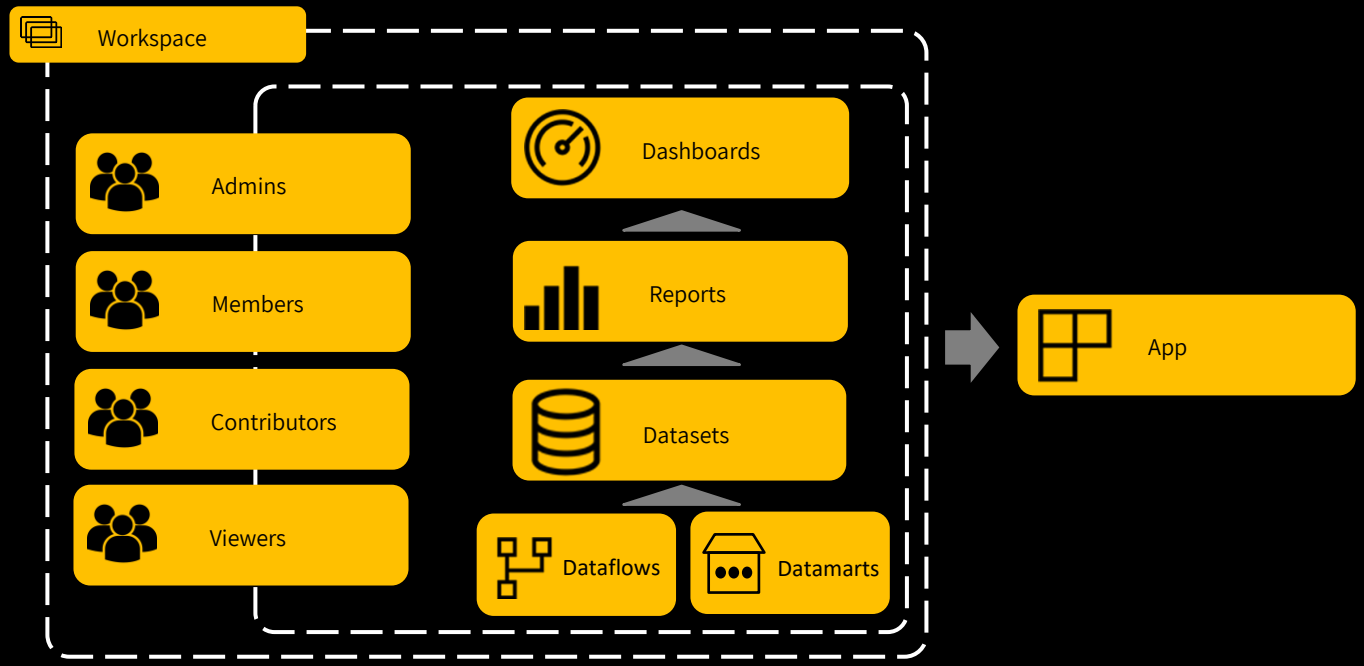


Agenda

- Sharing mechanisms & purpose
- Security 101
- Things you need to set up
- Licensing

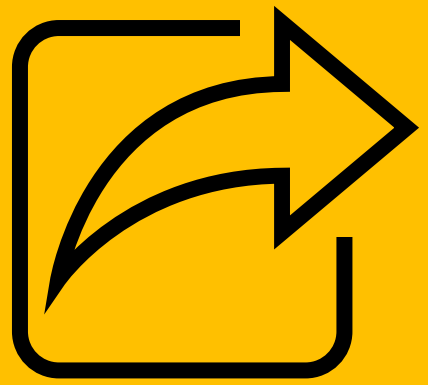
Overview of Power BI Service

- Administrator settings
- Security
- Gateway connections
- Workspaces & its content

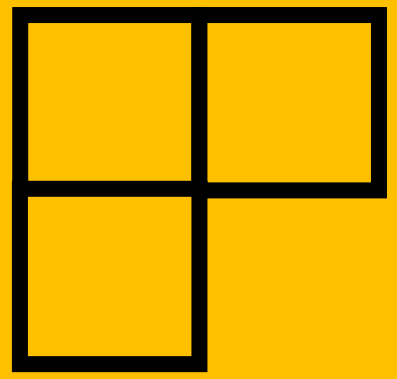


Sharing Mechanisms

Workspace level
Viewer permissions



Direct share items
from the workspace



Publish a
Power BI App

Sharing Purpose

View and interact with data

- Share report, app, dashboard
- Publish to web
- Embed in a website or application

Collaborate or use data for new content

- Share datasets
- Share workspaces
- Share dataflows

What about Working with Excel?

