



INTRODUCTION TO POWER BI

UNDERSTAND THE CAPABILITIES OF POWER BI AND
GET STARTED BUILDING WITH POWER BI



Welcome to our introductory training on Microsoft Power BI

Learn how you can use Power BI to easily build reports and dashboards with interactive visualizations and AI-driven insights. See how you can use this solution to drive business results with actionable insights.

Today's business world is becoming increasingly more data driven. Small and large businesses alike use data to make decisions about sales, hiring, goals, and all areas for which they have data.

- It can be intimidating to understand data without analytical background.
- Power BI takes intimidation and hassle out of data analysis and visualization.
- Power BI allows to connect to hundreds of data sources.



What you will learn



1

Describe the business value and features of Power BI.

2

Compare and contrast the different components that make up Power BI

3

Describe how to load, clean and transform data

4

Build a basic dashboard

5

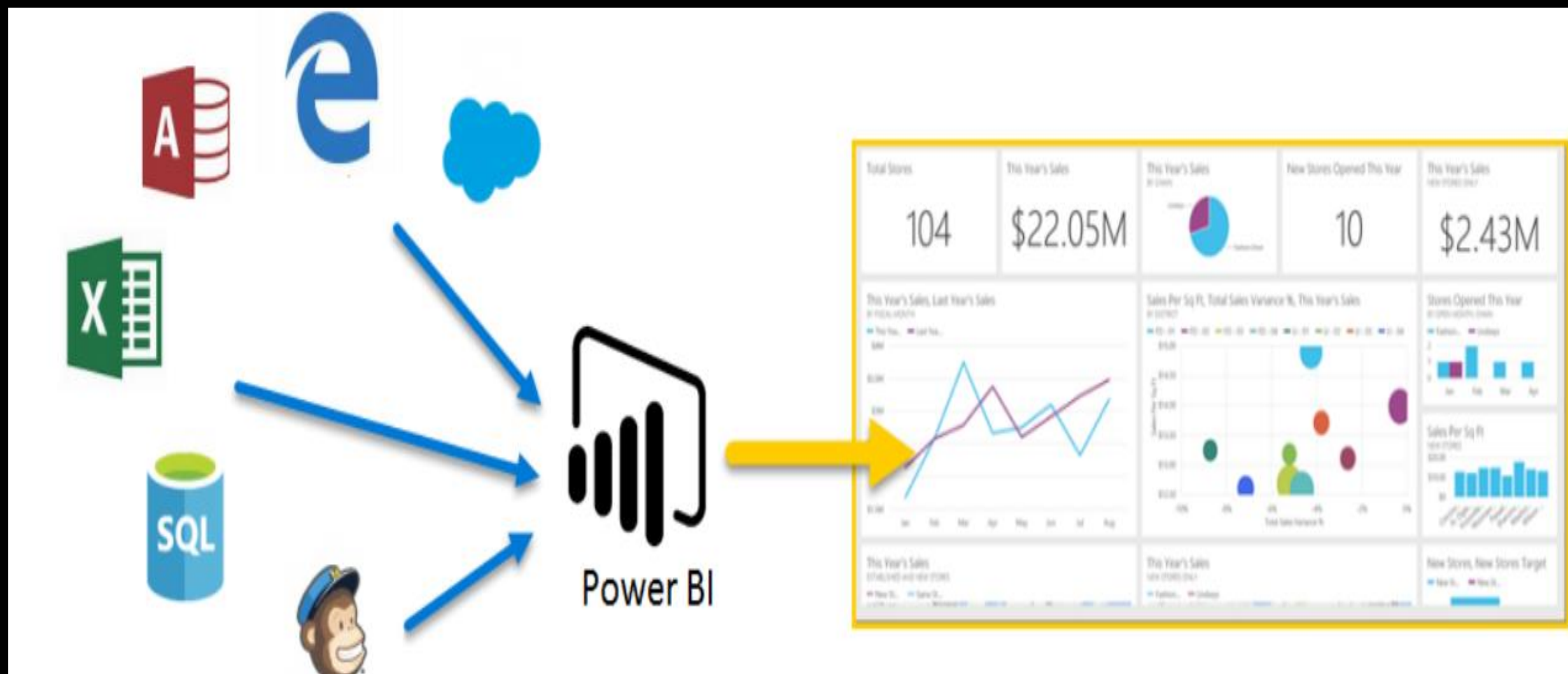
Consume Power BI reports and dashboards

6

Explore AI insights in Power BI



What is Microsoft Power BI?



