

# GETTING STARTED WITH POWER BI

Pedro Reis | Ricardo Freitas



# meetup



# ANY OF THESE QUESTIONS?

Then this session is for you



## What is Power BI?

What is this tool? What can it do?



## How to get started?

Can I relate my case? Can I use this tool? What does it take to get started?



## Excel or Power BI?

Is it easy to move from Excel to Power BI? Can they work together?



## Where to learn?

How can I learn more about it?



## How does it compare?

Is it better than other tools?



## How much does it Cost?

What would it cost me to use it?

# WHO WE ARE



**Pedro Reis**

- BI Architect @ Altran -> Natixis
- Previous: Sonae, Throttleman, Bosch, Jumia
- Excel Geek – Finalist at 2017 Excel National Championship
- PBI MCP, SCM MM from MIT



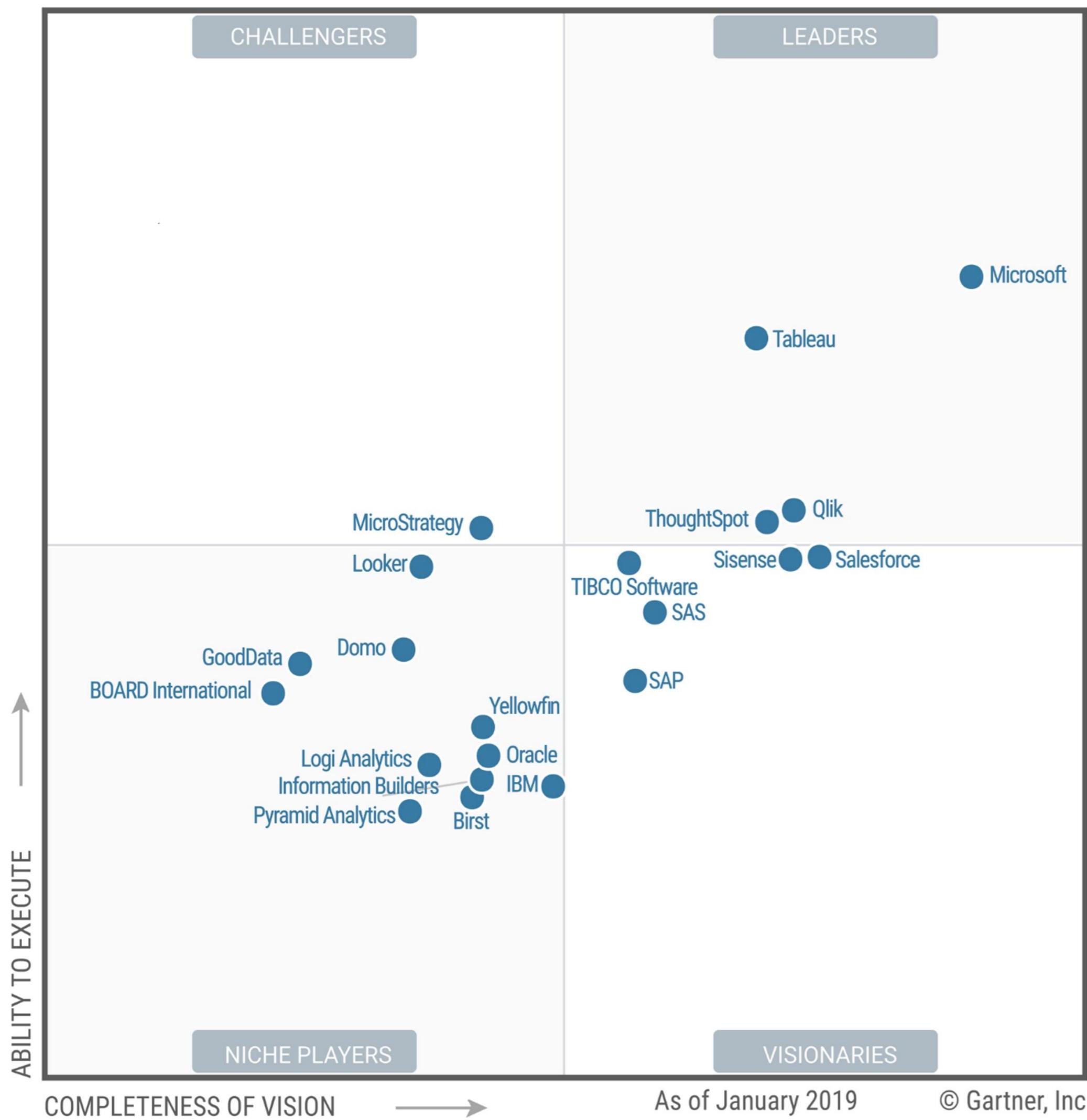
**Ricardo Freitas**

- BI Consultant @ Altran -> Natixis
- Previous: Culto de BI, iTGrow, ITSector, myPartner
- Lic. Information Science applied to Mgmt
- PG Information Systems
- Master Knowledge Management Practices

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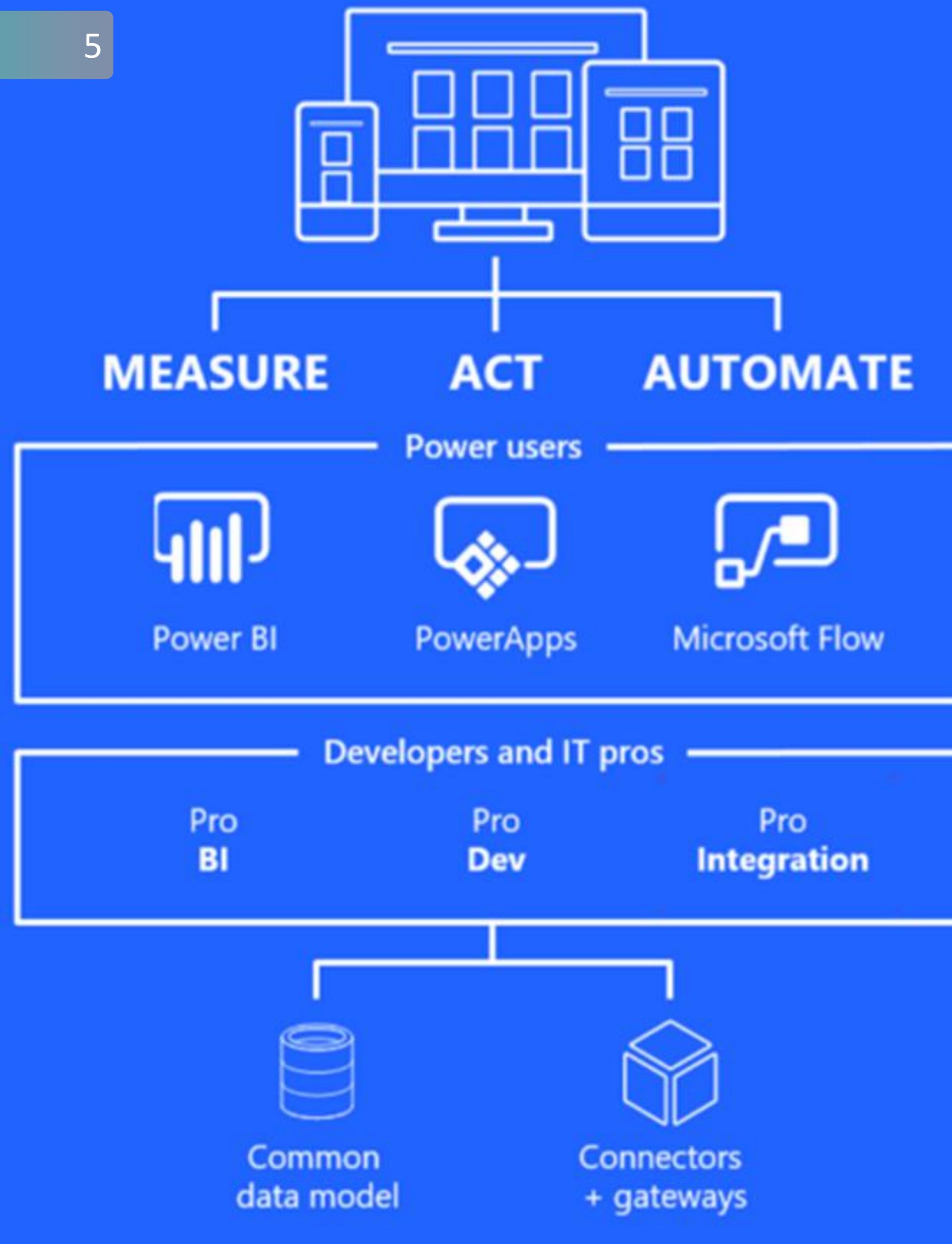
Figure 1. Magic Quadrant for Analytics and Business Intelligence Platforms



# WHY POWER BI

## The Leader

- Leader in Gartner Quadrant
- Incredible capabilities
- Beautiful tool
- Easy to use / works with Excel



# WHY POWER BI Complete Ecosystem

- Can connect to any data
- Open source capabilities
- Power Platform (Flow, Power Apps, etc.)

