Enterprise & multi-tier Power BI deployments

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Data platform MVP

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BOOTCAMP

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What we cover today

- Our way of working
- The evolution of BI
- Deployment framework
- Demo time!
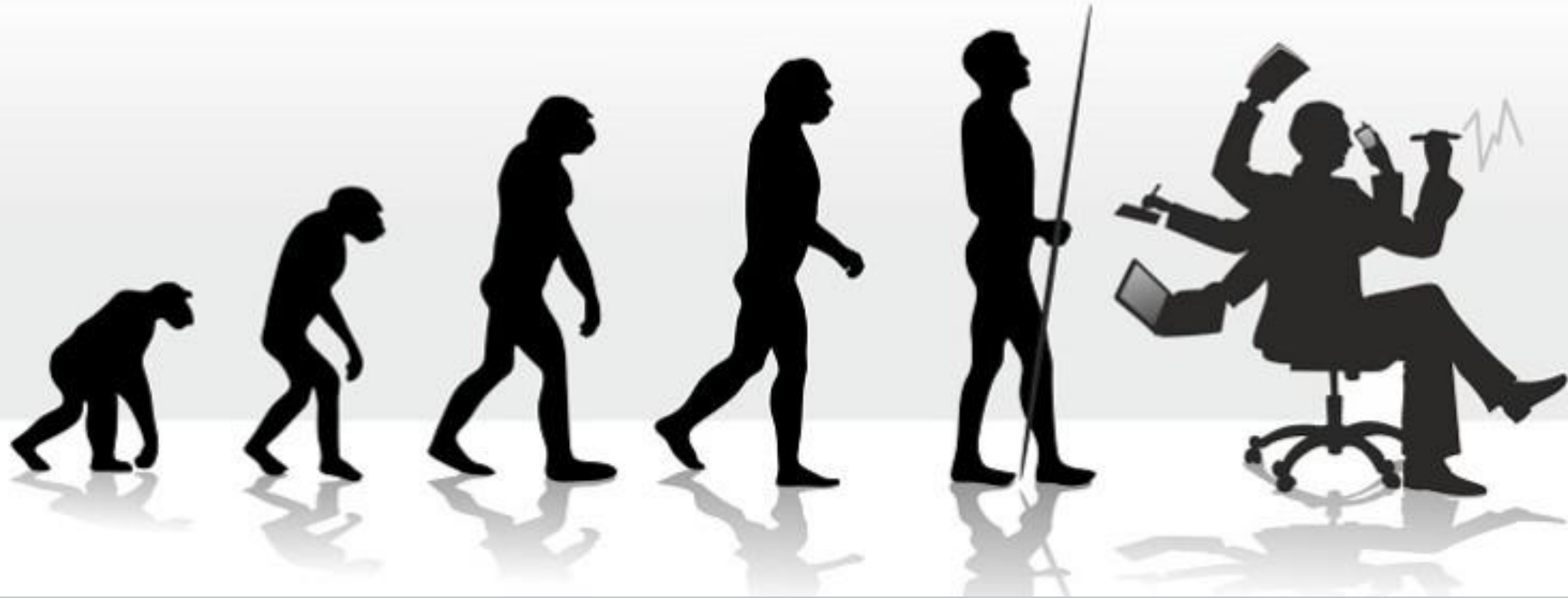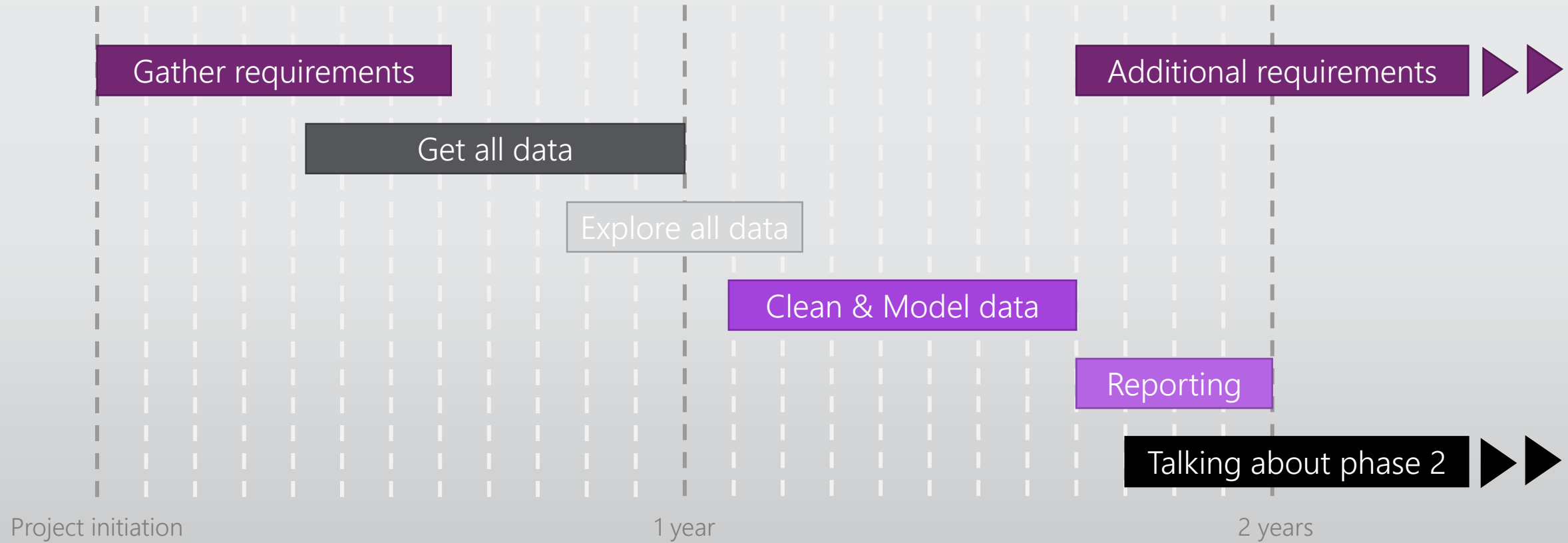- What about dataflows?
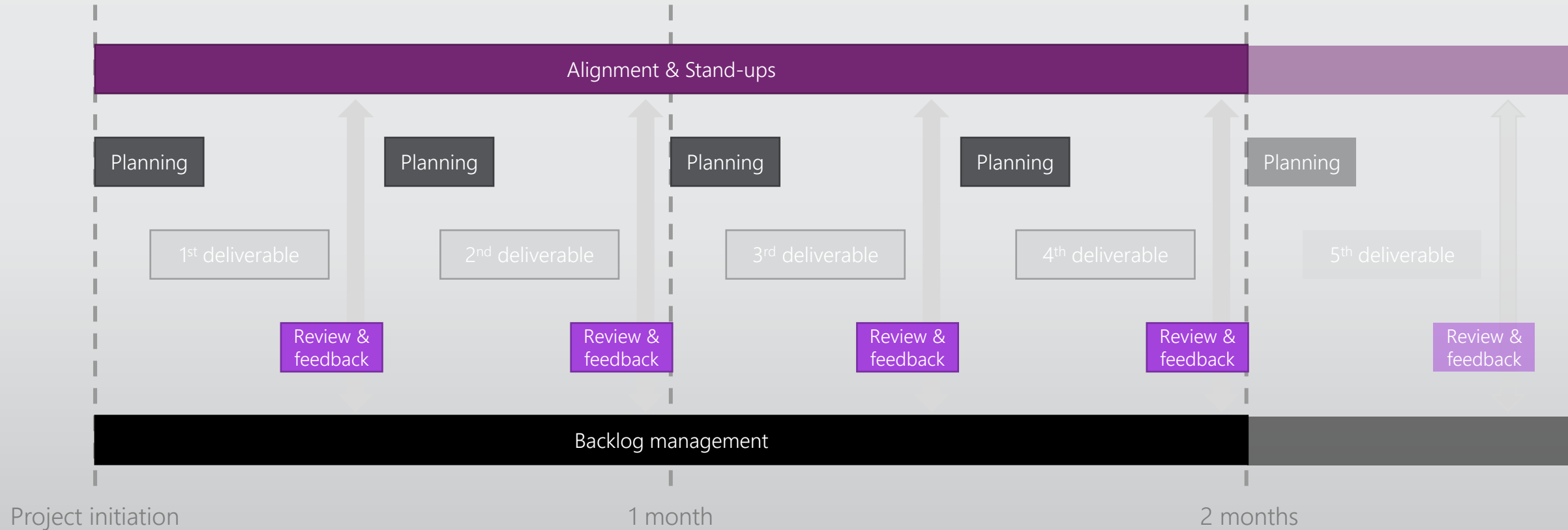- XMLA endpoints & roadmap