Microsoft Power BI is a complete reporting solution that offers *data preparation*, *data visualization*, *distribution*, and *management* through development tools and an online platform.

- 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 lets you easily connect to your data sources, clean, and model your data without affecting the underlying source, visualize (or discover) what's important, and share that with anyone or everyone you want.

Components of Power BI



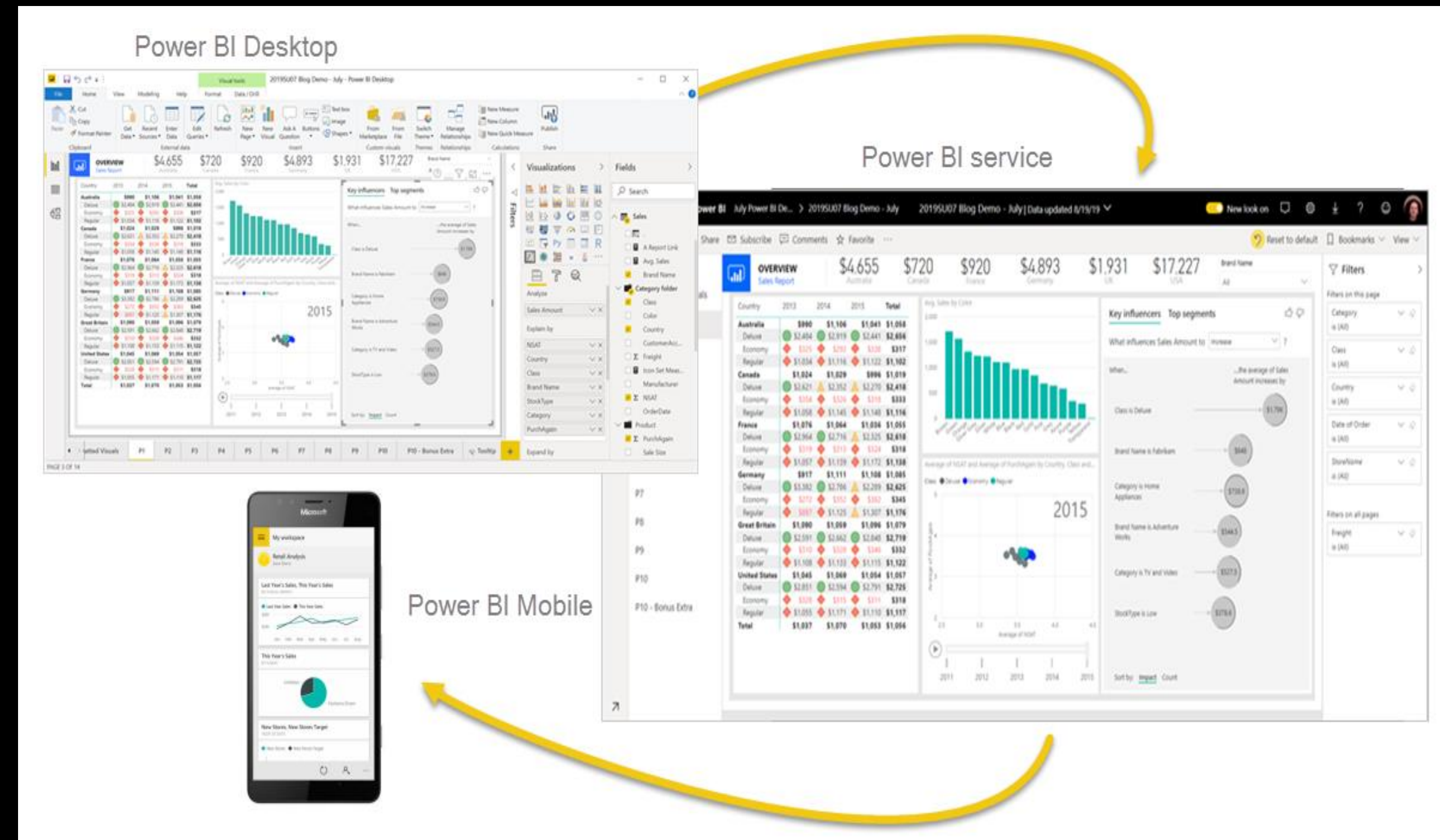
Power BI consists of a :

1. Microsoft Windows *desktop application* called Power BI Desktop,
2. an online SaaS (Software as a Service) service called the *Power BI service*, and
3. a mobile *Power BI apps* that are available on phones and tablets.

