Prepare Azure DevOps for your Microsoft Fabric needs
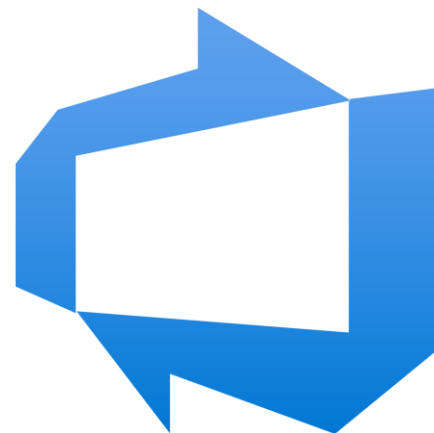
Microsoft Fabric

Azure DevOps

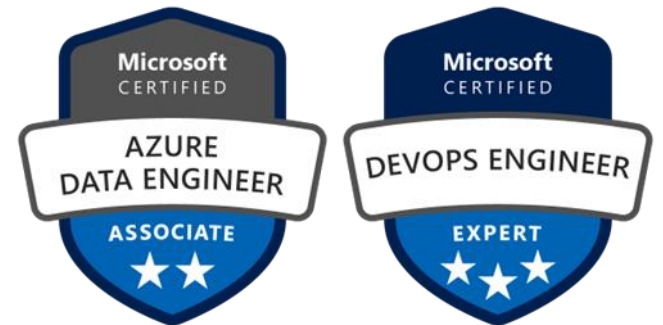**Kevin Chant**

Partners
Data Point Prague 2024

Agenda

- Bio
- Overview of Microsoft Fabric
- Intro to Azure DevOps
- Azure Repos
- Azure Pipelines
- Demos

Kevin Chant

- Data Engineering Manager in the Netherlands
- Worked in IT since the days of Windows 95
- Experience in various sectors
- Various certifications, dual-category MVP

- Twitter/Blue Sky: @kevchant
- LI: https://www.linkedin.com/in/kevin-chant/
- Blog: https://www.KevinRChant.com
- GitHub: https://github.com/kevchant

Microsoft Fabric

| Comp analytics platform | Lake centric and open | Empower every Business user | AI Powered |