Analyze in Excel

Connected Excel Tables

Internal vs External – Prerequisites

- Internal User
  - Have an AAD account
  - Needs Power BI license
  - Dataset access without additional settings
- External User
  - Needs an AAD guest account
  - Needs Power BI license or can use own*
  - Additional Tenant settings
  - Dataset access plus additional dataset settings (enable the **dataset external sharing** option)

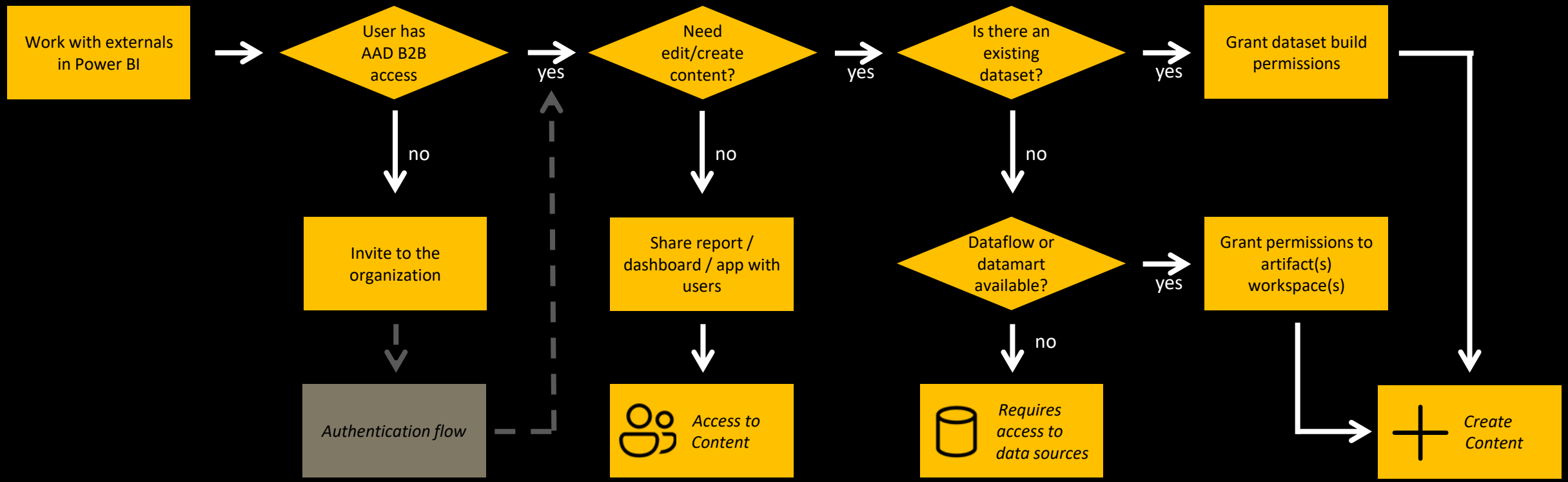
*unless the company has Premium

Internal vs External – Use Cases

A company hires a media agency for commercials and ads on YouTube, Instagram, etc. They bring together the company‘s financial data and the agency‘s campaign data (number of views, view duration, etc.) to determine the effectiveness and efficiency of their campaigns.

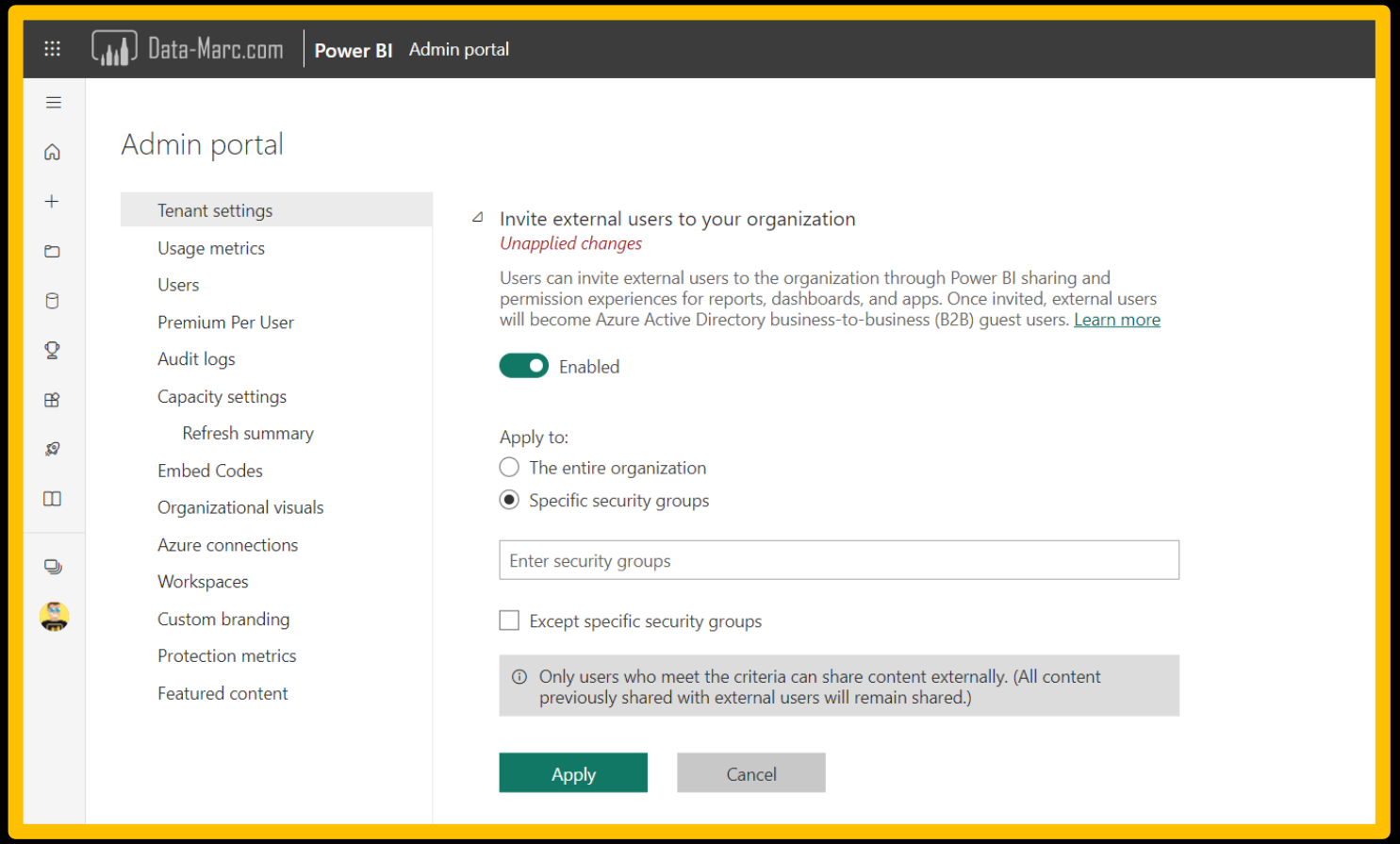
The Distributors sell the ingredients to the Vendors, who sell the finished products to Customers. The Distributors are interested in creating a report allowing the Vendors to view their sales at the Distributors. In addition, the report would enable the Vendors to access other useful information such as potential opportunities with clients, file-sharing capabilities between Distributor and Vendor, the locations where their products are being sold, and details about their best-selling and least popular products.