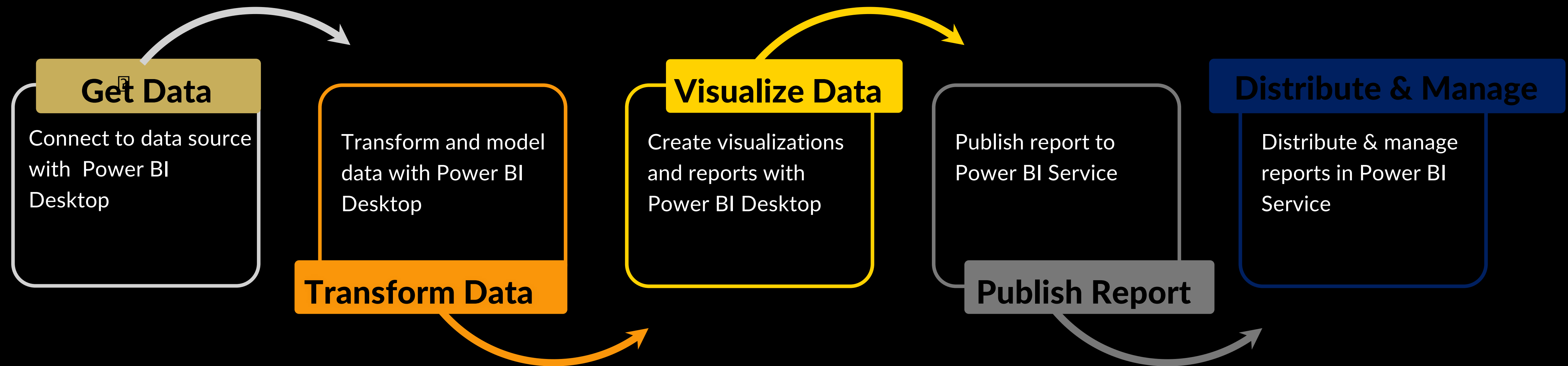
- **Power BI Desktop** is the development tool available to data analysts and other report creators.
 - Free

- **Power BI service** allows you to organize, manage, and distribute your reports and other Power BI items. -- Trial account at app.powerbi.com

- **Power BI Mobile** allows consumers to view reports in a mobile-optimized format.



Power BI Workflow



There's a common flow when creating reports with Power BI. First, you start with Power BI Desktop to connect to data and create the report. Then you publish the report to the Power BI service and distribute to consumers.

1

Semantic Models

A semantic model is a collection of data that you import or connect to.

A **semantic model** consists of all connected data, transformations, relationships, and calculations.

2

Reports

A Power BI report is one or more pages of visualizations such as line charts, maps and other elements.

3

Dashboards

A dashboard is a single canvas that contains one or more tiles and widgets pinned from a report.

1

Report View

You can create queries to build compelling visualizations that you can share with others. You can arrange them as you want them to appear.

2

Data View

See the data in your report in data model format, where you can add measures, create new columns,

3

Model View

: Get a graphical representation of the relationships that are established in your data model and manage or modify them as needed.

Build a Basic Dashboard



While the data sources that you use might be different, the process for building and sharing a dashboard are same. You need to take the following steps:

- **Prepare your data:** Preparing the data ensures that it's in a format that Power BI can easily consume.
- **Build a report:** The report contains the visuals that you want to include in your dashboard. Depending on the scenario, reports can be built in either Power BI Desktop or using the Power BI Service.
- **Pin the report visuals to a dashboard:** Dashboards are the primary element that users use for viewing data. They can include data from multiple reports as needed.
- **Share a link to the dashboard:** Any users with the link and the necessary permissions are easily able to view and interact with the data.



Dashboards vs Reports



Both dashboards and reports in Power BI are tools designed to visualize and communicate data effectively. They are customizable and allow for a wide range of visualization options, such as charts, graphs, and tables. Additionally, both can connect to a variety of data sources, facilitating data integration for comprehensive analysis.