## Power BI Ideas

How can we improve Power BI?

Enter your idea

Hot Top ideas New Category Status My feedback

3,667  
votes

Vote

### Matrix +/- Collapse/ Expand Buttons

Please add Collapse/Expand buttons in the Matrix Visualizations. Otherwise when all fields are expanded by default the user would have to scroll a lot to find what they are looking for. I could add a slicer to take user to the data they are looking for but then the rest of the data in the matrix disappears and more specifically the overall totals change! Expand/Collapse buttons would keep the overall totals as intended and totals for other fields while allowing the user to only expand the field they are interested in. Also ability to do conditional formatting for a specific field...

212 comments · Desktop · Flag idea as inappropriate...



STARTED

· Amanda Cofsky (Program Manager, Microsoft Power BI) responded

If you were at our Microsoft Business Applications Summit, you might have seen Amir and Will demo this feature! We are actively developing it now, and while we do have some more work today before it releases, the release isn't too far off in the future. You can watch the session they demoed it in here:  
<https://www.microsoft.com/en-us/businessapplicationssummit/video/BAS2018-204>

3,590  
votes

Vote

### Decomposition Tree Visualization Type

Multiple requests from groups that would like to see a decomposition tree. Typically they are from Proclarity/PerformancePoint world.

142 comments · Reports · Flag idea as inappropriate...



BACKLOG

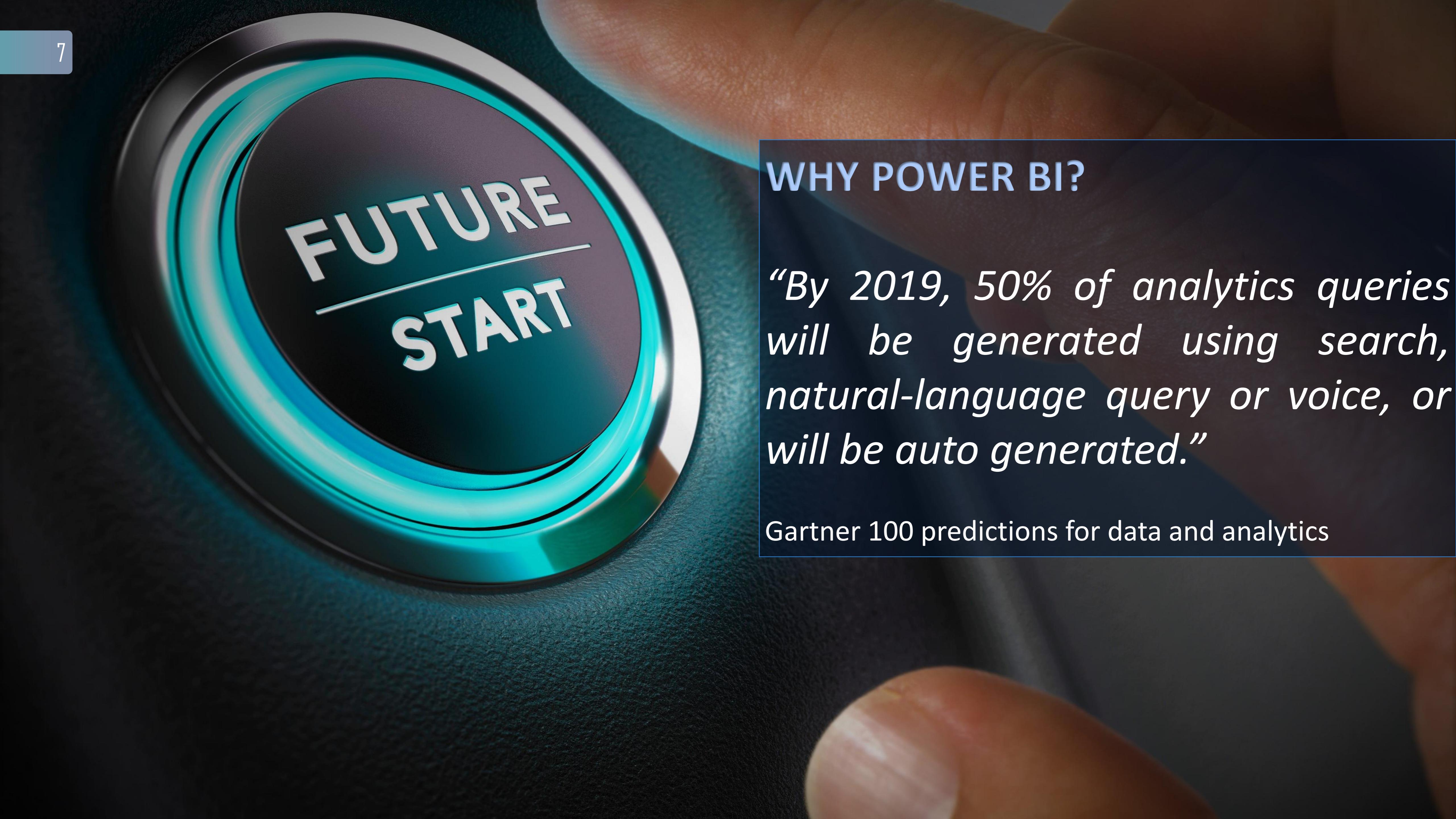
· Amanda Cofsky (Program Manager, Microsoft Power BI) responded

Hey everyone! I'm updating this suggestion to "backlog" to better indicate its current state. We really want to do this and it's definitely on our backlog to do. However, we aren't currently planning or working on it, as our focus right now is on a couple of other "bigger" investments, such as printing to PDF in Desktop and expand and collapse on matrix row headers. I will update the suggestion again when we start planning the feature, and in meantime, please do keep voting and commenting. Thanks again for your patience and feedback!

# WHY POWER BI

## Community & feedback

- Microsoft listens to user voice
- Monthly updates, strong Microsoft push
- Inumerous communities

A close-up photograph of a person's hand pressing a large, circular, glowing blue button. The button has the word "FUTURE" at the top and "START" below it, separated by a thin horizontal line. The button is set against a dark, textured background, possibly a leather surface, and is illuminated from behind, creating a bright glow.

FUTURE  
—  
START

## WHY POWER BI?

*“By 2019, 50% of analytics queries will be generated using search, natural-language query or voice, or will be auto generated.”*

Gartner 100 predictions for data and analytics



GO WHERE NO  
ANALYST HAS  
GONE BEFORE

# Power BI Architecture

From data to organizational wide accessible reports and dashboards





# POWER BI DESKTOP

Bring your data to life... And completely for free!

Free tool to connect to data, transform it, model it, build reports and produce data analytics



[DOWNLOAD](#)



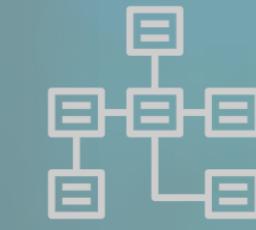
Get data

Import data from almost  
any data source



Transform it

Clean, organize, shape it.