Our way of working

Busy era

Classic approach

Working on it...

⣷ This shouldn't take long.

Start working agile

Alignment & Stand-ups

| Planning | | Planning | | Planning | | Planning | | Planning |

| 1st deliverable | 2nd deliverable | 3rd deliverable | 4th deliverable | 5th deliverable |

Review & feedback

Review & feedback

Review & feedback

Review & feedback

Review & feedback

Backlog management

Project initiation

1 month

2 months

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The evolution of BI

The evolution of BI

3rd wave
End user BI

Everyone

2nd wave
Self-service BI
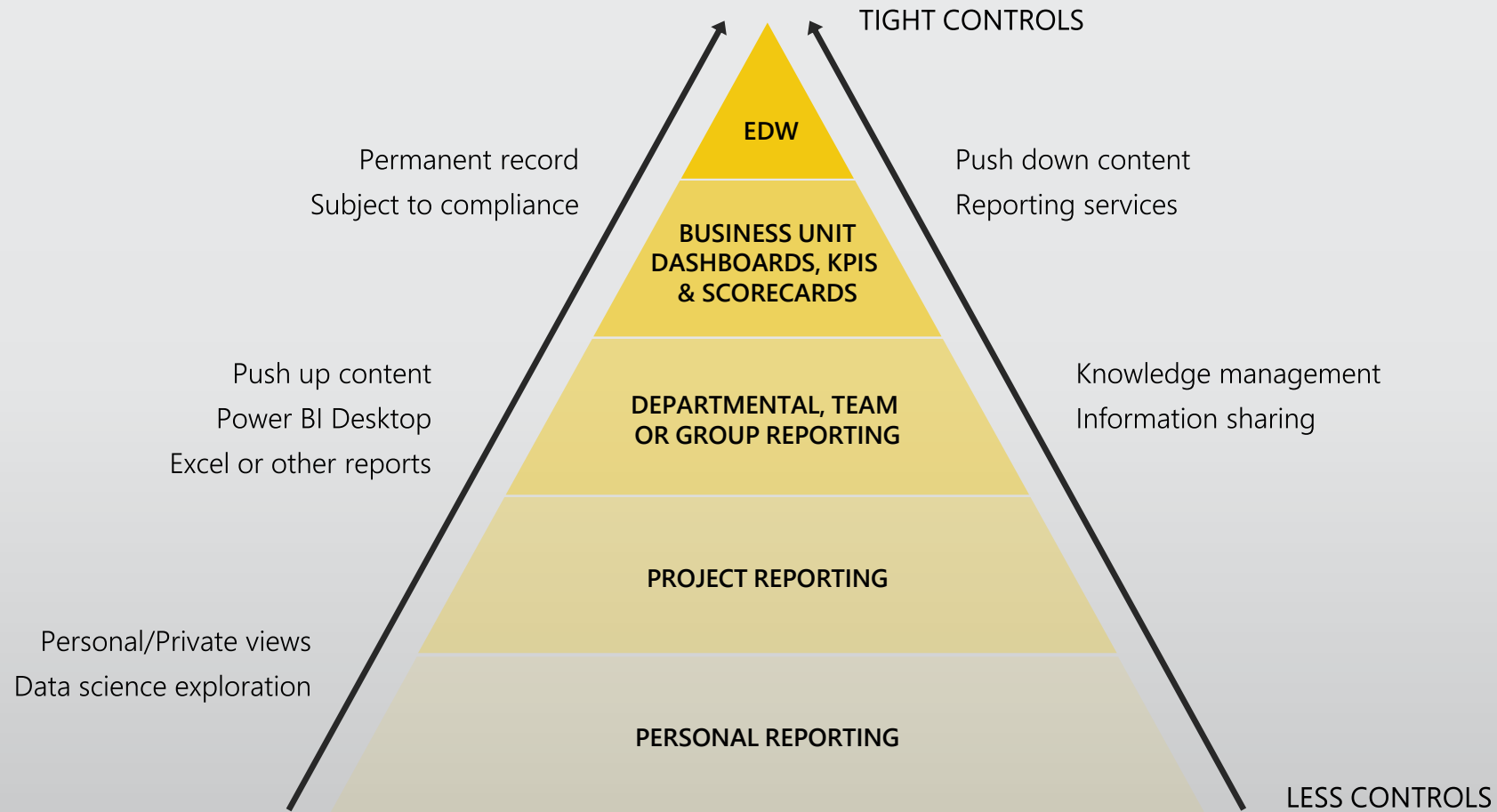
Analyst to end user

1st wave
Corporate BI

IT to end user

Self-service vs End-user BI

Governance Model

TIGHT CONTROLS

EDW

Permanent record
Subject to compliance

Push down content
Reporting services

BUSINESS UNIT DASHBOARDS, KPIS & SCORECARDS

Push up content
Power BI Desktop
Excel or other reports

DEPARTMENTAL, TEAM OR GROUP REPORTING

Knowledge management
Information sharing

PROJECT REPORTING

Personal/Private views
Data science exploration

PERSONAL REPORTING

LESS CONTROLS

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Deployment scenarios

	Corporate BI	IT-Managed Self-Service BI	Business-Led Self-Service BI
Approach	⬇ Top-Down	⬆⬇ Blended	⬆ Bottom-Up
Data sources	Published by IT	Only governed sources	Any type of data source
Ownership	Fully supported by IT	IT for data model, Business for reports	Business supports all elements of the solution
Governed by	IT	IT for data, business for reports	Business
Usage scope of business	Only use of content	Creation of (custom) reports and dashboards	Data prep, modelling, reports and dashboards