Differences:

- **Purpose:** Dashboards are used for high-level monitoring, often in real-time or near-real-time, providing a consolidated view of business performance. Reports, on the other hand, are used for in-depth analysis and exploration of data to answer complex business questions.
- **Interactivity:** While dashboards offer limited interactivity to keep things simple, reports provide a variety of interactive features. These include drill-through, filtering, and highlighting that enable users to delve deeper into the data.
- **Structure:** Dashboards are typically single-page, with multiple visualizations available at a glance. Reports, however, may be multi-page, with different visualizations and data tables split across multiple pages or tabs.
- **Data updates:** Dashboards are designed for real-time or near-real-time data updates, making them ideal for monitoring live data. Reports typically focus on historical data and require periodic updates, with Power BI offering scheduled refresh capabilities.
- **Use case:** Dashboards are often used for quickly sharing key insights across an organization, while reports are more suited for detailed analysis, allowing users to explore specific aspects of the data.

What can you do with Power BI Service as a Consumer?



As a consumer, you can use the Power BI service to review and interact with content that's been shared with you.

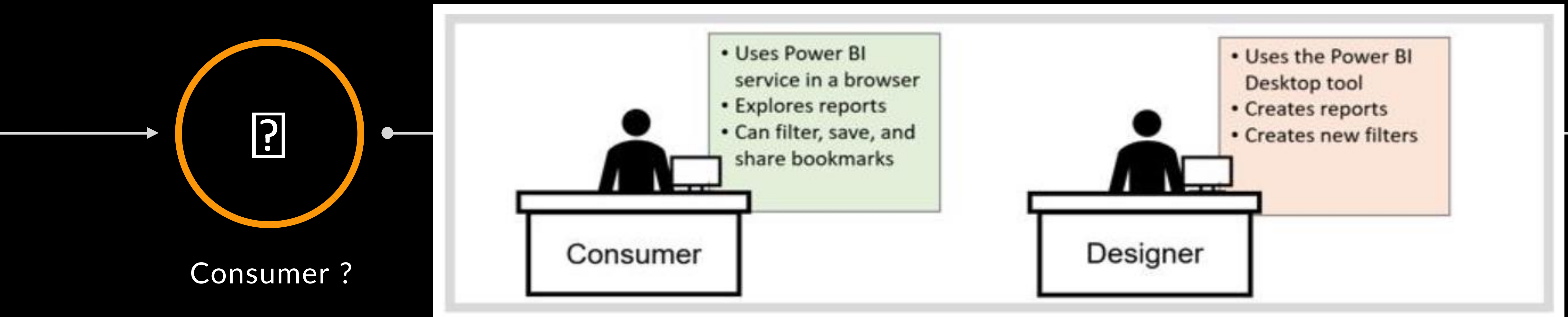
Power BI can help make your job easier and more effective at the same time by converting all that data into charts and graphs to help you visualize your data in meaningful ways.

You and your colleagues can work from the same trusted dashboards and reports from a browser or mobile device. Because your data updates and refreshes automatically, you're always working with the freshest content.

Because the content isn't static, you can explore your data further by looking for trends, insights, and other business intelligence.

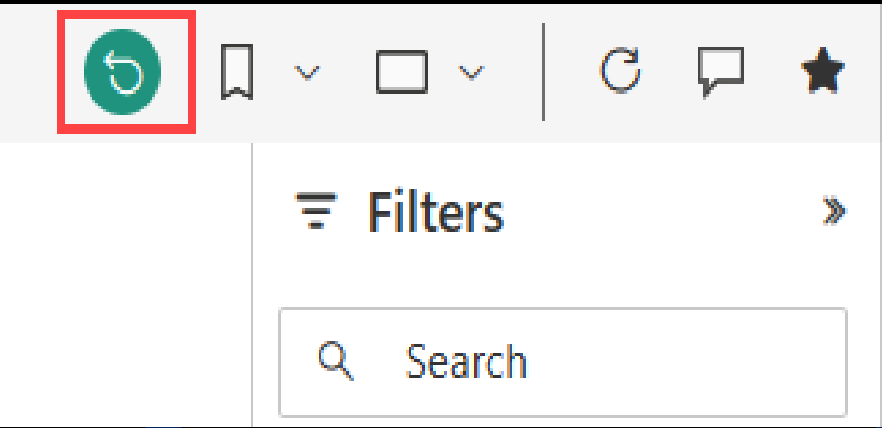


Are you a Power BI Consumer?