Model it

Build a relational model



Build reports

Build your reports with  
stunning visuals. Add  
powerful measures.



Advanced analytics

Enhance with analytics  
features and visuals



Publish

Publish to Power BI Service or  
Report Server

# POWER BI DESKTOP

## General Report Development Workflow

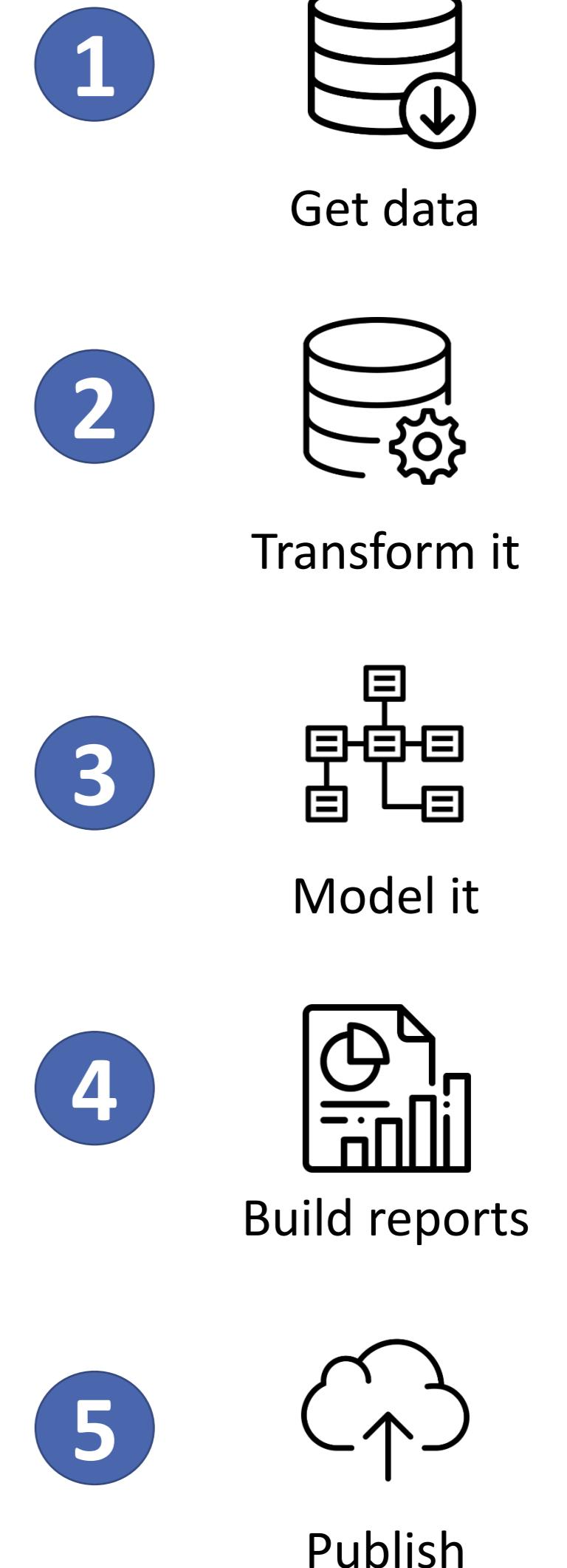
The screenshot shows the Power BI Desktop interface with several numbered callouts:

- 1: Power BI Desktop window title bar.
- 2: Home tab ribbon.
- 3: Visualizations pane on the left.
- 4: Fields pane on the right.
- 5: Share button in the ribbon.

The main workspace displays three visualizations:

- Sales for Top 5 Categories: A stacked bar chart showing sales for Germany, Canada, France, and Great Britain.
- Average Sale Amount by Class: A horizontal bar chart comparing Deluxe, Economy, and Regular classes.
- Units by Class & Brand: A bubble chart showing units across different brands and classes.

The ribbon tabs include: File, Home, View, Modeling, Help, Get Data, Refresh, New Page, New Visual, Insert, Marketplace, From File, Themes, Manage Relationships, Calculations, and Share.



“**DEMO**”



**shift**



# POWER BI SERVICE

Host, organize, share your data

Microsoft's cloud service for hosting data and providing insights to entire organizations