How to Work with Externals in Power BI?



Considerations

Allow everyone to invite others or only a selected group of people managed via an AD group



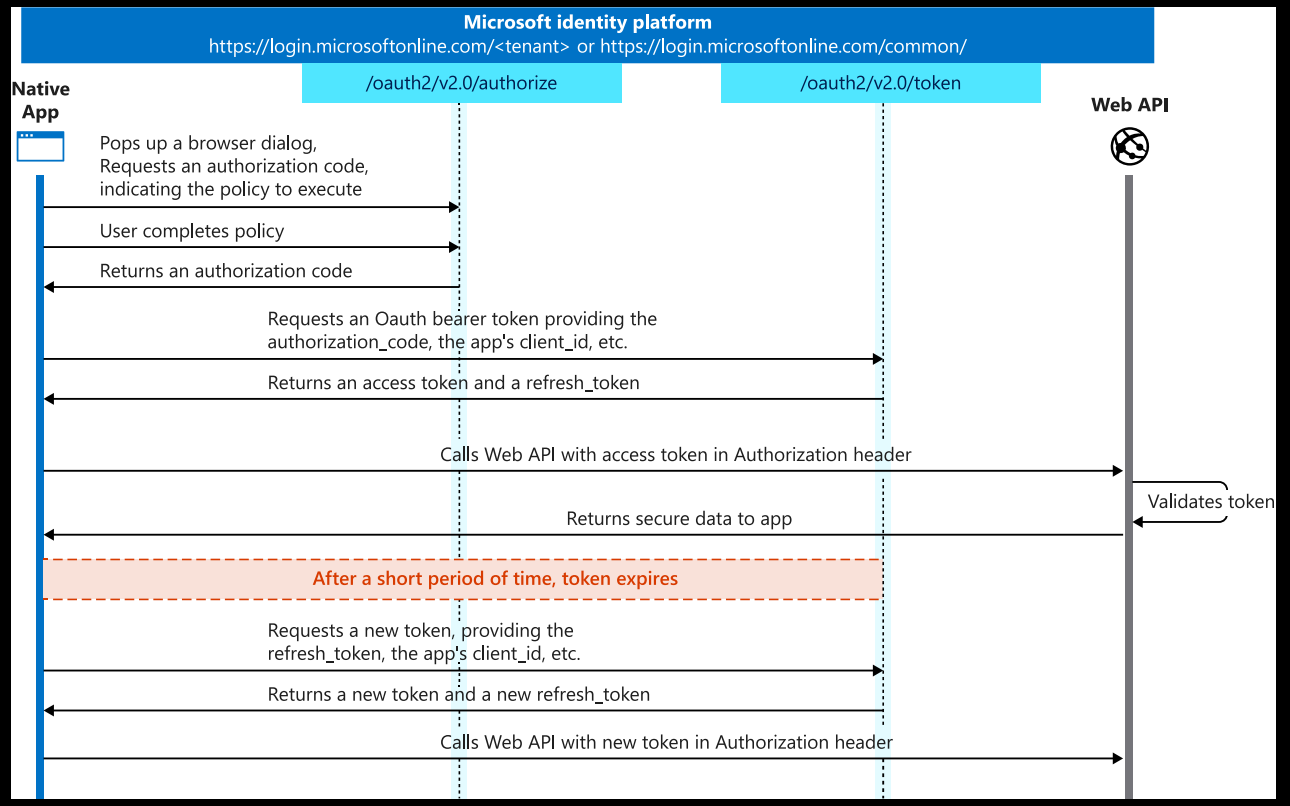
Security 101

Principle of least privilege as possible

Authentication

Power BI is part of the Microsoft cloud that runs on Azure.