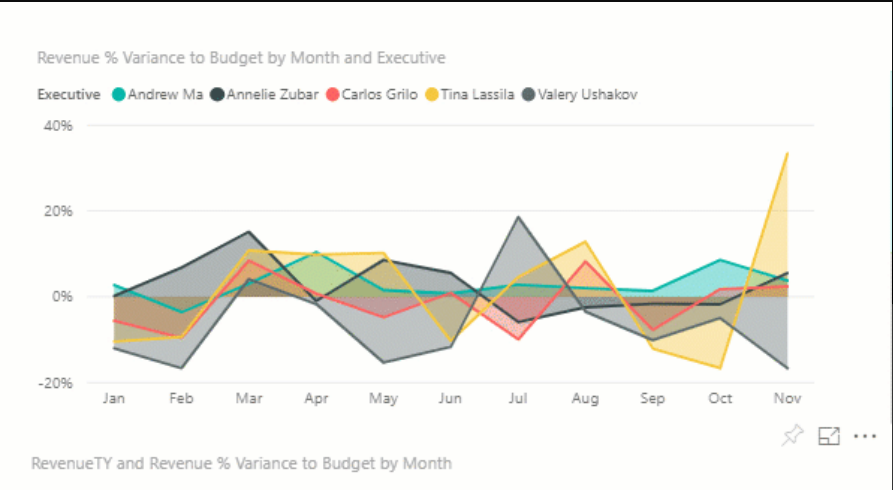
- The way you interact with Power BI depends on your job role. As a user or consumer, you're the person who receives dashboards, reports, and apps from designers who create them.
- Also, you work in the online version of Power BI, called the Power BI service, to review and interact with this data to make business decisions.
- You don't need to be a data scientist to perform complex data analysis. Power BI does the complex work for you with straightforward and intuitive controls.

What can you do?



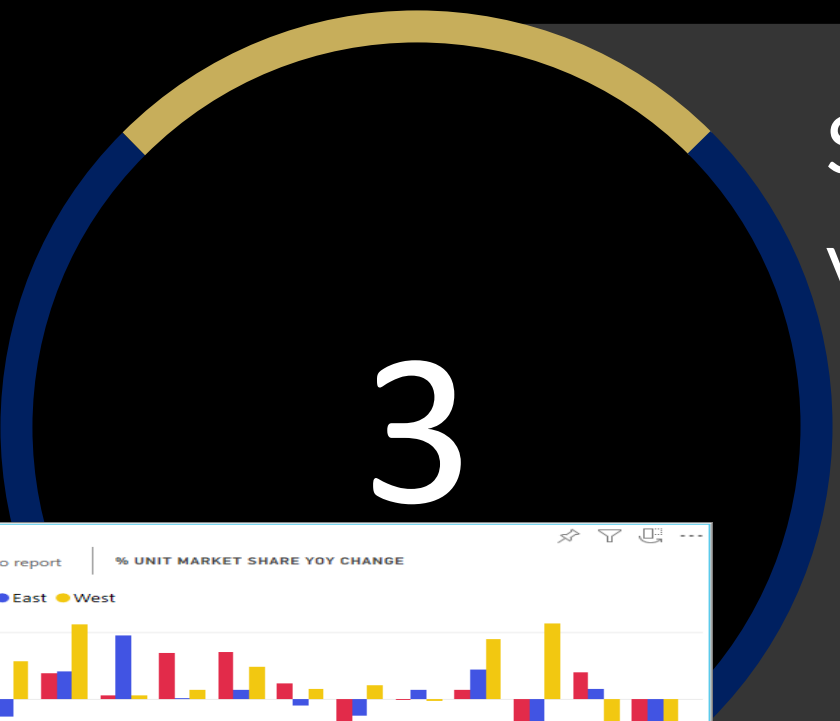
Safely interact with content

Filter, slice, subscribe and export content without affecting the underlying dataset or the original reports, dashboards or apps