Data Factory | **Synapse Data Engineering** | **Synapse Data Warehouse** | **Synapse Data Science** | **Synapse Real Time Intelligence** | **Power BI** | **Data Activator**
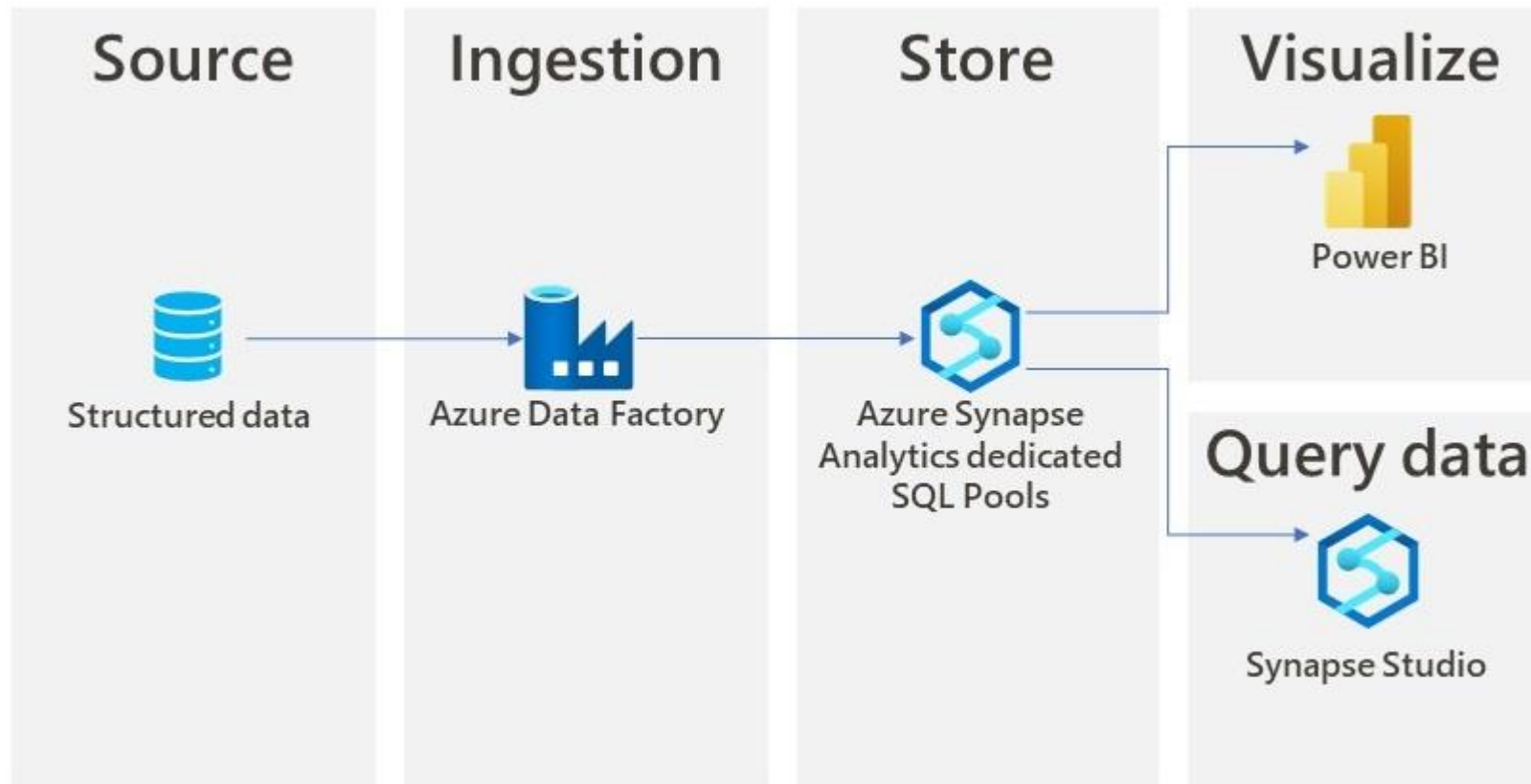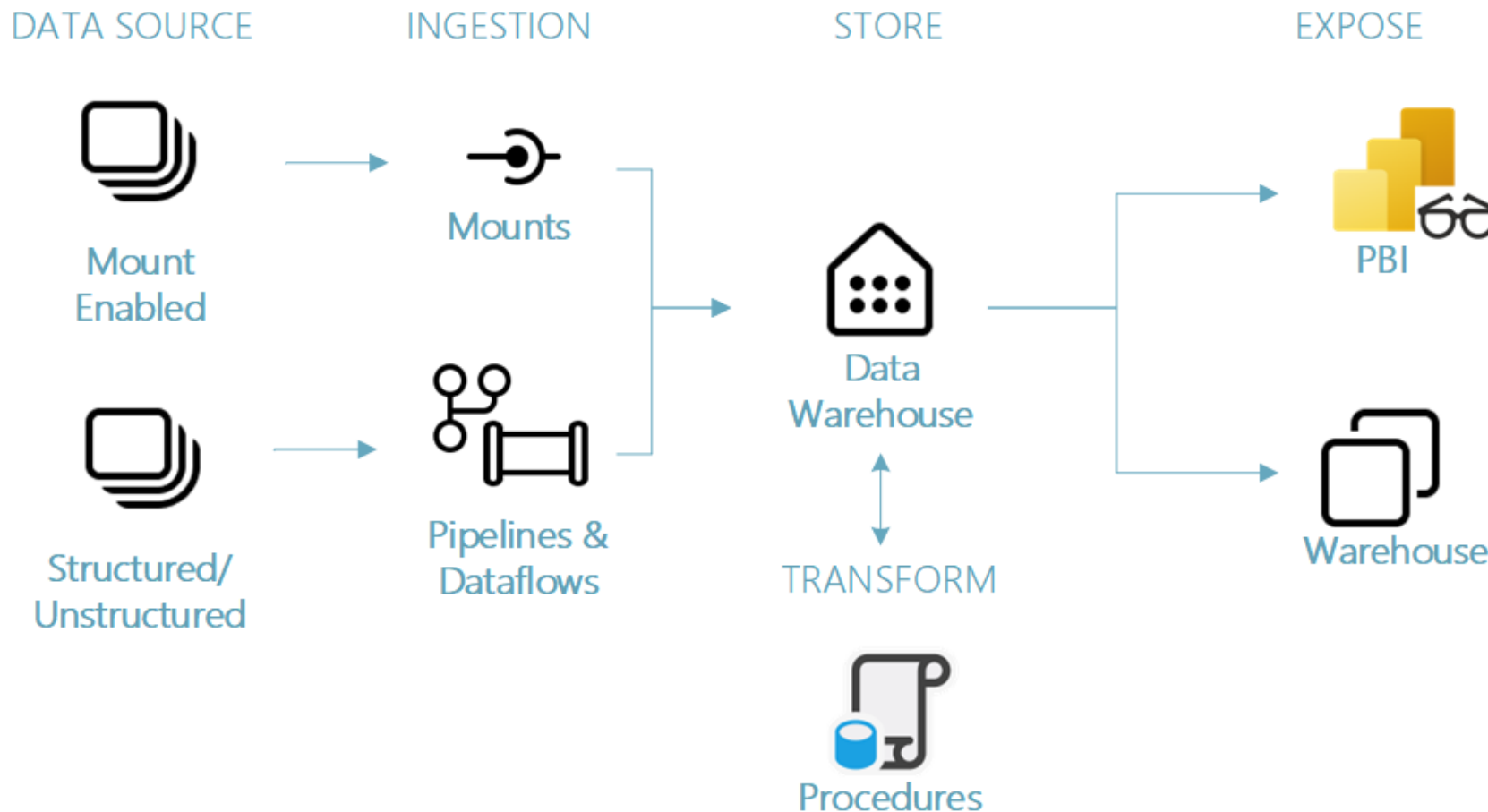
OneLake

