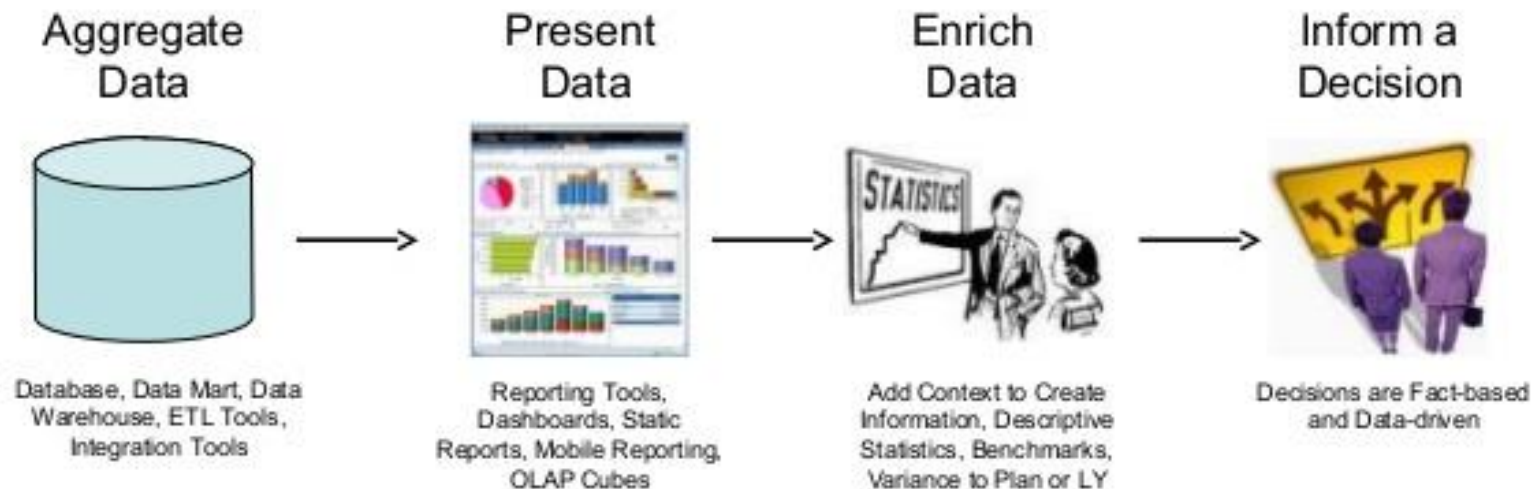


BIG DATA ANALYSIS AND VISUALIZATION USING POWER BI AND TABLEAU

Introduction to Microsoft Power BI

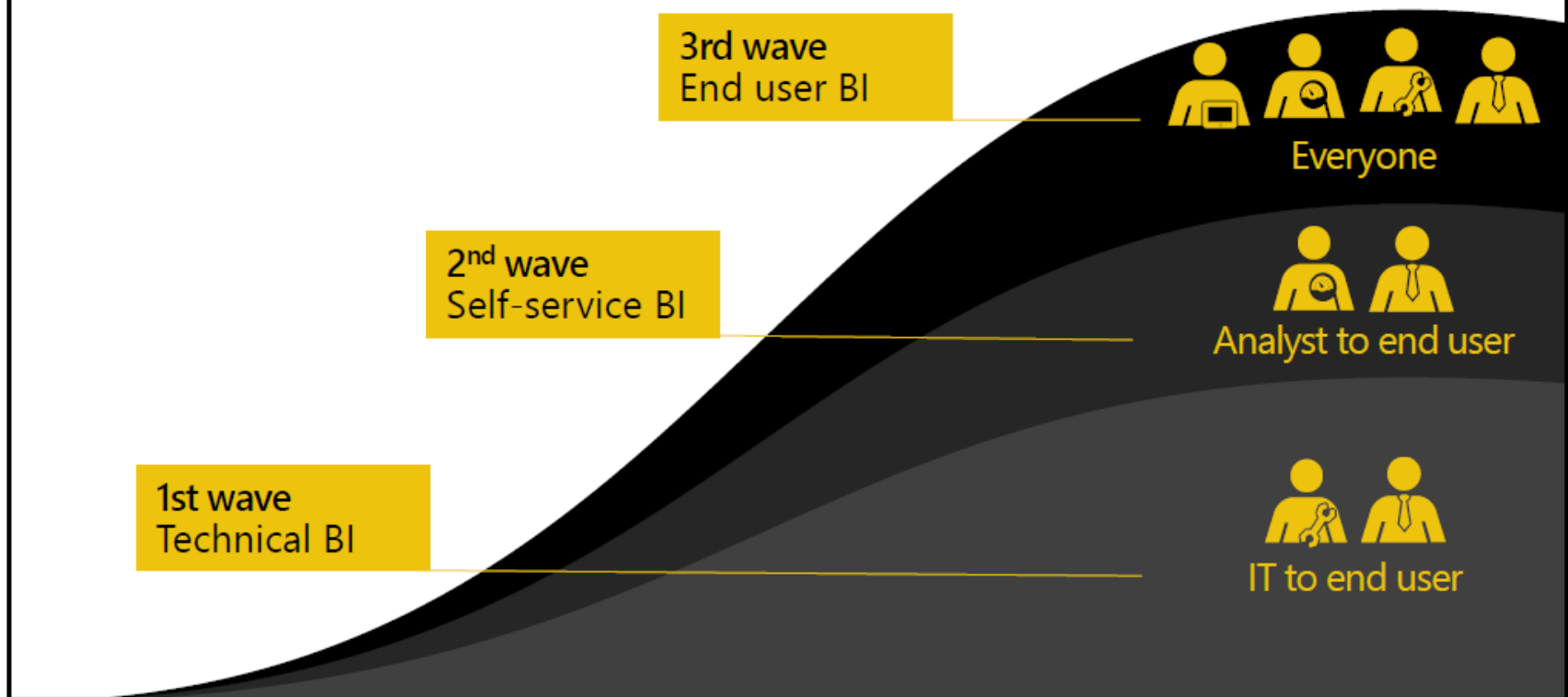
What is Business Intelligence?