- Power BI makes use of the generic centralized identity access platform – Microsoft Identity platform and OAuth 2.0 code flow.
- If you're already using anything in M365, access is handled in the same way.
- If you're maintaining Active Directory on-premises, you can setup AD sync to Azure to get one centralized security mechanism.



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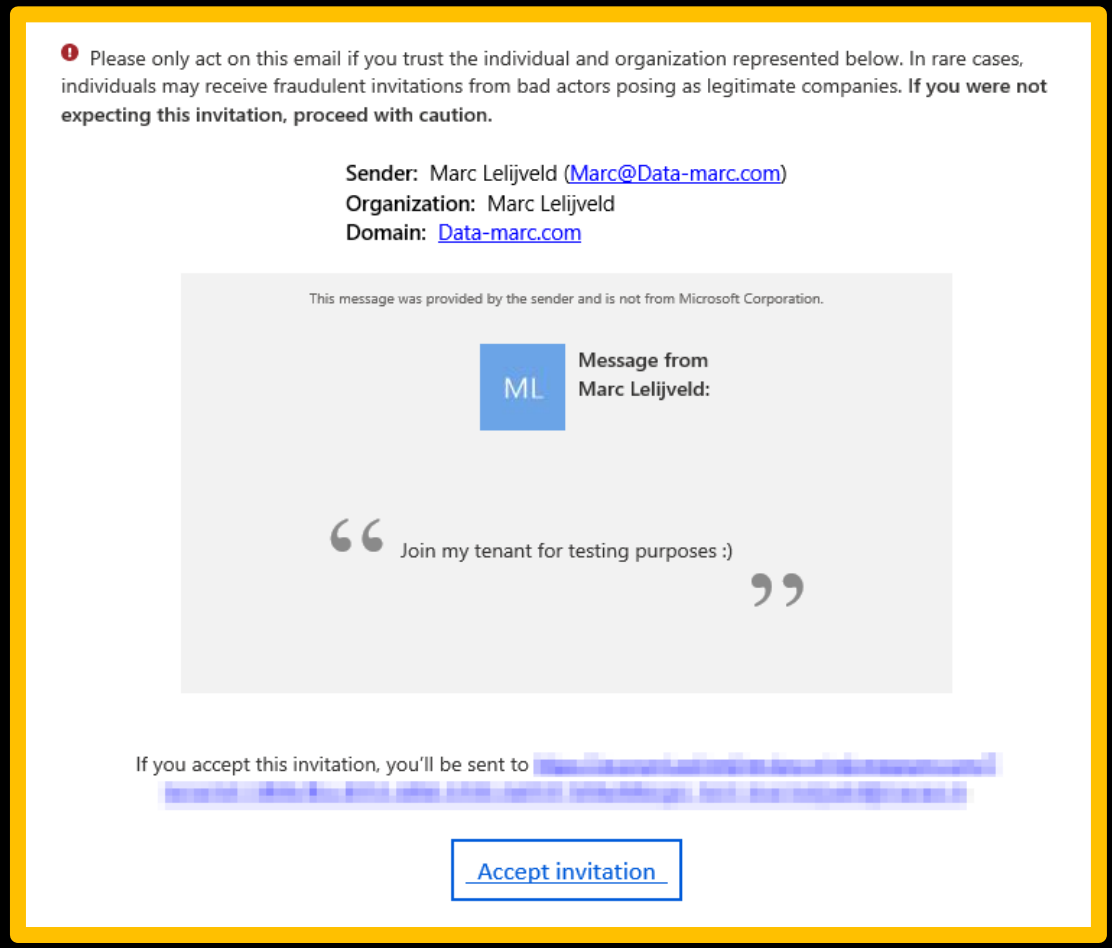
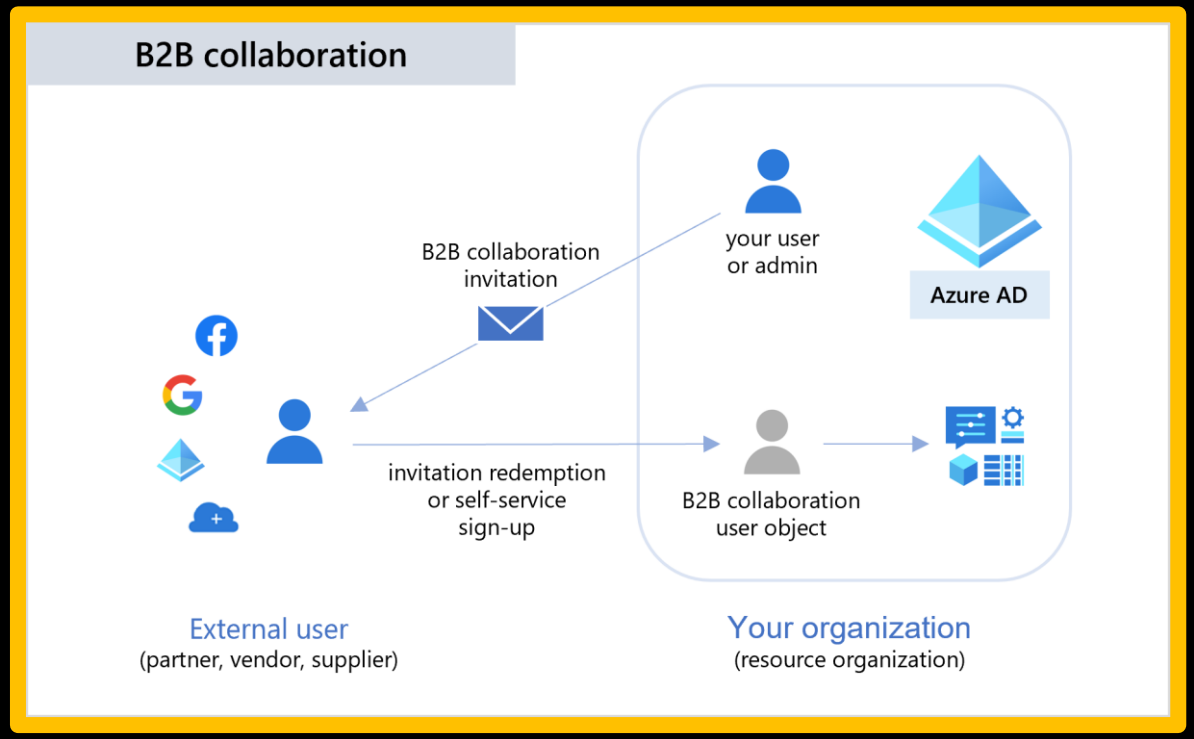
Invitation to Join a Tenant