Power BI

<http://app.powerbi.com>



Reports

Create Powerful Reports



Dashboards

Create Dashboards.  
Insights with a single  
glance



Scheduled Refresh

Schedule your data for  
automatic updates



Workspaces Apps

Organize your content



Security

Create Security Roles and  
Rules

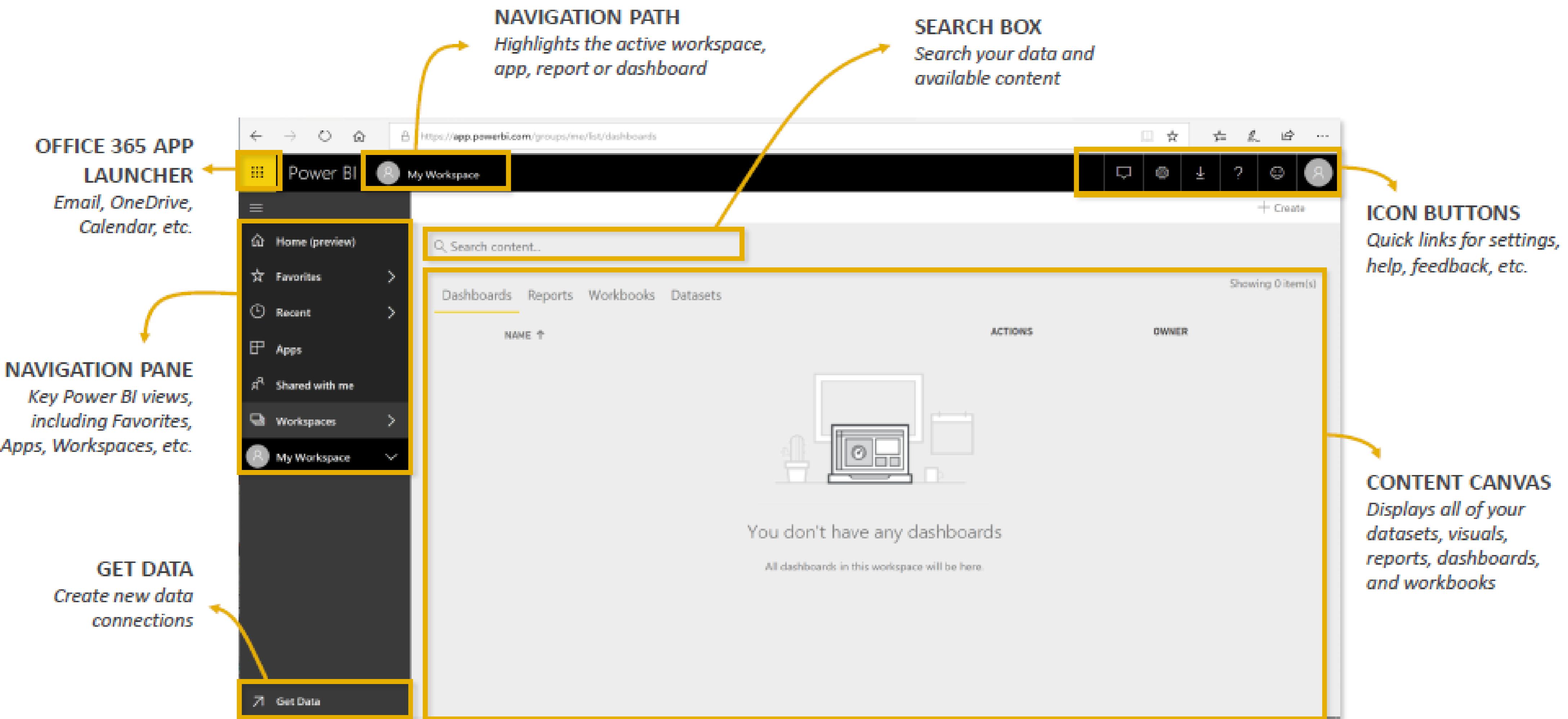


Sharing

Share with any Power BI user  
within your organization

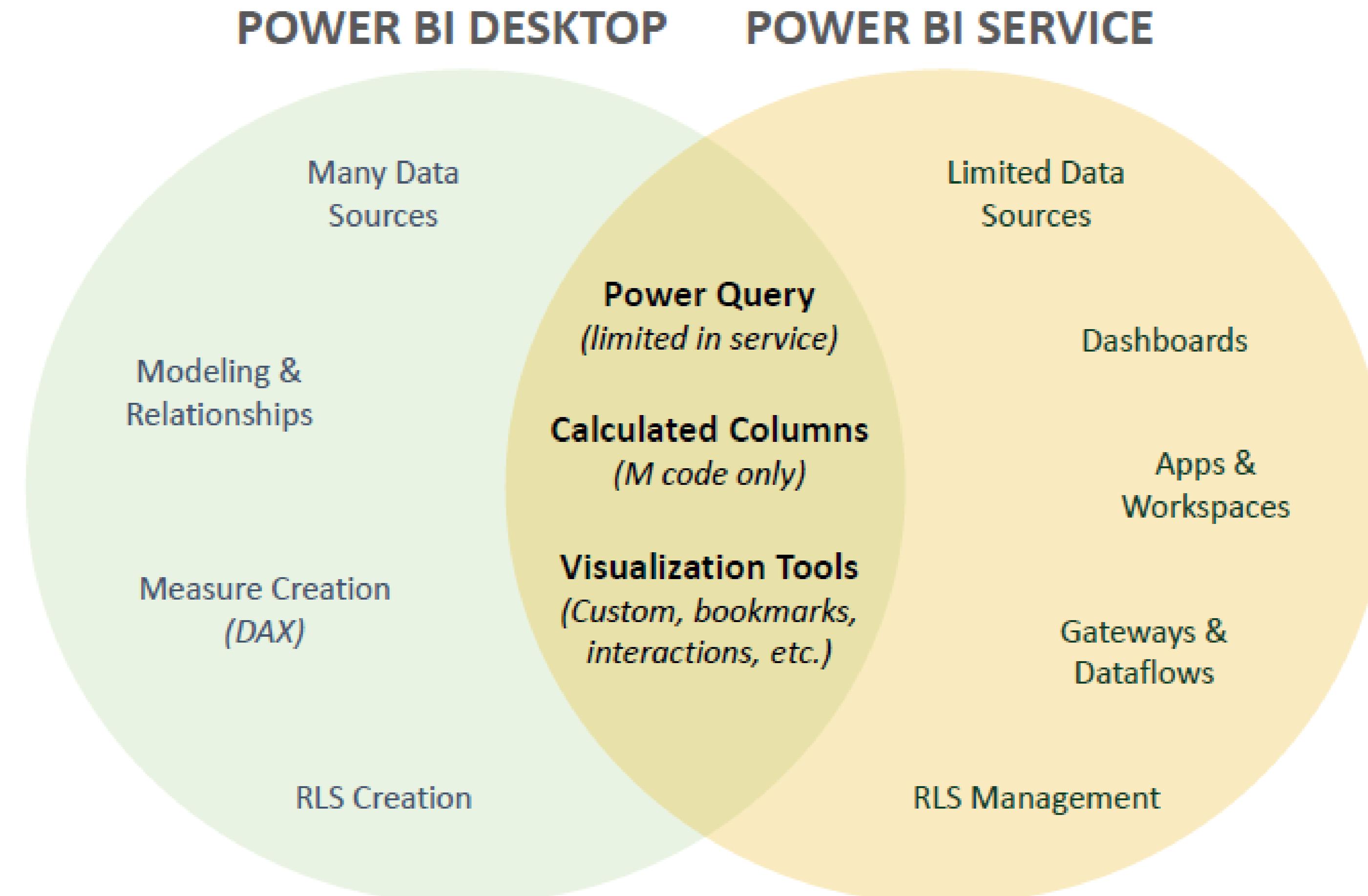
# POWER BI SERVICE

## Tour of the Interface



# POWER BI SERVICE

How does it relate to Power BI Desktop? How do they work together?