- Business Intelligence (BI) is a technology-driven method which helps you to analyze data and to provide actionable information which helps corporate executives, business managers, and other users to make informed business decisions.



A New Generation of BI

- Today, BI extends to everyone

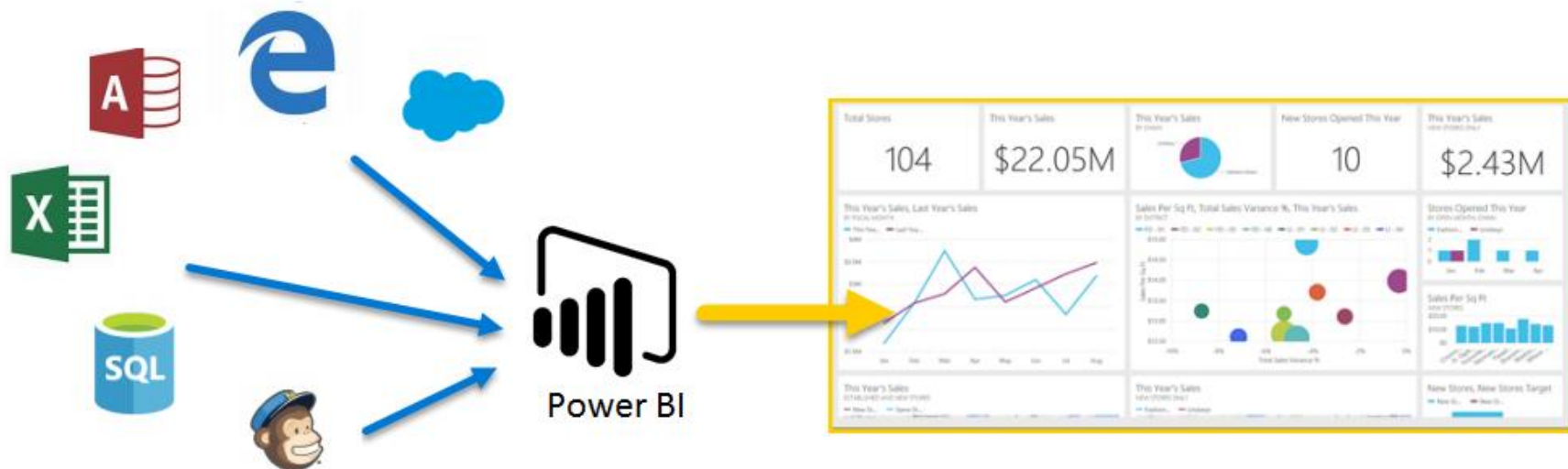


Most Popular BI Tools



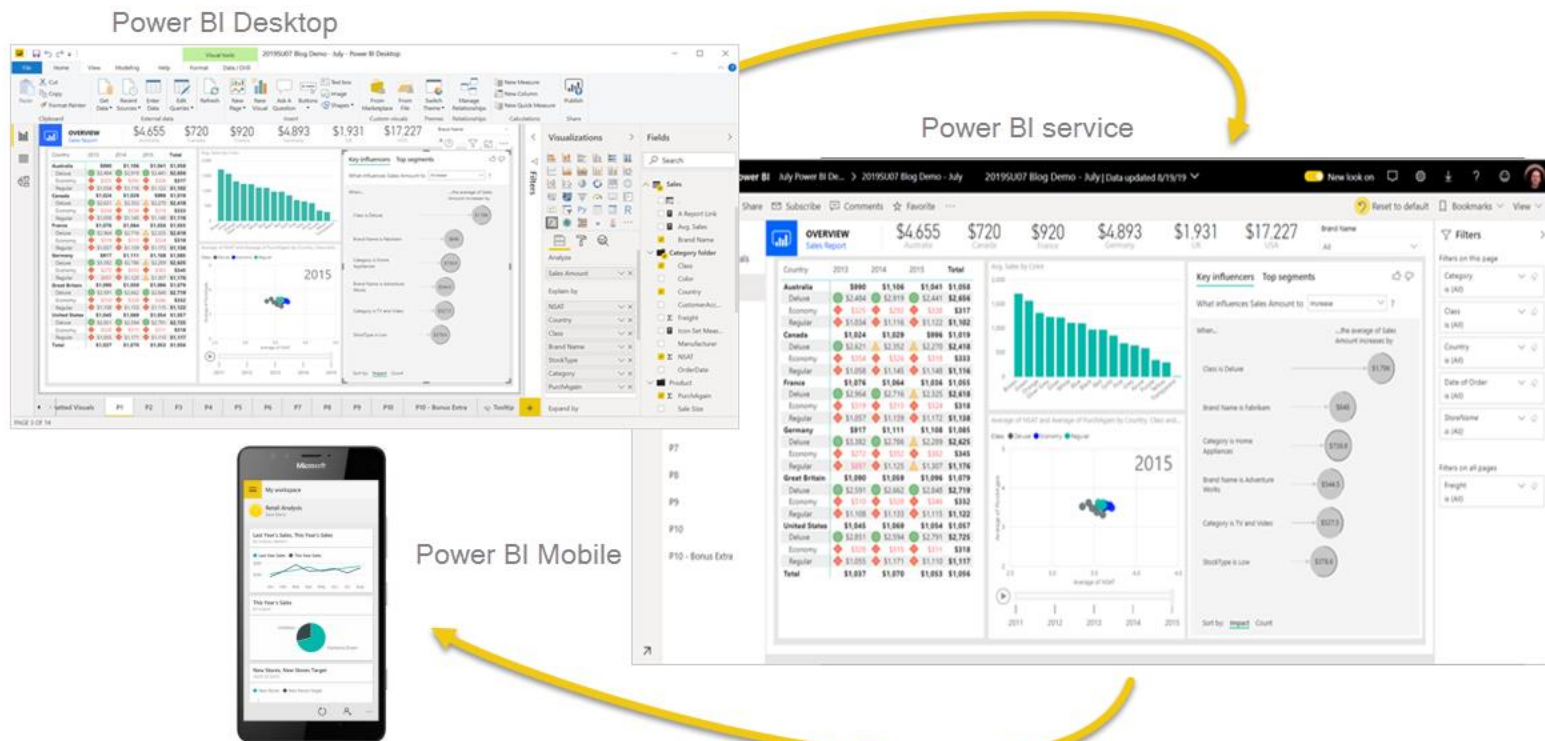
What is Microsoft Power BI?

- Microsoft Power BI is a collection of software services, apps, and connectors that work together to turn your unrelated sources of data into coherent, visually immersive, and interactive insights.