You must be invited to join another tenant first, before you can start sharing with externals, or start collaborating.

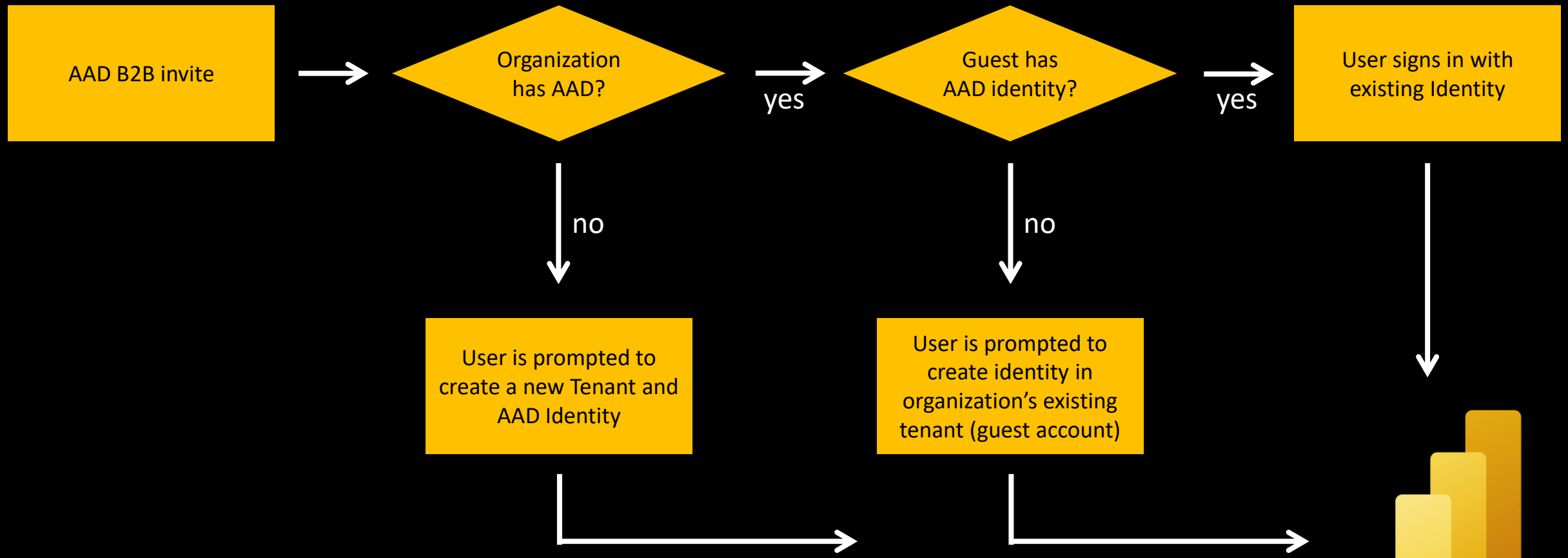


Authentication

For B2B access, an AAD connection between both collaborative Active Directories is preferable.