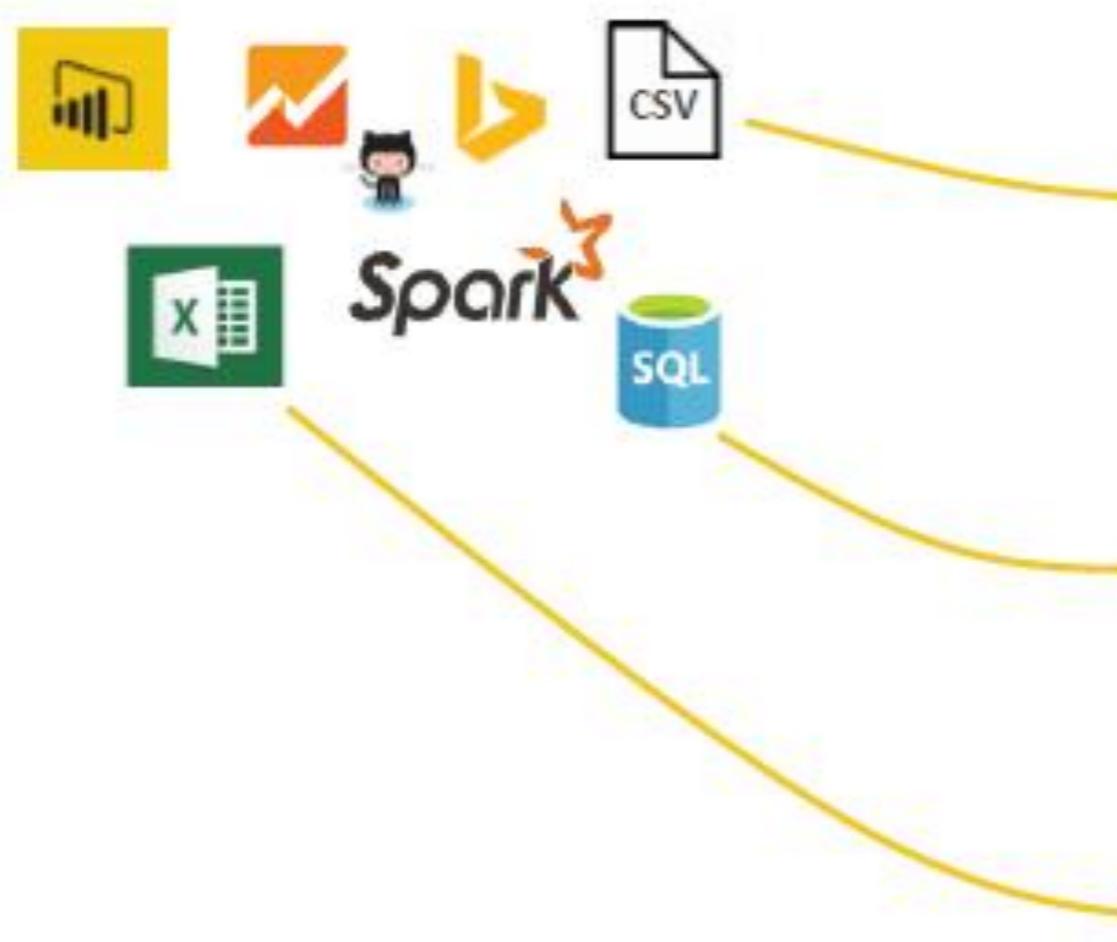


# POWER BI SERVICE

The Building Blocks of Power BI Service



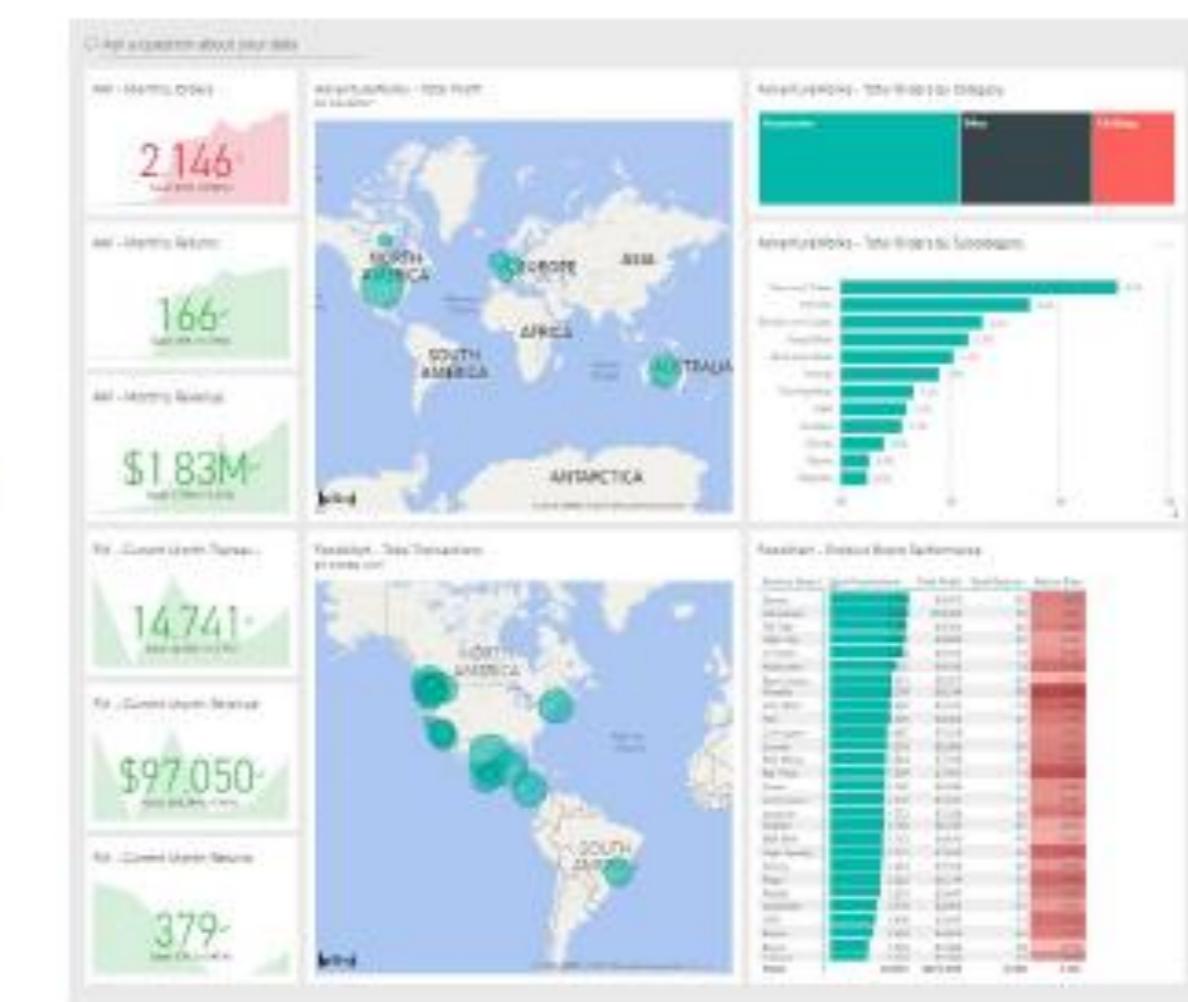
## DATASETS & WORKBOOKS



## REPORTS



## DASHBOARDS



# POWER BI SERVICE

## My Workspace versus App Workspaces

### My Workspace

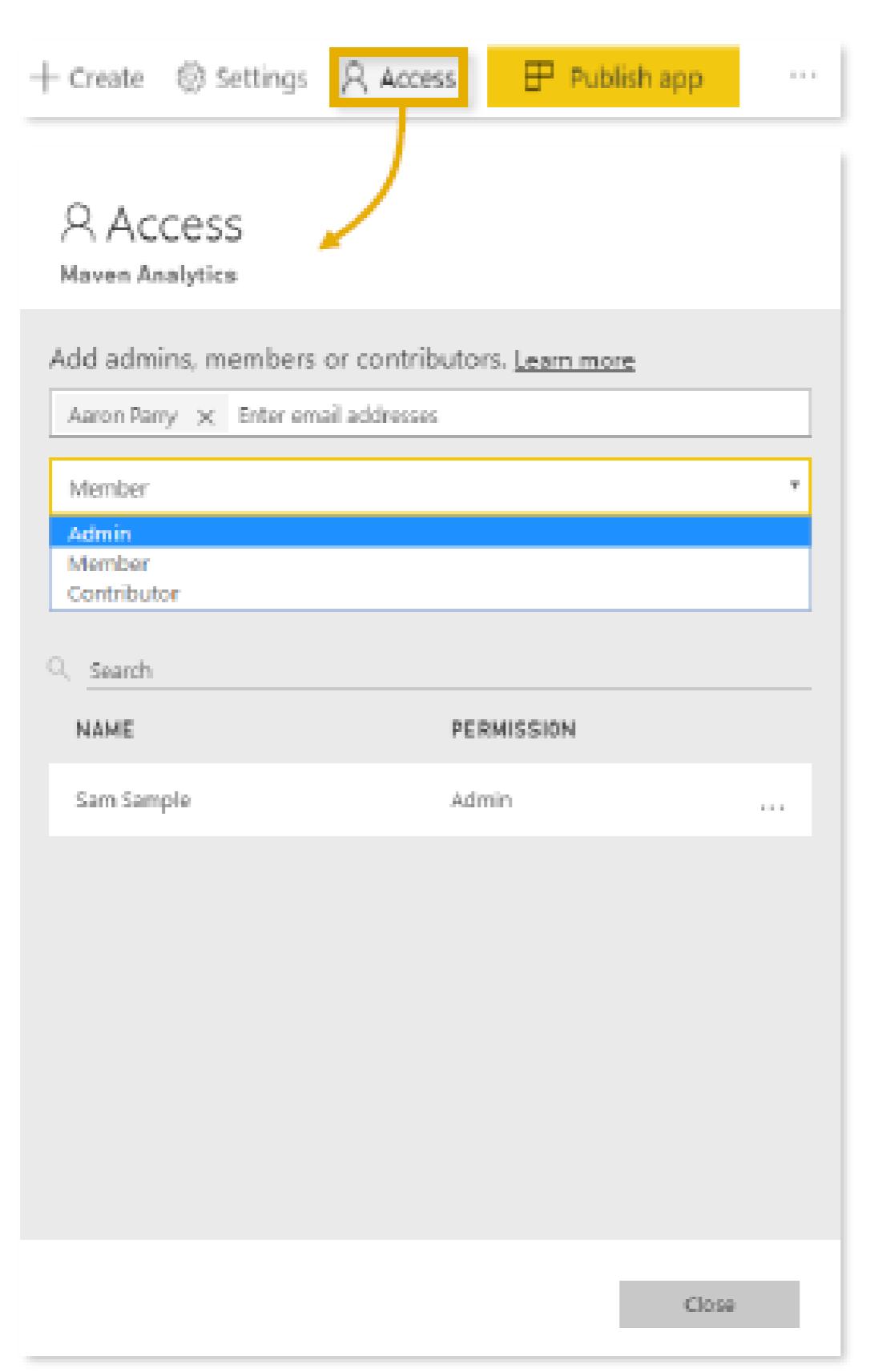
- **Personal workspace** for a single user (*Free or Pro*)
- By default, **only you** can access content in this workspace (*can't collaborate with others*)
- Content can be shared with **individual Pro users** (*shared with me*)
- Contains **core building blocks** (*datasets, workbooks, reports & dashboards*)

### App Workspaces

- **Shared workspace** for many users (*with Pro licenses*)
- **Multiple users** can access and collaborate on content within app workspaces
- App workspaces can be **created and shared** across your organization
- Contains **core building blocks** (*datasets, workbooks, reports & dashboards*), plus **dataflows**