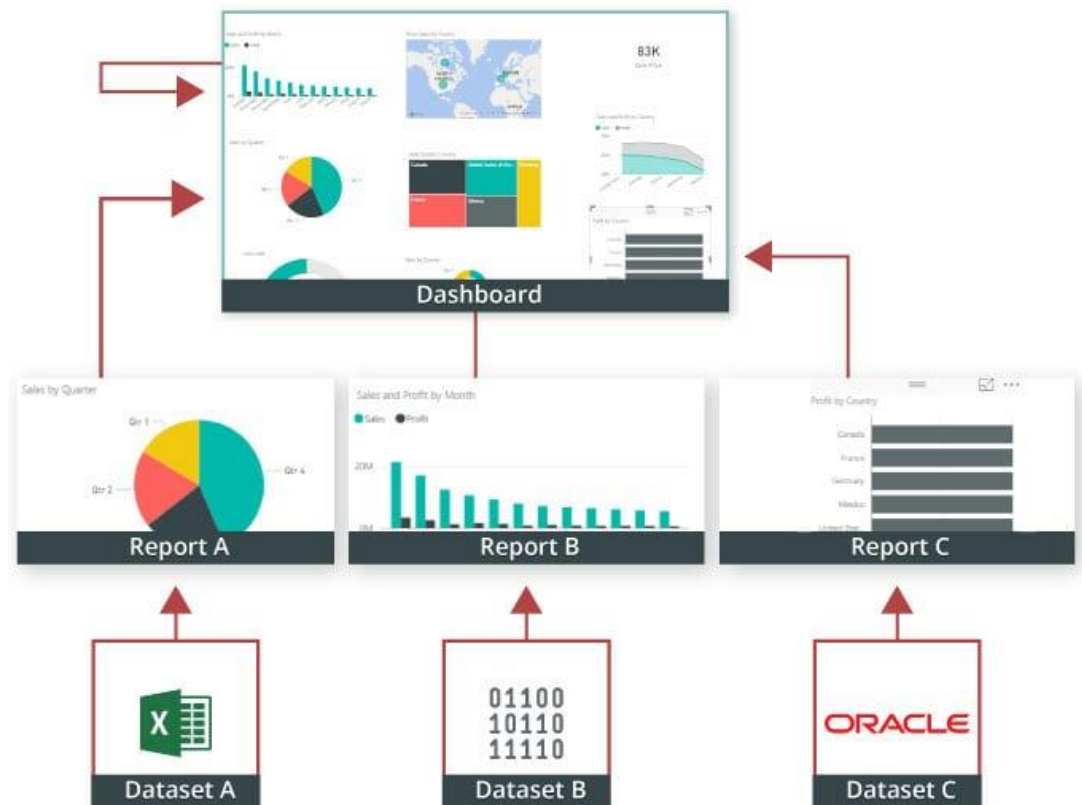
Power BI Component

- Power BI consists of:
 - A desktop application called **Power BI Desktop**
 - An online service called the **Power BI Service**
 - A **Power BI Apps** that are available on phones and tablets.



Power BI Concepts

- The major building blocks of Power BI are:
 - ▣ Datasets
 - ▣ Reports
 - ▣ Dashboards



Datasets

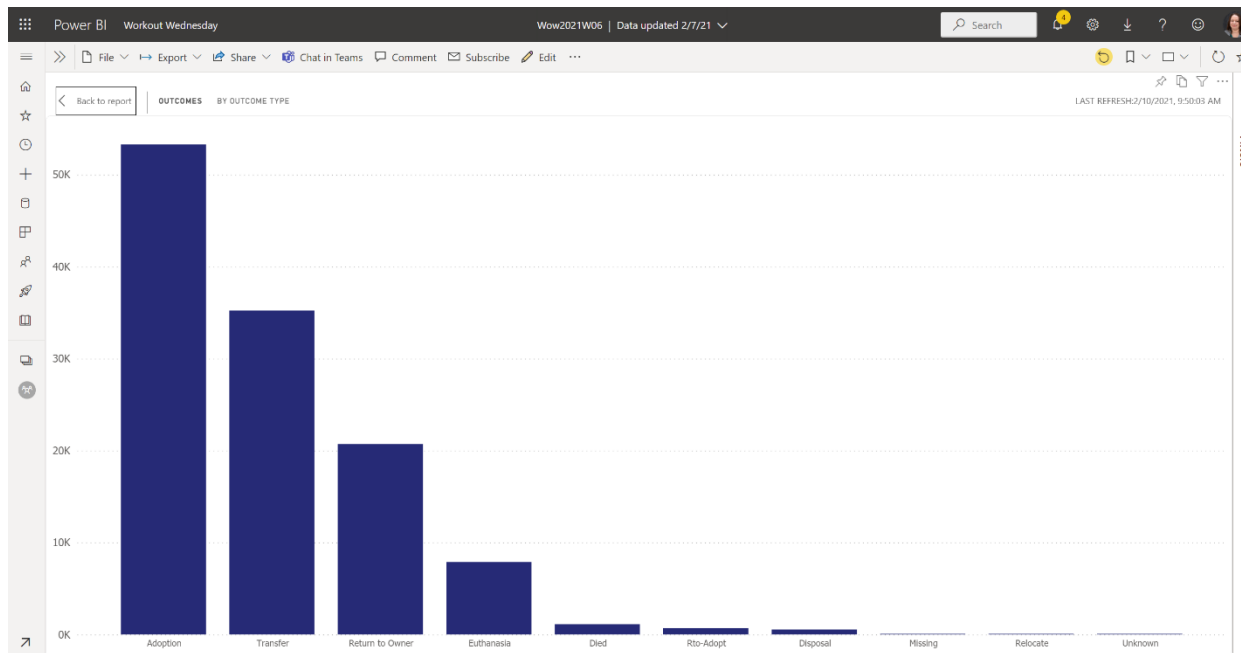
- A dataset is a collection of data that you import or connect to.

The screenshot shows the Microsoft Power BI web interface. On the left is a sidebar with navigation options: Home, Favorites, Recent, Apps, Shared with me, Workspaces, and My workspace (which is highlighted with a pink box). The main area displays the 'My workspace' content, with tabs for Dashboards, Reports, Workbooks, and Datasets (the 'Datasets' tab is selected and highlighted with a pink arrow). Below the tabs is a search bar and a table of datasets. The table has columns for NAME, ENDORSEMENT, ACTIONS, REFRESHED, NEXT REFRESH, and API ACCESS. It shows four datasets: Customer Profitability Sample PBIX, Opportunity Analysis Sample PBIX, Procurement Analysis Sample, and Retail Analysis Sample PBIX. The 'My workspace' item in the sidebar is highlighted with a pink box, and a pink arrow points from it to the 'Datasets' tab in the main content area.