Authorization flow

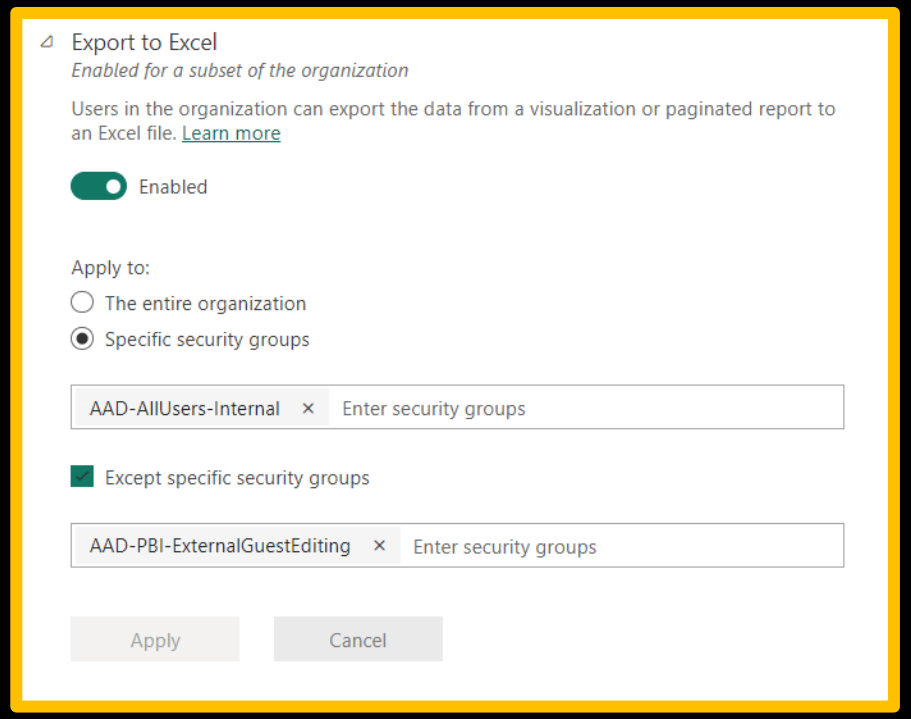


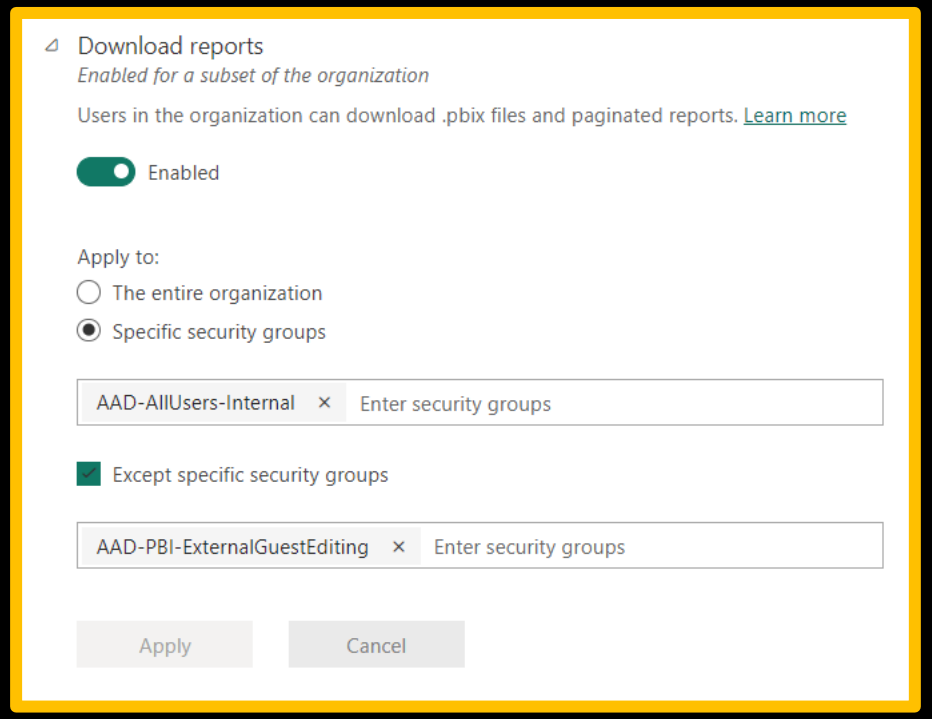
Demo

Join external organization and view external content

Can Externals Get Data out of Power BI?

It depends on your tenant settings in Power BI.
Use the except function, or setup only for internal users.





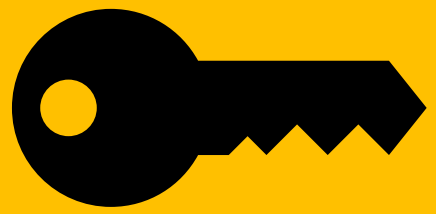
Monitoring

- Regularly review if they still need access (solution owners)
- Monitor Audit Logs to see what they’re doing (admins)

What Needs to be Done?