# POWER BI SERVICE

## My Workspace versus App Workspaces



When adding others to app workspaces, you can assign roles based on **three levels of permissions**:

### CONTRIBUTOR

- Publish, create, edit, and delete content in workspace
- Can't add people to new roles or modify members
- Can share if the content has been previously shared but can't share new content

### MEMBER

- All Contributor rights, plus:*
- Add members or users with lower permission levels
  - Publish and update apps
  - Share an item or app
  - Allow others to reshare

### ADMIN

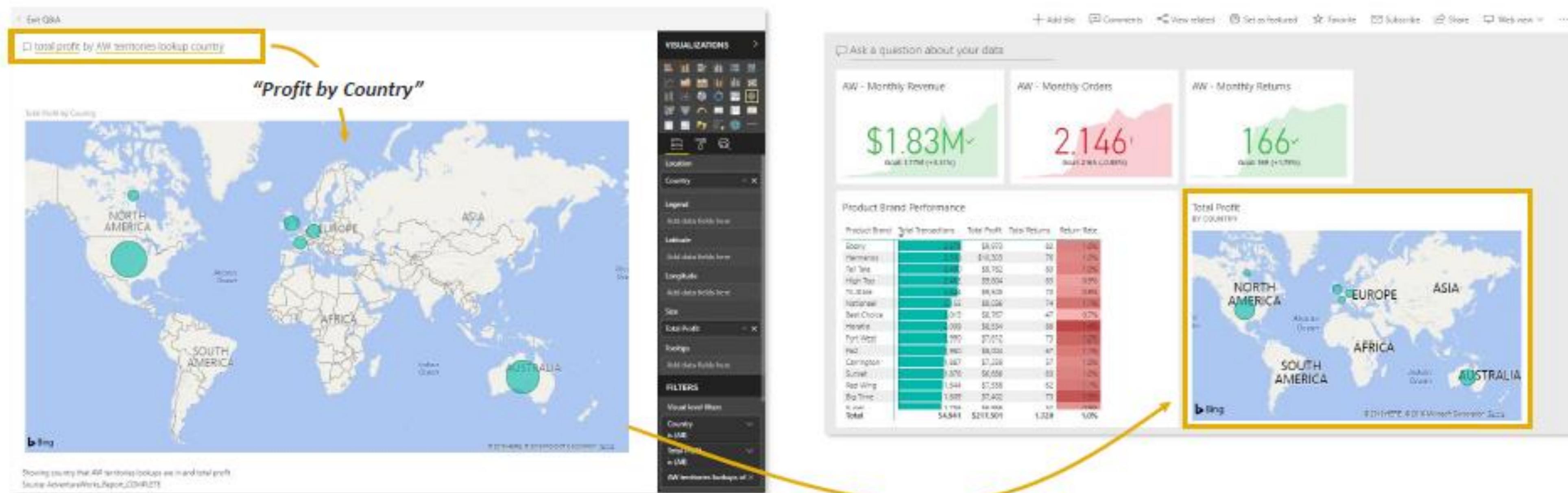
- All Member rights, plus:*
- Update/delete workspaces
  - Add or remove other users (including admins)

# POWER BI SERVICE

## Q & A (Questions & Answers)

Q & A allows you to ask Questions and get Answers – in English Language.

Tip: Develop your model carefully using factuals & dimensions, and also name your attributes carefully.

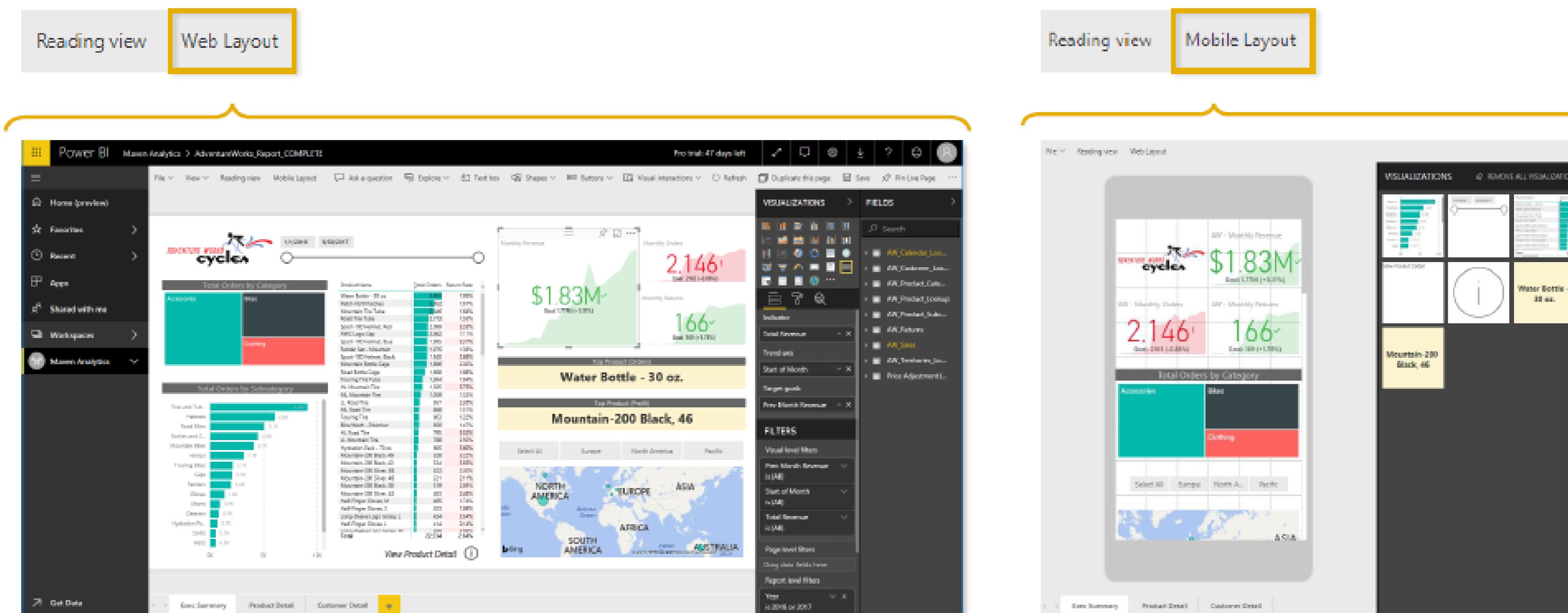


For tips asking question in Power BI Q&A visit - <https://docs.microsoft.com/en-us/power-bi/consumer/end-user-q-and-a-tips>