Other auxiliary services as well

- Purview integration

- Security (unified solution coming at some stage)

- Git integration

Integrating various services

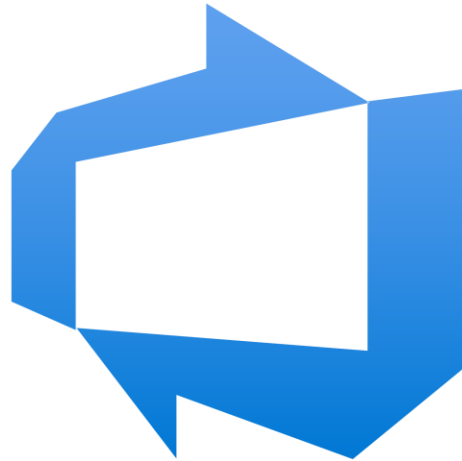| Source	Ingestion	Store	Visualize
Structured data	Azure Data Factory	Azure Synapse Analytics dedicated SQL Pools	Power BI
			Query data
			Synapse Studio

Within Microsoft Fabric

Fabric Demo

Azure DevOps

- Manages Application Lifecycle Management

- Two main versions

- Collection of services

Azure DevOps intro

Azure DevOps organization advice

- Create own organization

- Billing

- Advanced Security

- Become familiar with essential settings

Azure DevOps Project advice

- Choose right process & source control

- Advantages to project Agent Pools

- Parallel jobs

- User-friendly name for service connections

Azure Repos

Professional Azure DevOps for the real-world
Git Logo by Jason Long is licensed under the Creative Commons Attribution 3.0 Unported License.

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Working with Fabric items in Azure Repos