Deployment scenarios

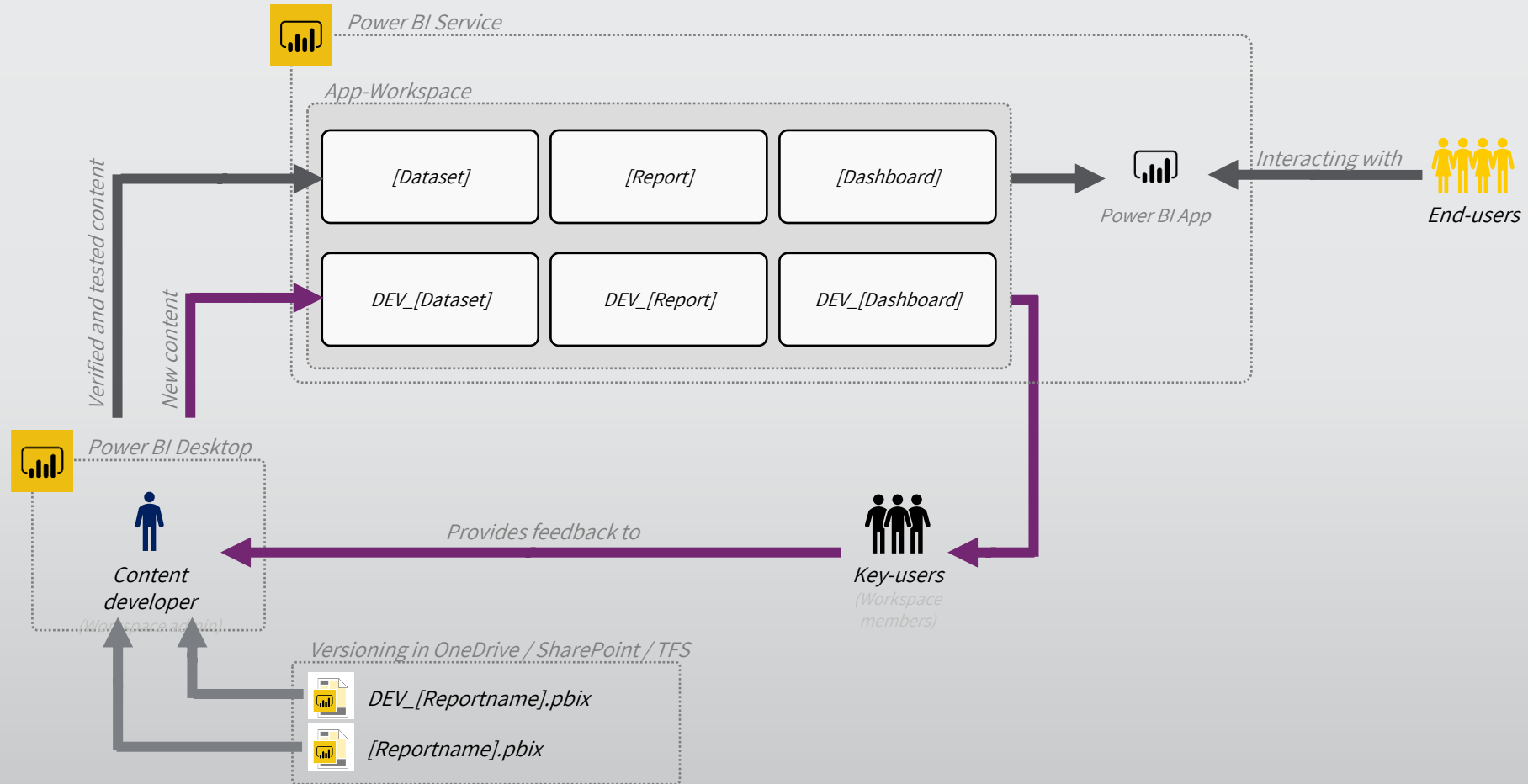|	Corporate BI	IT-Managed Self-Service BI	Business-Led Self-Service BI
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100% IT-Driven (Corporate BI)

50/50 (IT-Managed Self-Service BI)

100% Business Driven (Business-Led Self-Service BI)

Deployment framework

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Deployment scenario (at small scale)

Demo context

SharePoint site
- DEV
- PROD

Demo_DP_dev
- Parameter
- Demo_DP
- Demo_DP

Deployment scenario (at large scale)

Power BI Service

Solution-Workspace-DEV
- Developers
- reports
- datasets

Solution-Workspace-UAT
- Testers
- reports
- datasets

Solution-Workspace-PRD
- Viewers
- reports
- datasets

manual publish

Power BI app

end-users

consume shared datasets
(if made available)

analysts

Continuous
Deployment
(Power BI API)