# POWER BI SERVICE

Mobile layout on phones

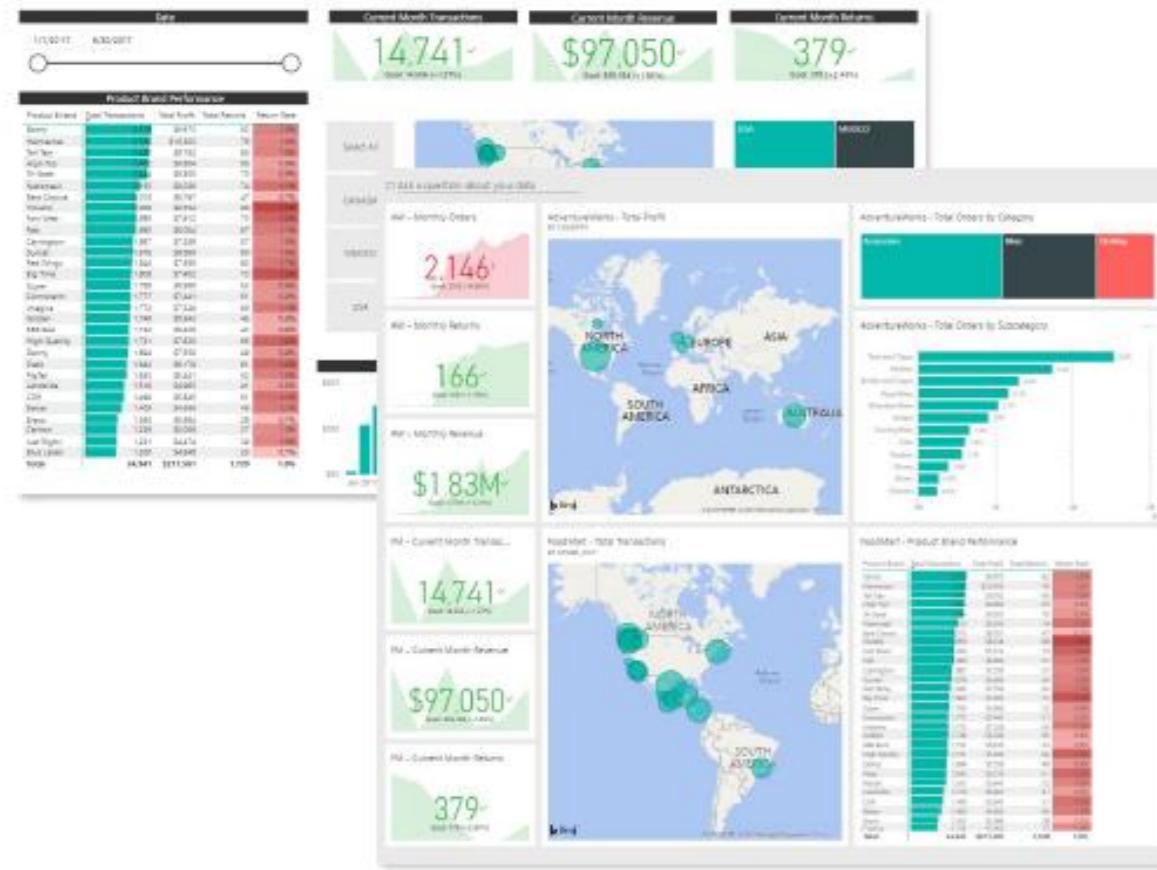
When you are developing a mobile layout for your report, you just reposition the visuals and other elements.



# POWER BI SERVICE

Multiple ways to collaborate & share

## DASHBOARDS & REPORTS



You can share your reports & dashboards through multiple ways:

- **Print reports** (only prints the *current page*), and **export reports to PDF and PPT** (and it allows to select current visible data or data in default views)
- **Publish to the web** (for specific uses, be careful what you share with this option)
- **Share your reports and dashboards** (with the ability of allowing them to reshare)
- Adding people and changing their type of access to **App Workspaces**
- Selecting multiple reports & dashboards and publishing like an **App**

# POWER BI SERVICE

Multiple ways to collaborate & share

**Apps** combine related reports and dashboards that you can selectively publish from App Workspaces to large groups of people, both internal and external to your organization

The screenshot shows the Power BI Service interface with the 'App' workspace selected. The left sidebar includes options like 'Home (private)', 'Favorites', 'Recent', 'App', 'Shared with me', 'Workspaces', and 'Move Analytics'. The main area displays a list of items under 'INCLUDED IN APP':

Name	Actions	Status	INCLUDED IN APP
AdventureWorks_Report_COMPLETE	⋮ ⌂ ⌃ ⌄ ⌅ ⌆	Power BI	<input checked="" type="checkbox"/>
AdventureWorks_Report_with_Weather	⋮ ⌂ ⌃ ⌄ ⌅ ⌆	Power BI	<input type="checkbox"/>
Foodliner Monthly Report	⋮ ⌂ ⌃ ⌄ ⌅ ⌆	Power BI	<input checked="" type="checkbox"/>
Total Order with Avg Temperature	⋮ ⌂ ⌃ ⌄ ⌅ ⌆	Power BI	<input type="checkbox"/>

From within an App Workspace, select any **reports and dashboards** you want to include

The screenshot shows the same Power BI Service interface after publishing the app. The 'INCLUDED IN APP' column now has checked checkboxes for all three items:

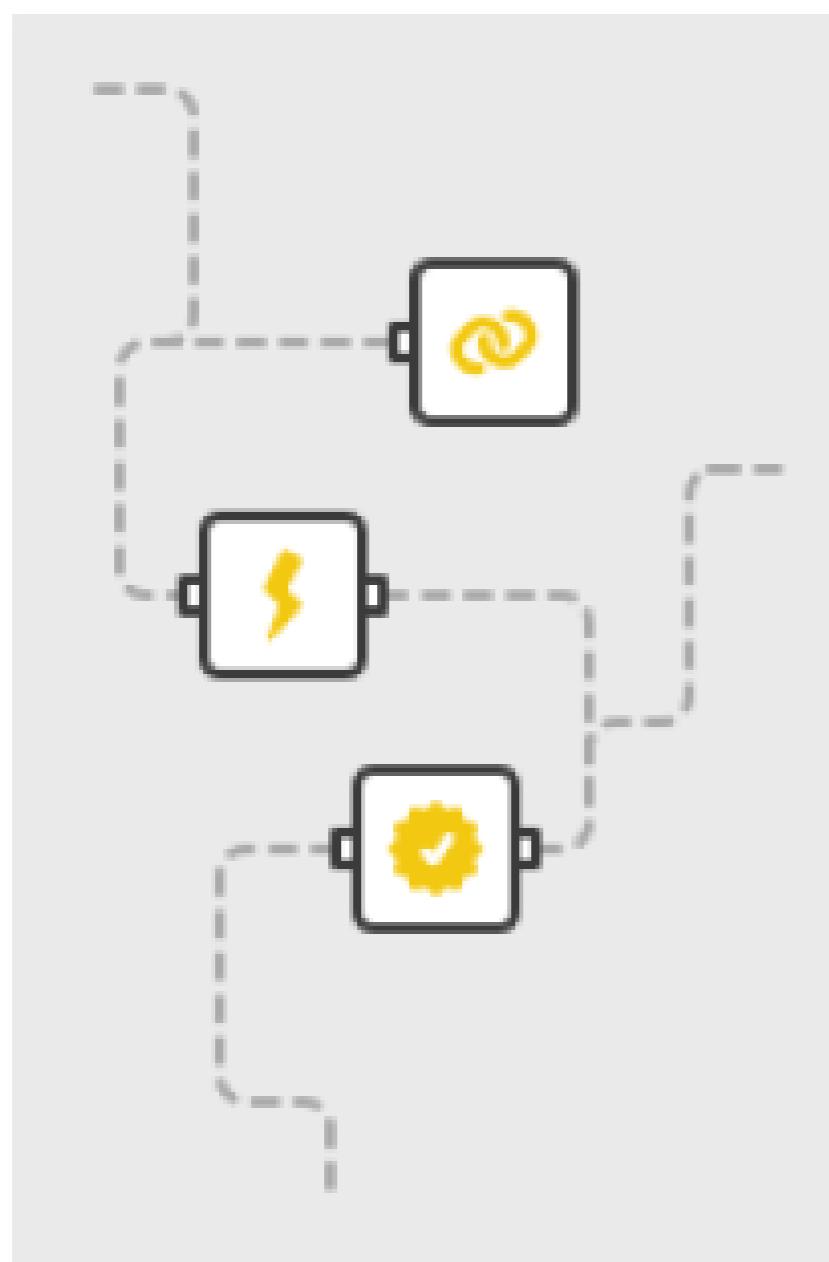
Name	Actions	Status	INCLUDED IN APP
Foodliner - Individual Sales Total	⋮ ⌂ ⌃ ⌄ ⌅ ⌆	Power BI	<input checked="" type="checkbox"/>
Foodliner - Per Line Page Total	⋮ ⌂ ⌃ ⌄ ⌅ ⌆	Power BI	<input checked="" type="checkbox"/>
Move Group - Executive Summary	⋮ ⌂ ⌃ ⌄ ⌅ ⌆	Power BI	<input checked="" type="checkbox"/>

Select **Publish App** to create a new App

# POWER BI SERVICE

Types of Dataflows (available on App Workspaces)

**Dataflows** are essentially Power Query processes that run *independently* within Power BI Service, and are used to ingest, transform, integrate, and enrich your data



## Why Dataflows?

- Reuse queries across **multiple Power BI Desktop or Service reports**
- Run ETL (*extract, transform & load*) processes on **specific schedules**
- Create a centralized data warehouse to serve as a **single source of truth**

## How are Dataflows Implemented?

1. **Create and build** dataflows in Power BI Service
2. **Schedule refresh settings** in Power BI Service
3. **Connect to dataflows** as a data source in Power BI Desktop

# POWER BI SERVICE

## Types of Gateways

You need to setup a Gateway, when you want Power BI Service to access your data on-prem.