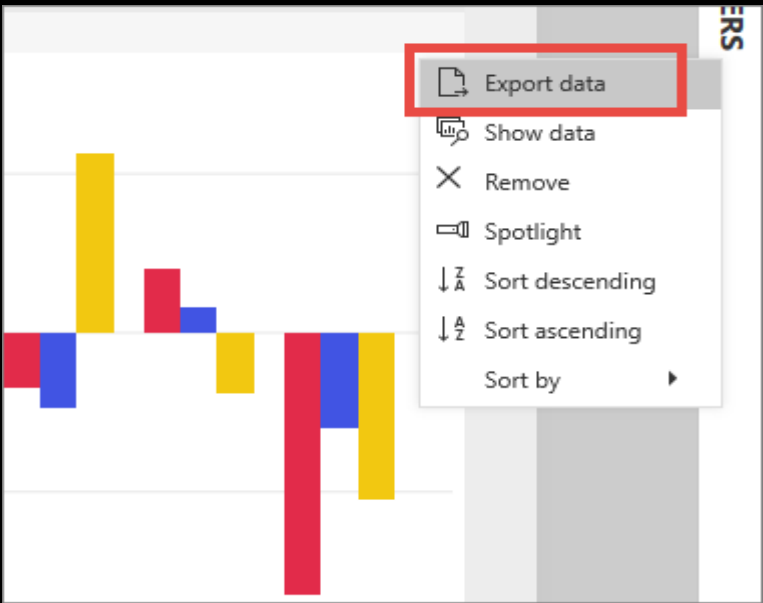
Display details on a visual

Visuals are made up of datapoints. Hover over a datapoint to view the details



Show data used to create a visual

Use Show Data feature to view the data used to build a visual



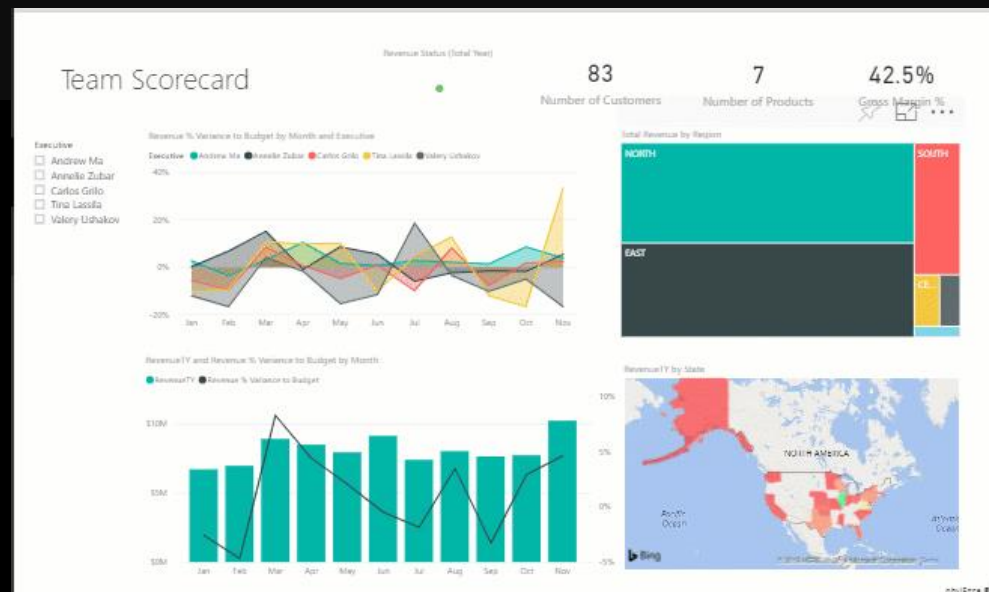
Export Data

You can export data and view in Excel.

You can also export entire reports to Power Point or PDF



What can you do?



5

Cross highlight and cross filter report content

All visuals in a report are related. Highlight or select a value in one visual and instantly view its impact on the other visuals.

Comment on specific visuals



6

Collaborate with colleagues

With the Power BI comment feature, you can add a personal comment or start a conversation with colleagues about a dashboard, right there on that dashboard.

7

Let Power BI work for you

1. Subscribe to reports & dashboards
2. Get alerts when your data reaches a threshold
3. Get Quick Insights
4. Ask questions using natural language



With Power BI, you can collaborate with your colleagues in many ways: **sharing, commenting, and printing.**



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THANK YOU FOR WATCHING