- Items supported by Git integration

- Power BI Projects synchronized

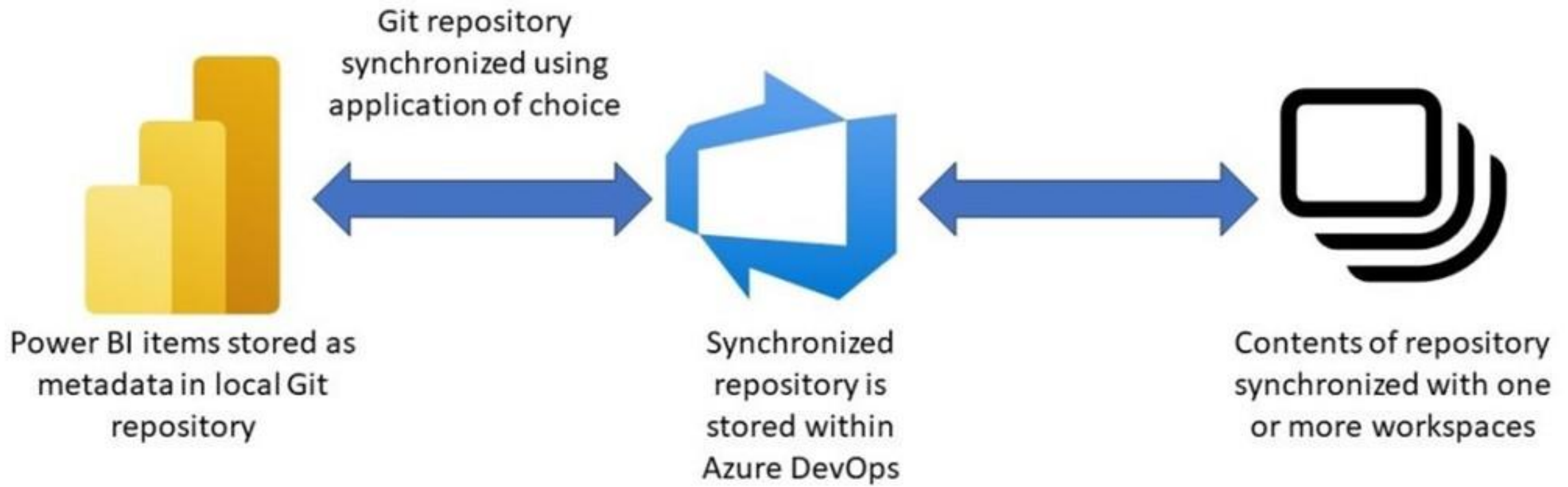- Data Warehouse Database Projects

- Azure Pipelines

Azure Repos & Git Integration

- Microsoft Fabric Git integration supports Azure Repos

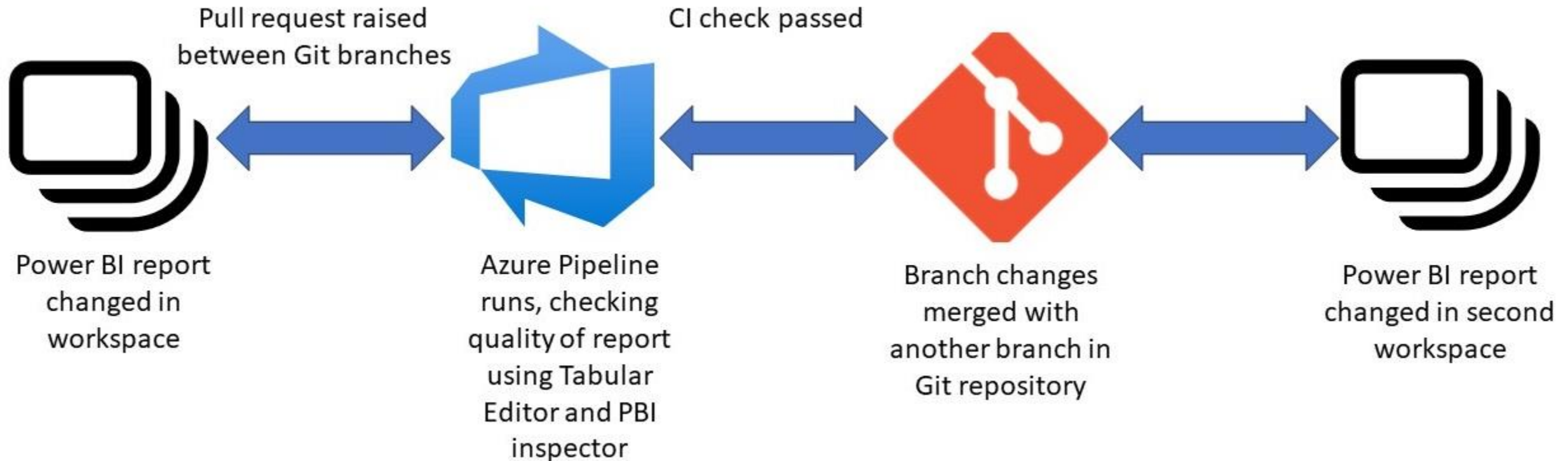- Requires Fabric or Power BI premium license

Working with Power BI projects

- Power BI Projects in Preview

- Stores metadata in various files

- Can be synchronized with Azure Repos for use with Microsoft Fabric Git integration

Using Git integration and Power BI Projects together

Git repository synchronized using application of choice

Power BI items stored as metadata in local Git repository

Synchronized repository is stored within Azure DevOps

Contents of repository synchronized with one or more workspaces

And then taking it a bit further…

Pull request raised
between Git branches

CI check passed

Power BI report
changed in
workspace

Azure Pipeline
runs, checking
quality of report
using Tabular
Editor and PBI
inspector