There are two types of gateways in Power BI: **Personal Mode** gateways and **Enterprise Mode** gateways

### ***Personal Mode Gateway***

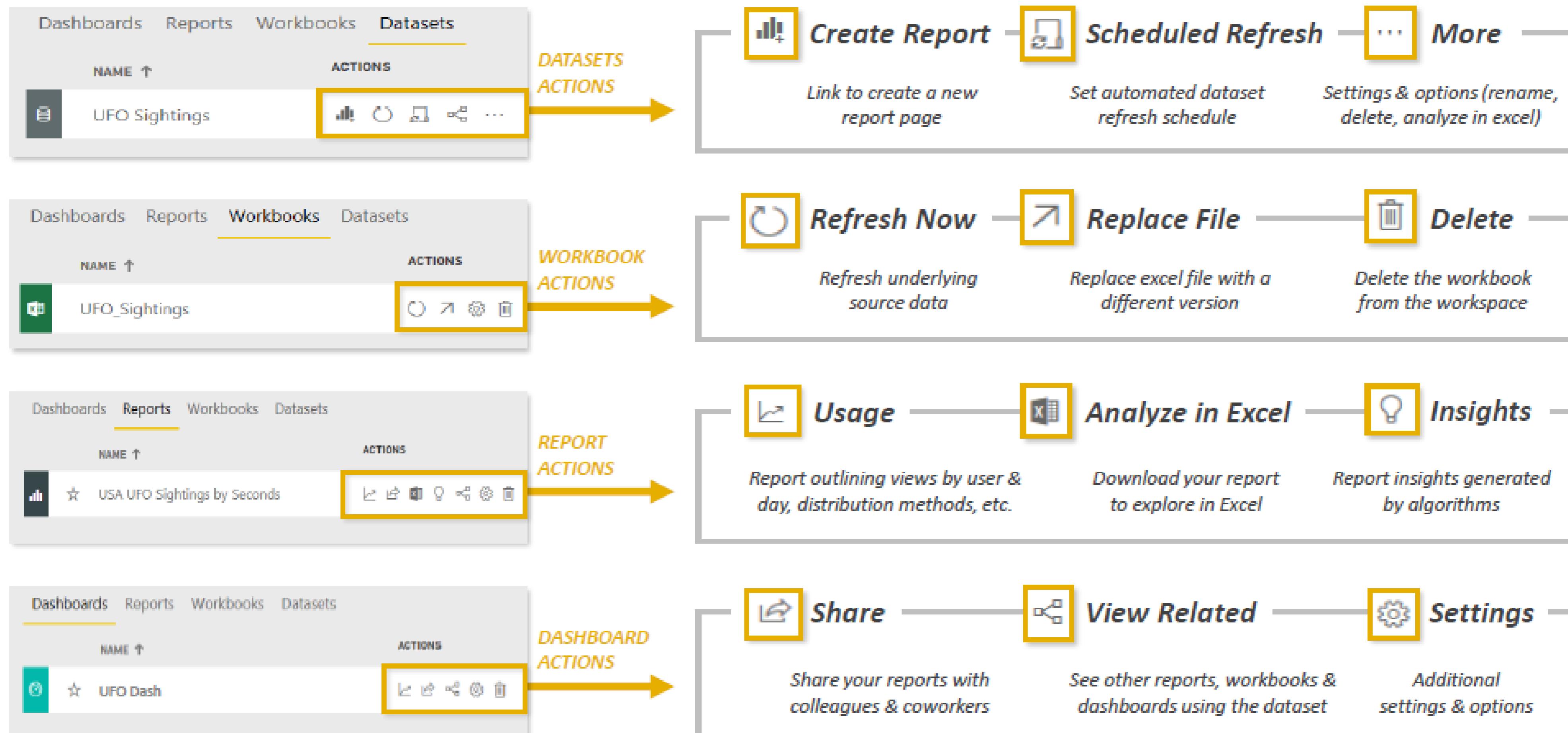
- Can only be used by **you**
- Can't be used with other apps or services
- Only supports scheduled refresh in **Power BI**

### ***Enterprise Mode Gateway***

- Can be shared and used by **multiple users**
- Can be used by **Power BI, PowerApps, Flow, etc.**
- Supports **scheduled refresh** and **live query**  
*(Dataflows)* for Power BI

# POWER BI SERVICE

## Common Workspace actions



# POWER BI SERVICE

Differences between Free, Pro and Premium Licenses

## Individual & Team Use

### Power BI FREE

*No license required but users have limited access and can't collaborate or distribute content*

### Power BI PRO

*Individually licensed and can leverage all content creation and interaction features*

## Enterprise Distribution

### Power BI PREMIUM

*Licensing based on dedicated capacity vs. number of users; content can be viewed without additional per-user costs*

#### *Free tier capabilities:*

- No license required
- Connect to 70+ data sources (*desktop & service*)
- Publish to Web
- Export to PowerPoint, Excel, CSV

#### *Pro License Capabilities:*

- All from *Free tier* +
  - User-based license
  - App creation
  - Email Subscriptions
  - Peer-to-Peer Sharing
  - App Workspaces
  - Analyze in Excel & Power BI Desktop

#### *Premium Capacity Capabilities:*

- Capacity-based license
- Publish reports across a company without need for individual user licenses
- Greater scale & performance than shared capacity
- Works with on-premise Power BI Report Server

*NOTE: Pro licenses still required to publish, share, and collaborate*

*Note: These lists may NOT be comprehensive as service features and functionality are frequently updated*

# Learning Resources

Some of the best places to get to know more about power bi

[\*\*Microsoft Guided Learning\*\*](#) – easy to go through, provides the basics to get your started

[\*\*Analyzing and Visualizing data with Power BI\*\*](#) – edX course, about 25 hours

[\*\*Power BI Blog\*\*](#) – to become more a more advanced user, you really need to be aware of new features being released, and this blog has all the information (also, the monthly Power BI Updates). The forums are also a best friend

[\*\*SQL BI\*\*](#) – The best site out there for SSAS/DAX/BI content. You are for sure already aware this exists in the intermediate stage, but it will become a definitive place to keep an eye on

[\*\*From Rookie to Rock Start Ebook\*\*](#) – Online free book

[\*\*Definitive Guide to DAX\*\*](#) – The Bible for advanced users

[\*\*List of DAX functions\*\*](#) – A mandatory source. Should be your first source of information regarding DAX, but sometimes it will be easier to understand through a couple of youtube videos

[\*\*Power BI Youtube Channel\*\*](#) – Microsoft Power BI Official YouTube channel

[\*\*Guy in a Cube\*\*](#) – These guys are awesome, and they give a great and innovative perspective of stuff you can do with the newest releases. Recommended for more advanced users and BI practitioners

[\*\*Curbal\*\*](#) – excellent youtube channels with new content every week. Will really help you understand those Calculate, Filter, All, Switch and other DAX functions

[\*\*Planilheiros\*\*](#) – If Portuguese is preferred, this is for sure one of the best channels out there

[\*\*Enterprise DNA\*\*](#) – another guy with tips & tricks, also regular web casts

[\*\*Udemy\*\*](#) – has great courses, search by Kirill Eremenko and also for [\*\*Chris Dutton\*\*](#)

[\*\*SQL Bits\*\*](#) – One of the top SQL related conferences out there, which provides for free most of the sessions in video after the events. Search for the Power BI Tag

# QUESTIONS