NAME ↑	ENDORSEMENT	ACTIONS	REFRESHED	NEXT REFRESH	API ACCESS
Customer Profitability Sample PBIX			10/14/2019,	N/A	--
Opportunity Analysis Sample PBIX			10/14/2019,	N/A	--
Procurement Analysis Sample			10/10/2019,	N/A	--
Retail Analysis Sample PBIX			10/14/2019,	N/A	--

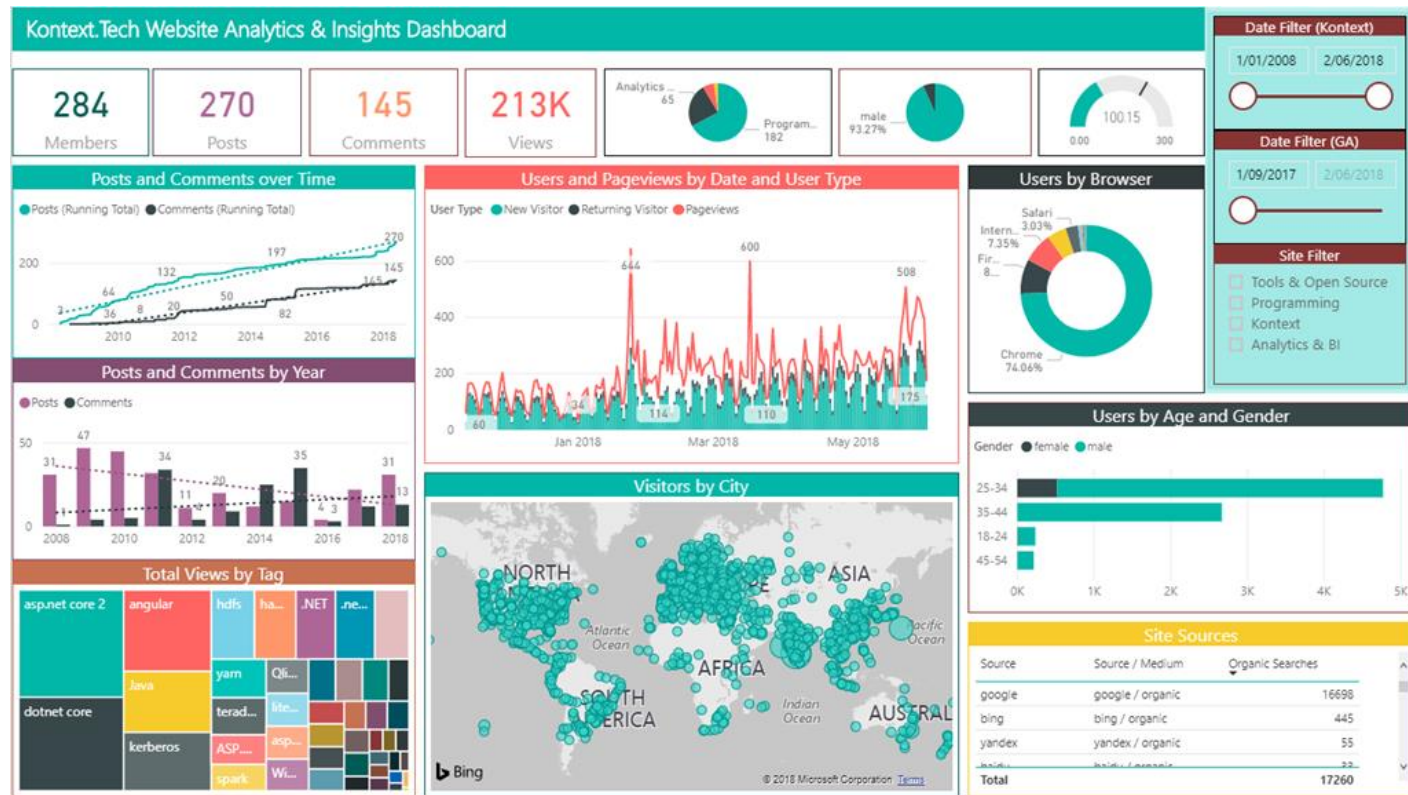
Report

- Report is a multi-perspective view into a dataset, with visuals that represent different findings and insights from that dataset.