Azure DevOps

Azure Repo

Power BI
developer

commit to
develop
branch

Files

DEVELOP

MASTER

Continuous
Integration

FAT stage

DEV artifact

Continuous
Integration

MASTER artifact

UAT stage

PRD stage

Data-Marc.com
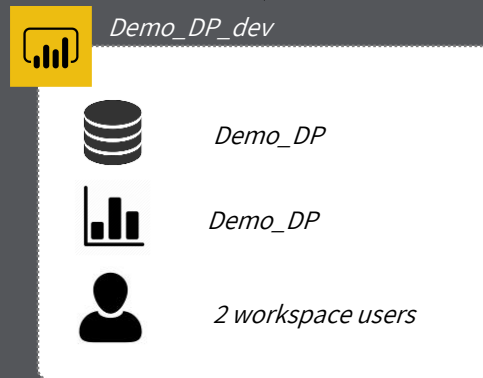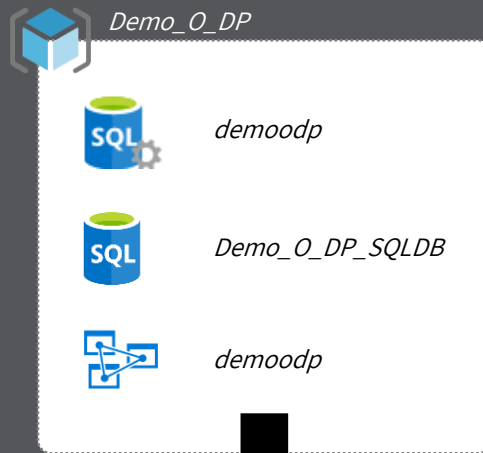
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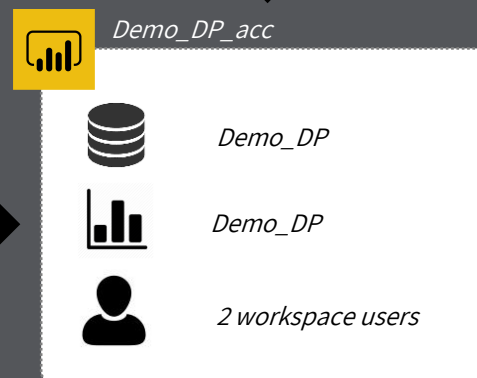
Deployment scenario (at large scale)

Azure DevOps

API

Power BI Service

Demo context

Development

Acceptance

Production

Demo_O_DP
- demoodp (SQL)
- Demo_O_DP_SQLDB (SQL)
- demoodp

Demo_A_DP
- demoadp (SQL)
- Demo_A_DP_SQLDB (SQL)
- demoadpaas

Demo_P_DP
- demopdp (SQL)
- Demo_P_DP_SQLDB (SQL)
- demopdpaas

Demo_DP_dev
- Demo_DP
- Demo_DP
- 2 workspace users

Demo_DP_acc
- Demo_DP
- Demo_DP
- 2 workspace users

Demo_DP_prd
- Demo_DP
- Demo_DP
- 2 workspace users
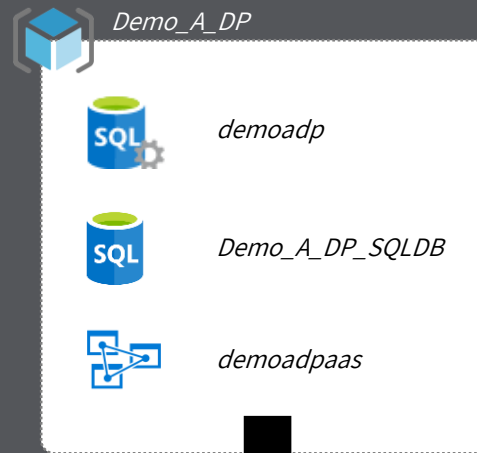
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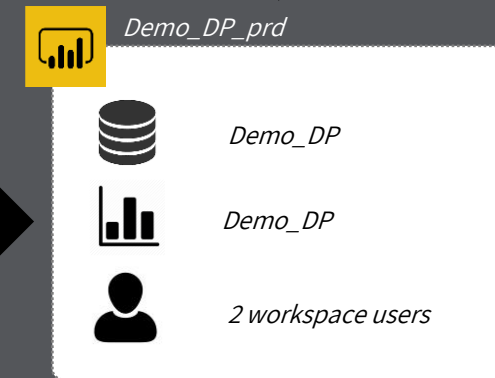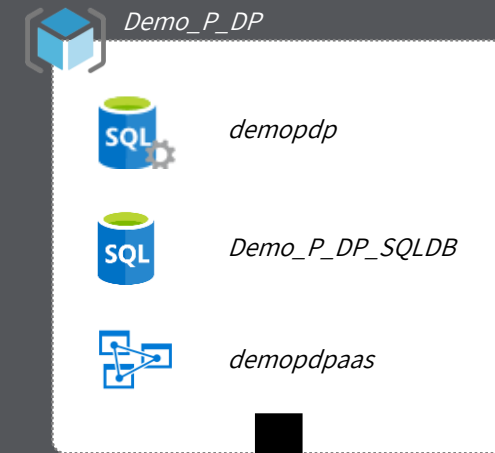
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Demo time!