Power BI Settings

Tenant Settings – General



Allow AAD guests to access Power BI

Show AAD Guests in Power BI Service suggested people

Invite externals to your organization

Tenant Settings – Specific

Use datasets across workspaces

Allow specific users to turn on external data sharing

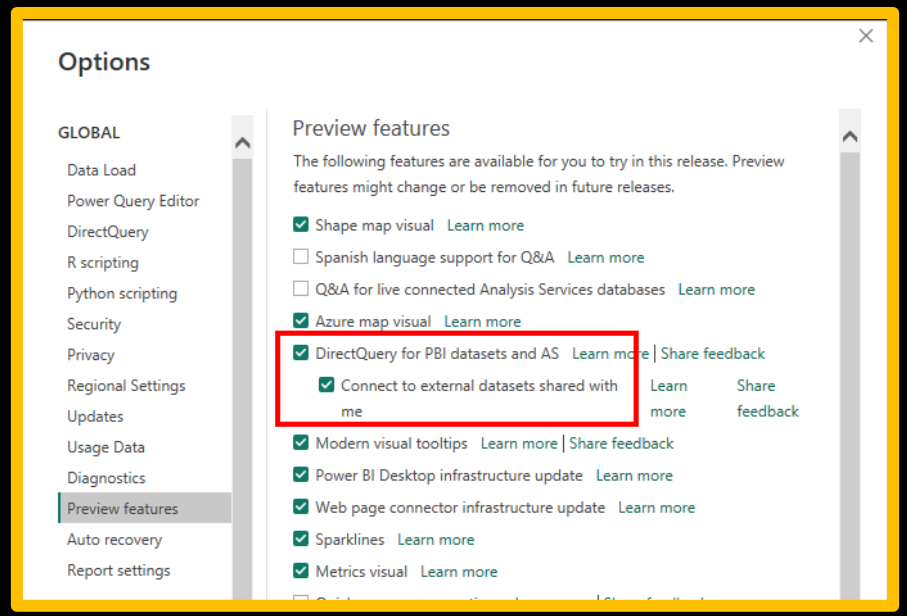
Allow AAD guest users edit and manage content in the organization

Guest users can work with shared datasets in their own tenants

External User Needs to Do

Accept AAD guest user invitation

Enable Preview features in Power BI Desktop



Demo – use case 1

Connect to external hosted Power BI Dataset from Power BI Desktop
And publish to own tenant.

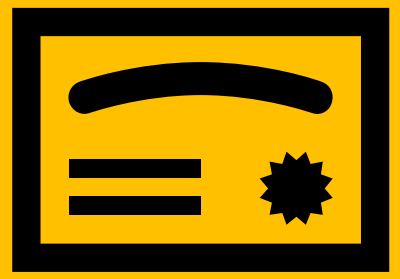
Demo – use case 2

Connect to external hosted Power BI Dataset from Power BI Desktop
And publish to the client tenant

Licensing

What about Power BI Licensing?

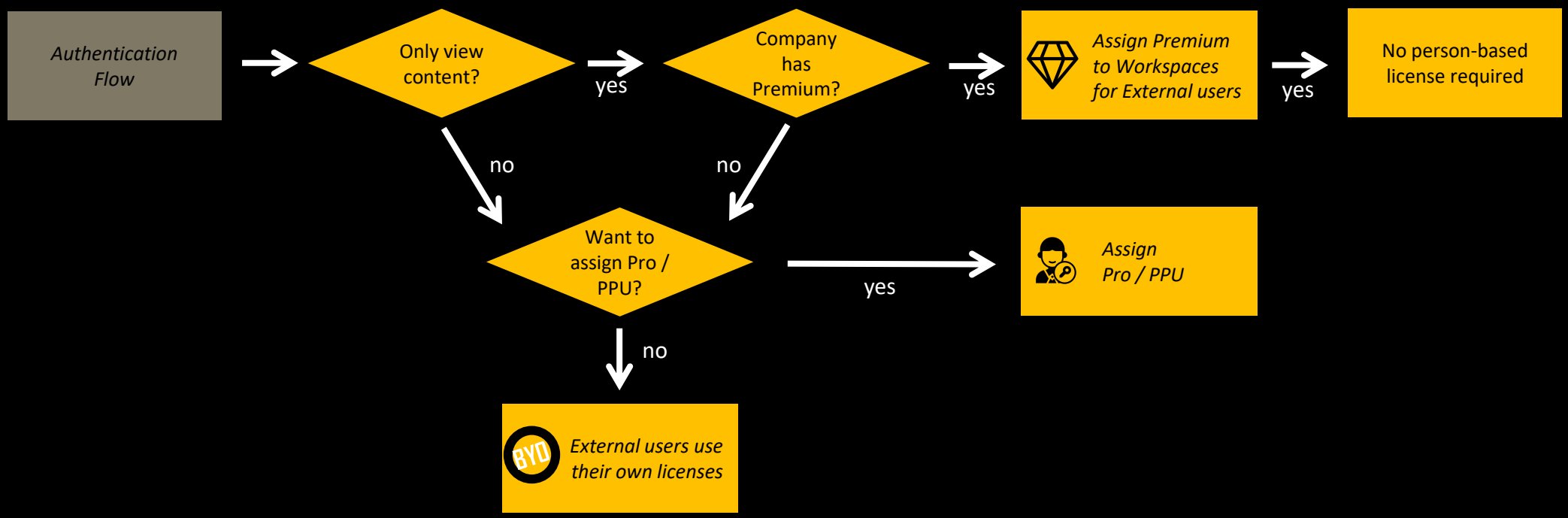
Shared content is backed by Power BI Premium