Branch changes
merged with
another branch in
Git repository

Power BI report
changed in second
workspace
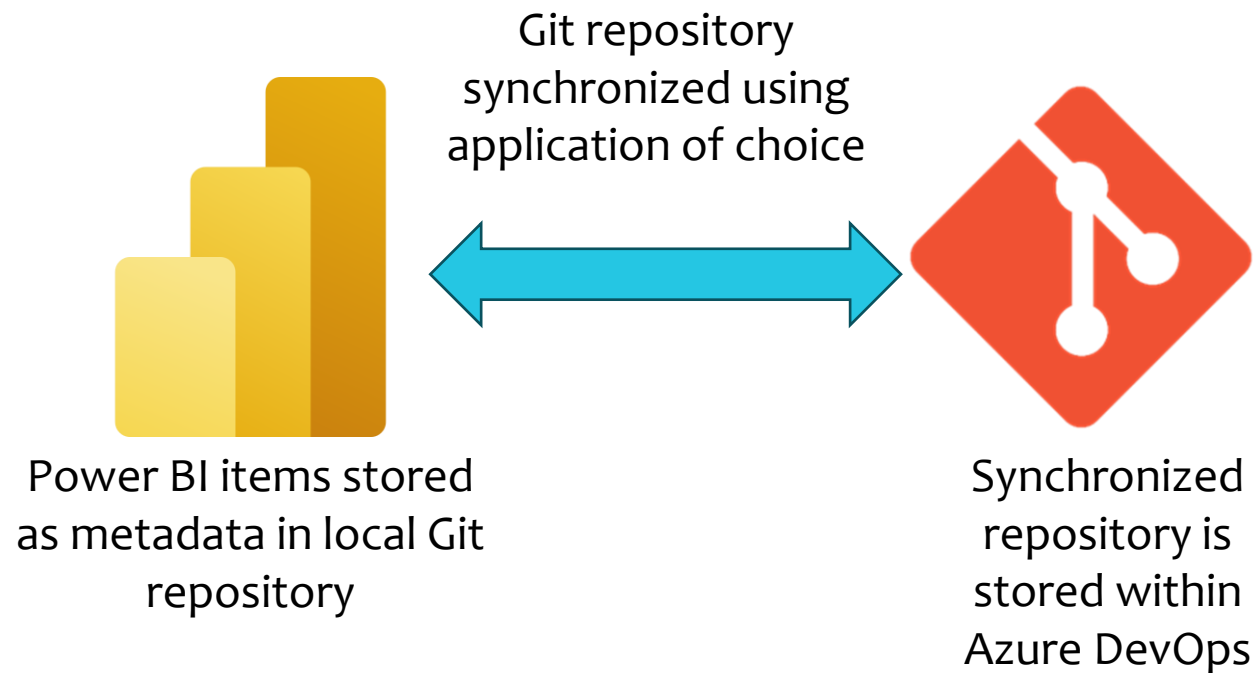
One other thing

- Direct Lake semantic models are currently not natively supported by Git integration

	Name	Git status	Type
⠿	DLTestDev	⊘ Unsupported	Semantic model

- However, you can get them to work with Git integration by extracting the model using Tabular Editor beforehand.

Power BI Project and Azure Repos demo

Git repository synchronized using application of choice

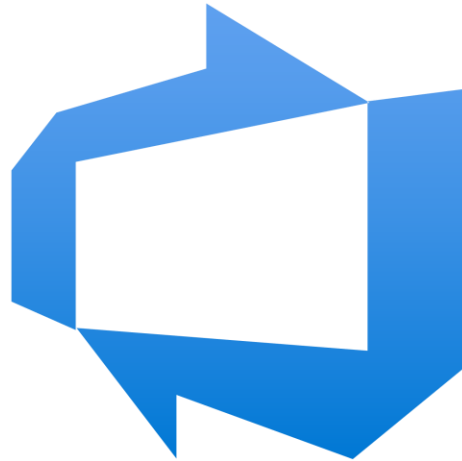Power BI items stored as metadata in local Git repository