Because life is boring without risks

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Blogging about everything related to Data and AI based on Microsoft technology

PBI

Development
1 job, 0 task
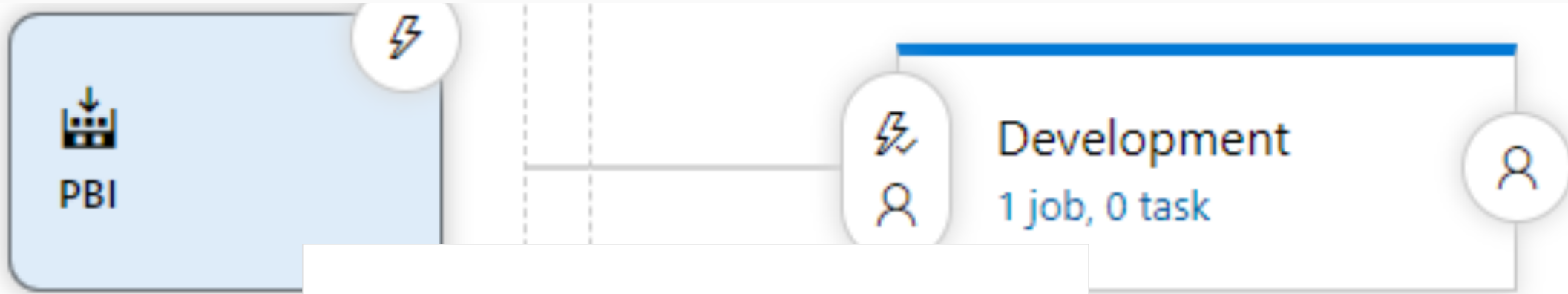
Versioning and CI/CD for Power BI with Azure DevOps

ON NOVEMBER 12, 2019 / BY MARC
/ IN AZURE, DEVELOPING, POWER BI REST API, POWER BI SERVICE, POWERSHELL
/ EDIT

Over a year ago, I wrote a blog about Multiple tier architecture and continuous delivery with Power BI, mainly an overview of the setup and manually creating development and production content. This blog will continue this story in more detail of Power BI CI/CD with Azure DevOps automated deployments.

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Macaw Power BI Extensions

Macaw | ⬇ 85 installs | ★★★★★ (0) | Free

Power BI release manager tasks for Azure DevOps.

Get it free

Overview   Q & A   Rating & Review

Macaw Power BI Extensions is a Build and Release Task for Azure Pipelines. With this tasks you can control your Power BI deployment in Azure DevOps

Actions that can be performed with this extension are:

- Group tasks
  - Create or Update Power BI workspace
  - Delete Power BI workspace
  - Write all workspace info to JSON logfile

- Report tasks
  - Create or Update Power BI Report
  - Delete Power BI Report
  - Delete Power BI DataSet
  - Update the datasources of the specified dataset
  - Update the parameters values for the specified dataset

For the custom task to work as it should, you need to configure the following parameters:

- ClientId: The client id of the native Azure Active Directory application. This application should have the appropriate rights in order to use the Power BI Api. To register an application, check the following URL: Register an Azure AD app to embed Power BI content
- Username: The username of the user that will perform the actions. Make sure the account does not have Multi