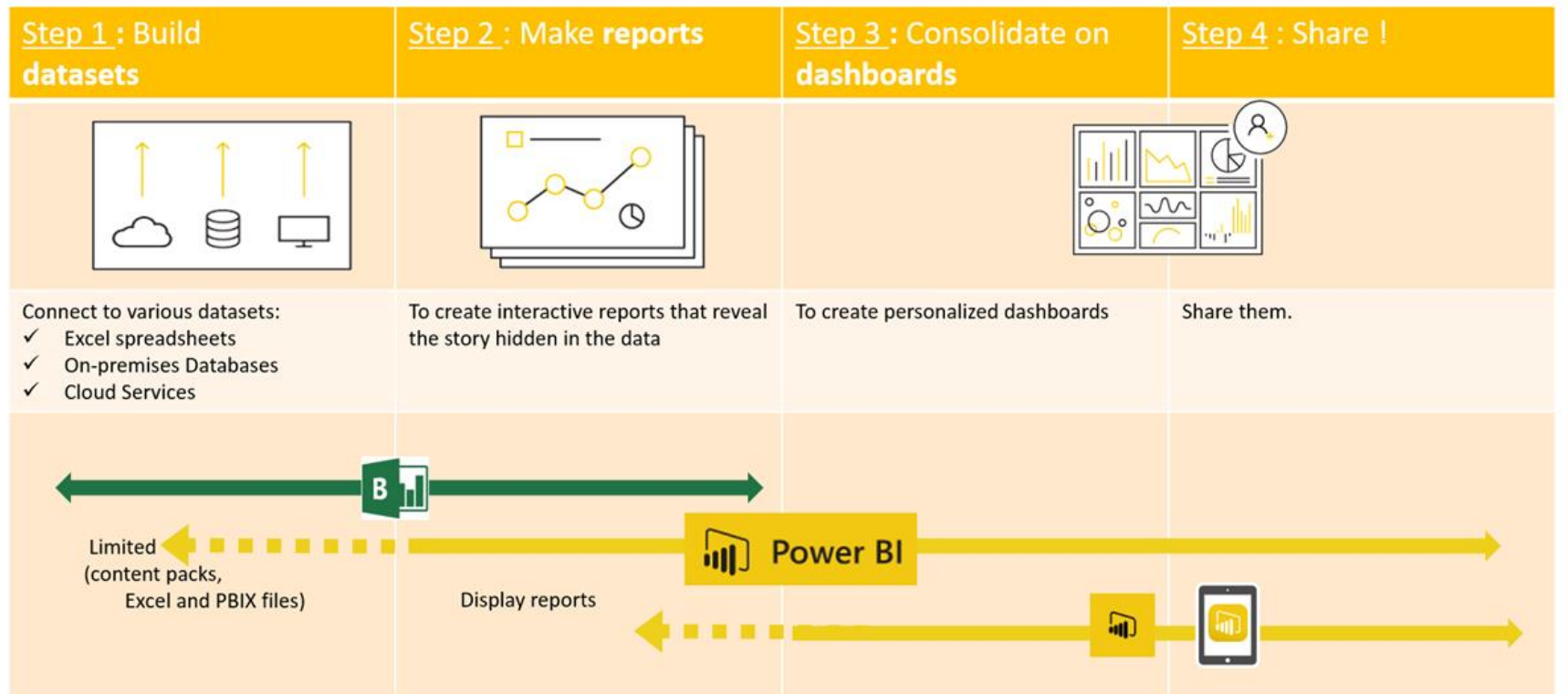


Dashboards

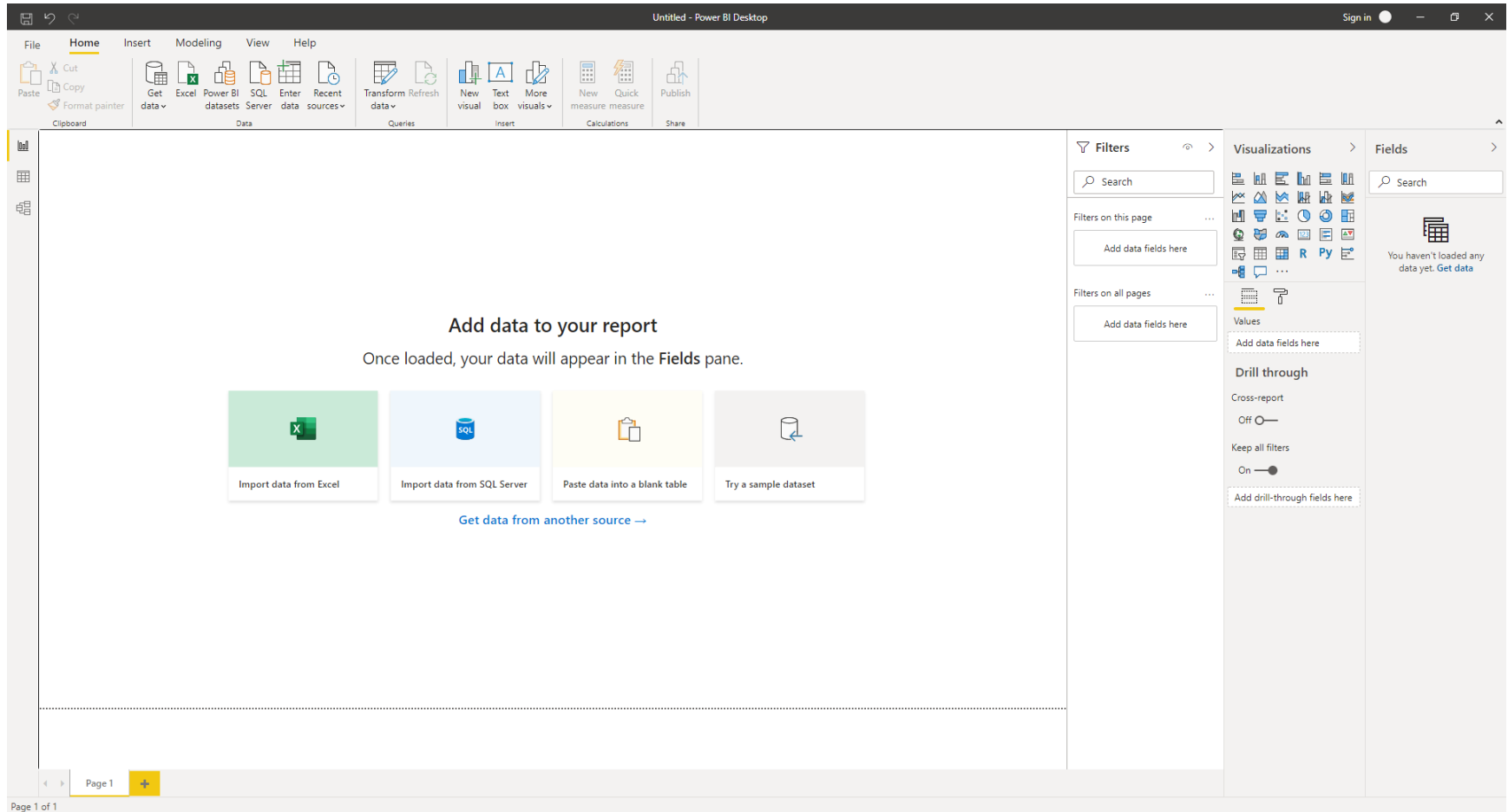
- A dashboard is a single canvas that contains zero or more tiles and widgets.



Power BI vs. Excel



Power BI Desktop



Power BI Service

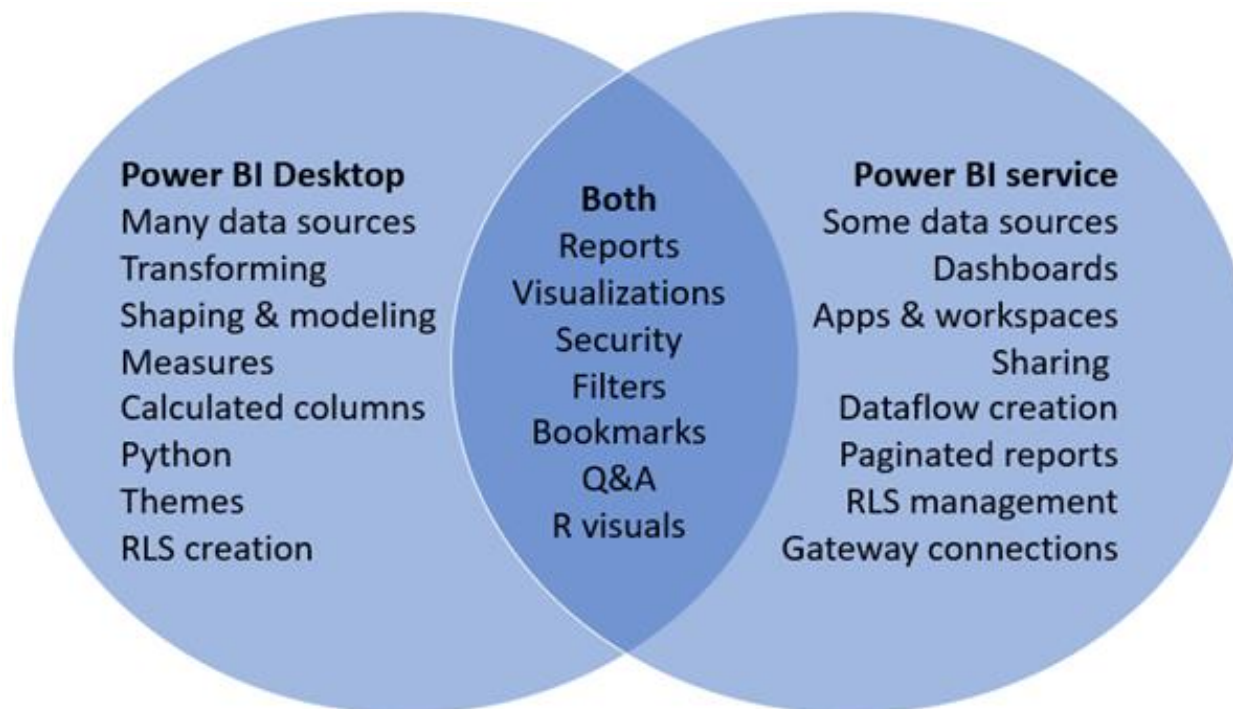
The screenshot shows the Power BI Service home page. The browser address bar displays `app.powerbi.com/home`. The left sidebar contains navigation links: Home, Favorites, Recent, Create, Datasets, Apps, Shared with me, Learn, Workspaces, and My workspace. The main content area greets the user with "Good morning, Peter" and the subtitle "Find and share actionable insights to make data-driven decisions". A yellow "New report" button is in the top right. Below the greeting is a "Recents" section with a table of recent workspaces.