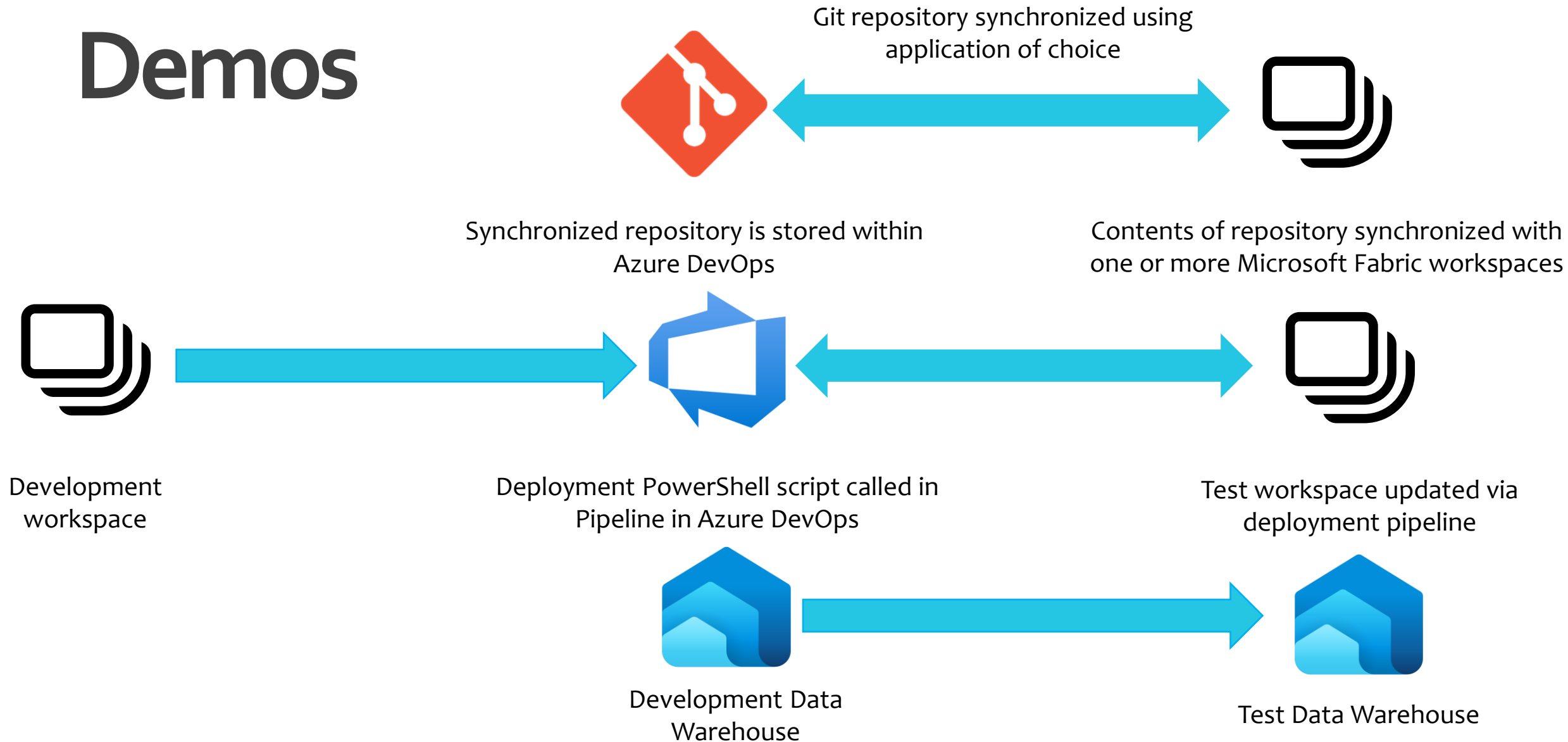Synchronized repository is stored within Azure DevOps

Azure Repos tips

- Branch models & strategies

- Branch policies & pull requests

- Advanced security

- Decide how to work with Git integration

Azure Pipelines

Demos

Git repository synchronized using application of choice

Synchronized repository is stored within Azure DevOps

Contents of repository synchronized with one or more Microsoft Fabric workspaces

Development workspace

Deployment PowerShell script called in Pipeline in Azure DevOps

Test workspace updated via deployment pipeline

Development Data Warehouse

Test Data Warehouse

Pipeline considerations

- Agents

- Configure triggers appropriately

- Keep secrets secret (variables, Azure Key Vault)

- Manage approvals accordingly

- YAML or classic pipelines

Why YAML?

- Closer to IaC

- Can perform pull requests

- Better for advance security scans

- More secure

Questions

Thank you

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