---

Agent phase
Run on agent

Power BI Group Tasks: CreateWorkspace
Power BI: Group Tasks

Power BI Report Task: CreateReport
Power BI: Report Tasks

Power BI Report Task: UpdateParameter
Power BI: Report Tasks

● ○

Categories

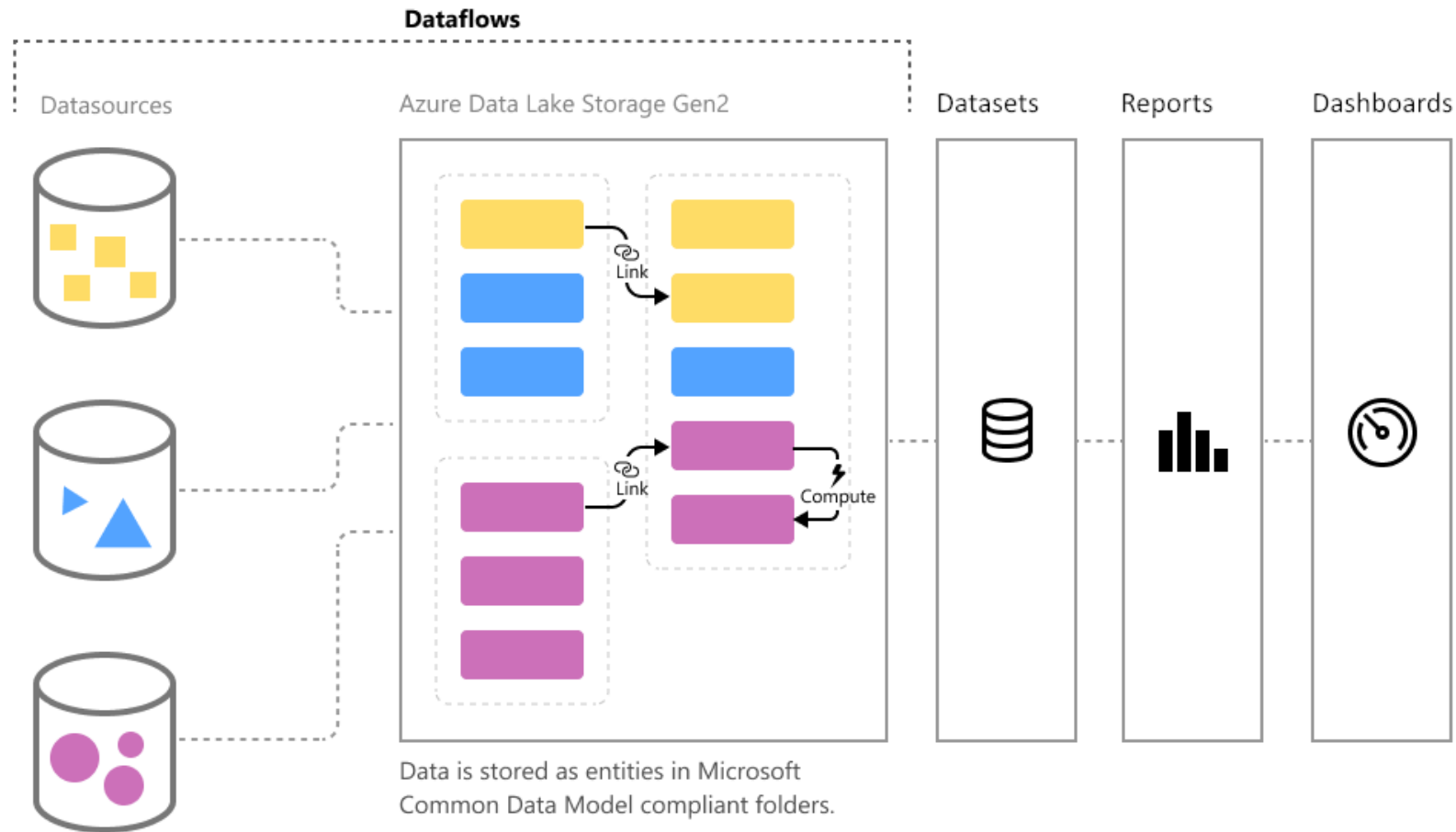Azure Pipelines

Works with

Azure DevOps Services
Azure DevOps Server

Resources

License

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But what about dataflows?

Dataflows

Datasources

Azure Data Lake Storage Gen2

Link

Link

Compute

Datasets

Reports

Dashboards

Data is stored as entities in Microsoft Common Data Model compliant folders.

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Dashboards   Reports   Workbooks   Datasets   Dataflows

Move dataflows across workspaces with the Power BI REST API

ON **OCTOBER 22, 2019**   /   BY **MARC**
   /   IN **DATAFLOWS**, **DEVELOPING**, **POWER BI REST API**, **POWER BI SERVICE**,
POWERSHELL
   /   **EDIT**

Dataflows are part of the Power BI service for a while now. More and more people are starting to benefit from it in multiple perspectives. The two most heard ones are re-use of data (and logic), but also isolate refreshes to avoid dependencies of refresh failures from different sources.

Same as for your data sources, you might have different workspaces setup in

SEARCH

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CATEGORIES

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Let's do another demo!

And another risk...

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Remarks and alternatives?
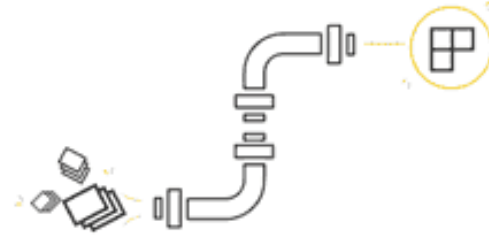
XMLA read/write

01/07/2020 • 2 minutes to read • 👁

> ⓘ Important
>
> **Some of the functionality described in this release plan has not been released.** Delivery timelines may change and projected functionality may not be released (see Microsoft policy). Learn more: What's new and planned

Enabled for	Public preview	General availability
Admins, makers, or analysts, automatically	-	Sep 2020

Feature details

XMLA read/write allows third-party BI tools to connect and manage datasets in Power BI Premium. This opens an enormous set of opportunities for additional third-party tool connectivity to enable scenarios like monitoring, lifecycle management, and debugging.