Name	Type	Opened	Location	Endorsement	Sensitivity
My workspace	Workspace	8 months ago	Workspaces	—	—

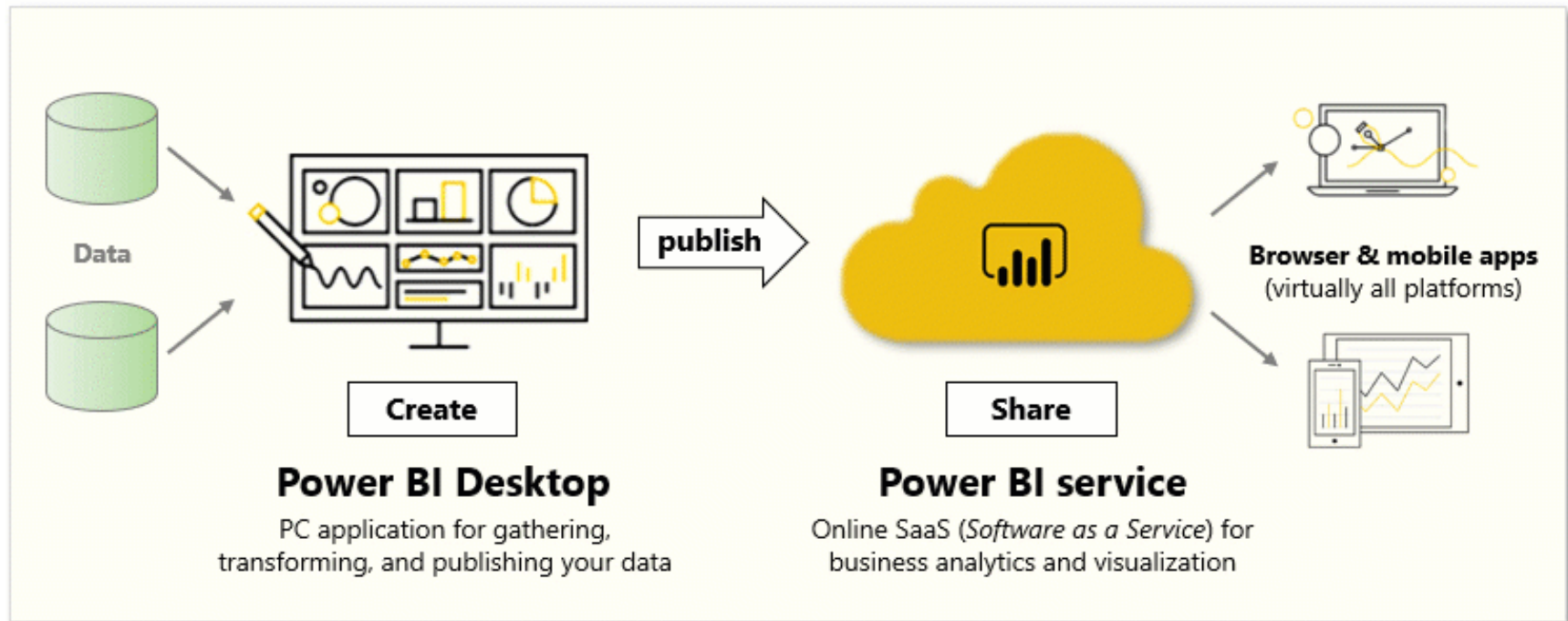
Below the table is a "Recommended apps" section with a grid of app tiles, each with an icon and a title. The tiles are: COVID-19 US Tracking Report, Azure DevOps Dashboard, Google Analytics Report, Template Apps Exploration Tool, Github Repository Usage, Microsoft 365 Usage Analytics, Microsoft Sample - Sales & Marketing, YouTube Analytics by MAQ Software, and Custom Visuals Exploration Tool.

Power BI Desktop vs. Power BI Services

- Most users use Power BI Desktop to create Power BI reports, and then use the Power BI service to collaborate and distribute their reports.



Implementation Process



Implementation Process (Power BI Desktop)