Hosting tenant assigns Power BI Pro License

Guest users bring their own Power BI Pro license

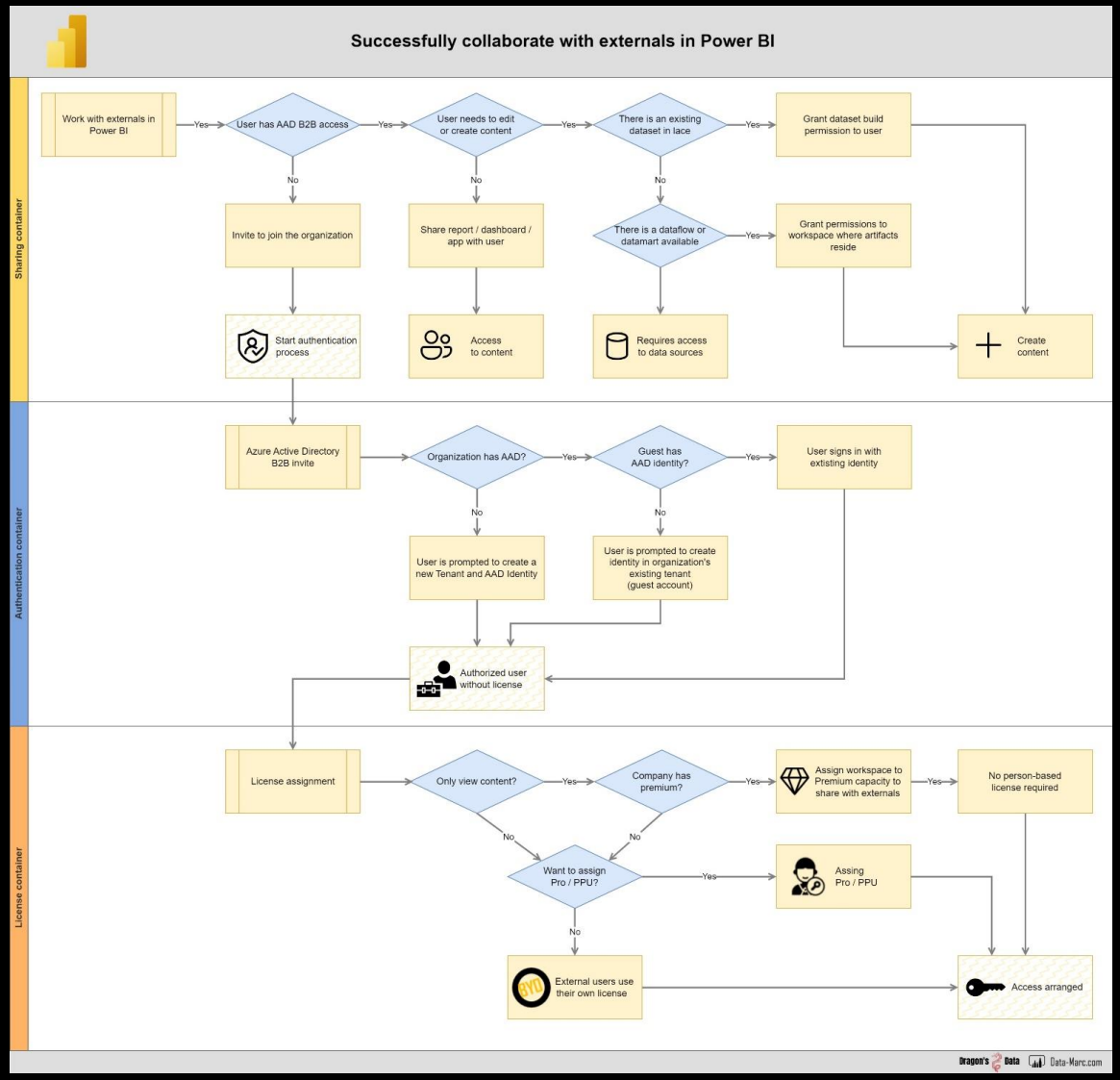
Licensing


Authentication Flow
Only view content?
yes
Company has Premium?
yes
Assign Premium to Workspaces for External users
yes
No person-based license required
no
no
Want to assign Pro / PPU?
yes
Assign Pro / PPU
no
BYO
External users use their own licenses

Wrap-Up & Remarks

Full Decision Tree

https://bit.ly/PBIDecisionTree



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Things That Will Help You to Get Started

Think about the purpose of sharing. Do they just need to view the content or also build on top of it?

If you work with external vendors, you do not always need to provide internal user accounts – they can use their own.

Security 101: Principle of least privilege as possible.

Consider the way how you share content:
Apps / Direct share / Workspace / Dataset build permissions

Consideration & Limitations

- Pro / PPU trial users won't be able to use this capability
- If connected tenants are not in the same region, your data might cross regions
- Cross-sovereign cloud scenarios are not supported
- You cannot share from personal workspaces (my workspace)
- Live connect to an externally located dataset is unsupported, all connections will be DirectQuery *(DirectQuery & composite model limitations apply)*

Resources ⚒

- Power BI Security whitepaper
  https://learn.microsoft.com/en-us/power-bi/guidance/whitepaper-powerbi-security
- SQL Bits 2020 – Kasper de Jonge – Power BI security deep dive
  https://youtu.be/I-1atHWpQFE
- Guy in a Cube - Publish from Power BI Desktop for external users
  https://youtu.be/x1xMxRXQ2So
- Distribute Power BI externally using Azure Active Directory B2B
  https://learn.microsoft.com/en-us/power-bi/guidance/whitepaper-azure-b2b-power-bi
- Overall decision tree to get started with external collaboration in Power BI https://bit.ly/PBIDecisionTree

Thank you for attending!

https://sqlb.it/?10052

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