Remarks and alternatives?

Deployment pipeline - develop, test, and deploy workspace content

02/03/2020 • 2 minutes to read •

> ⓘ **Important**
>
> **Some of the functionality described in this release plan has not been released.** Delivery timelines may change and projected functionality may not be released (see Microsoft policy). Learn more: What's new and planned

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Admins, makers, or analysts, automatically	May 2020	Aug 2020

Feature details

Enterprises need proper ALM functionality to support the development, testing, and roll out of strategic BI applications. This Power BI Premium-only feature gives enterprises the ability to maintain development, test, and production environments and incrementally transition artifacts between them, reconfiguring them with the appropriate connections and security settings.

Remarks and alternatives?
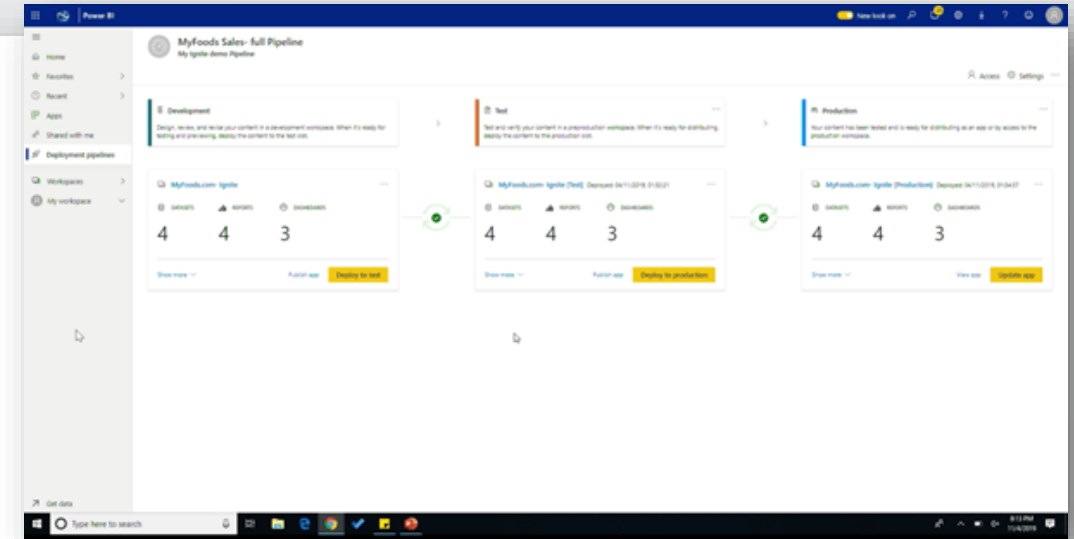
Recap

- Version history done automatically
- Professionalize your deployment process
- Easy roll-back if needed
- Roll-out more than only Power BI in one go!
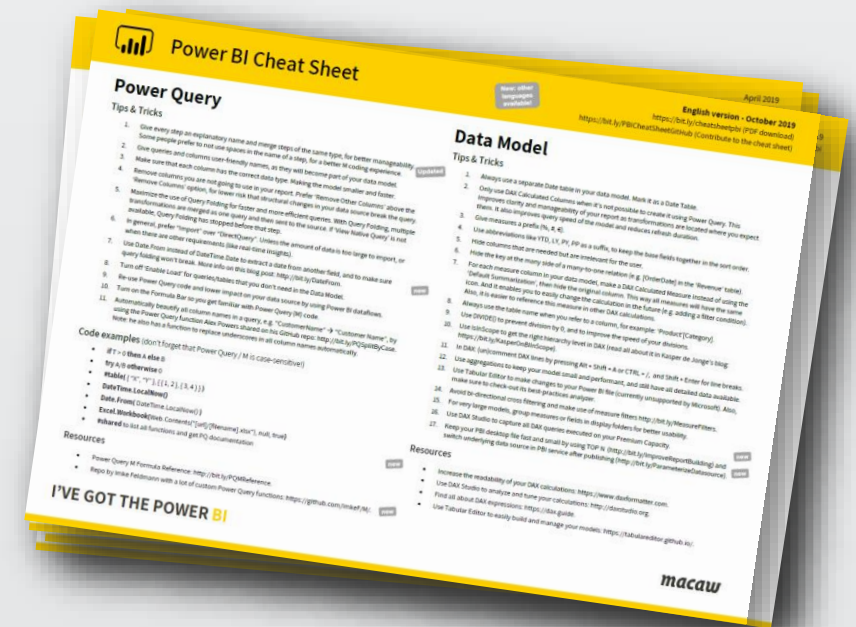- XMLA read/write + Deployment pipelines coming!

LET'S RECAP...

Download for free!

https://bit.ly/cheatsheetpbi

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