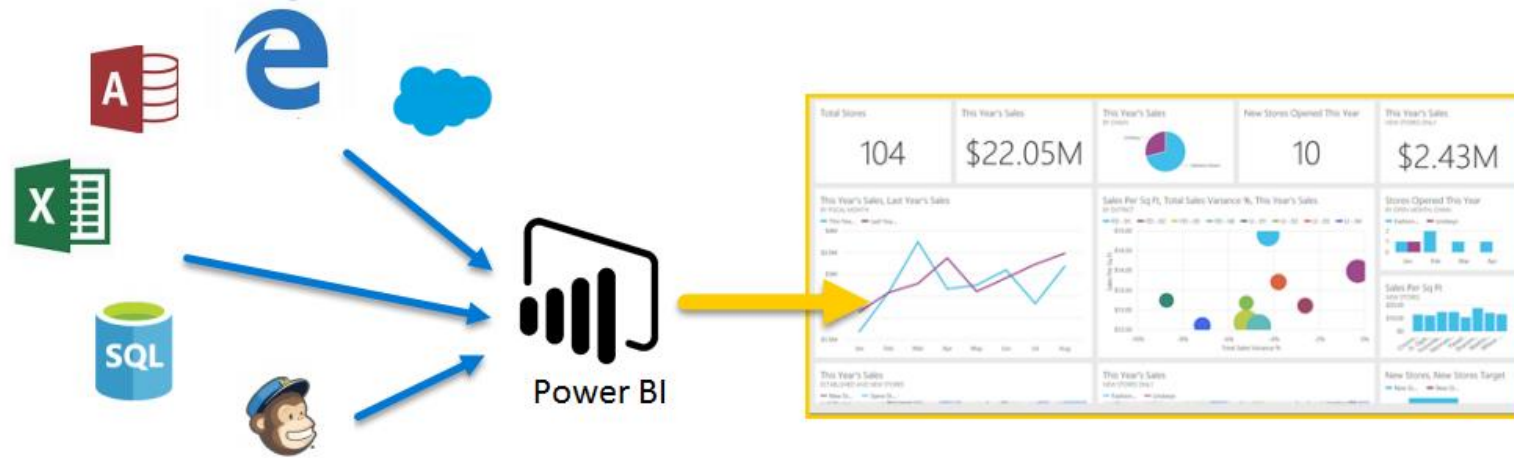


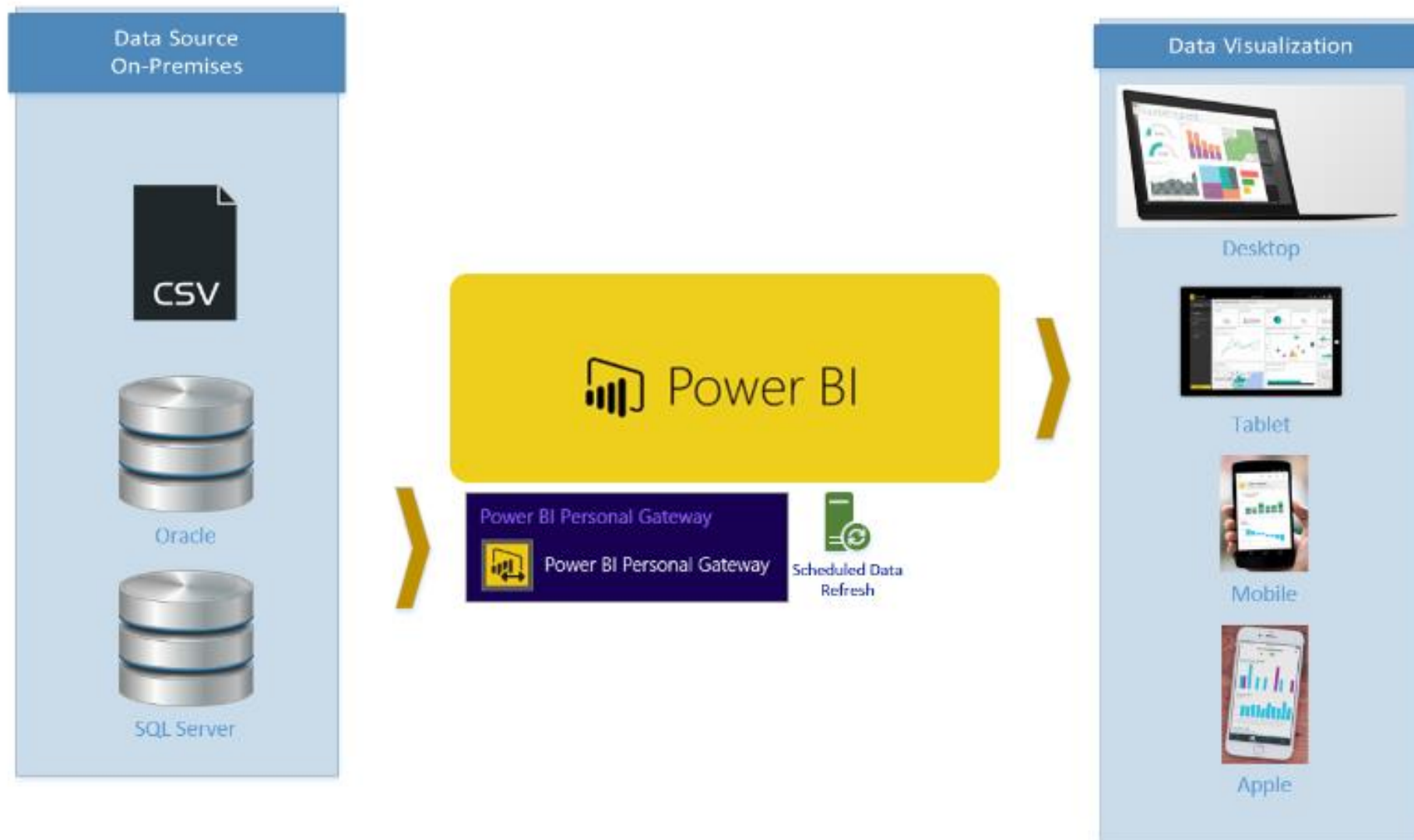
What is Power BI?

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



- Always real time, data sync automatically
- Create dashboard to monitor data, which combines on-premises data
- Graphical visualization
- Dashboard can be shared to other user

Power BI Architecture



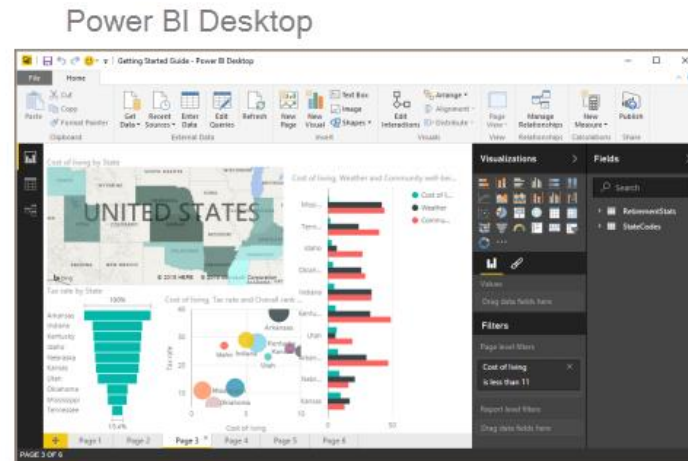
Parts of Power BI

Power BI Desktop

- Windows desktop application
- Power BI service

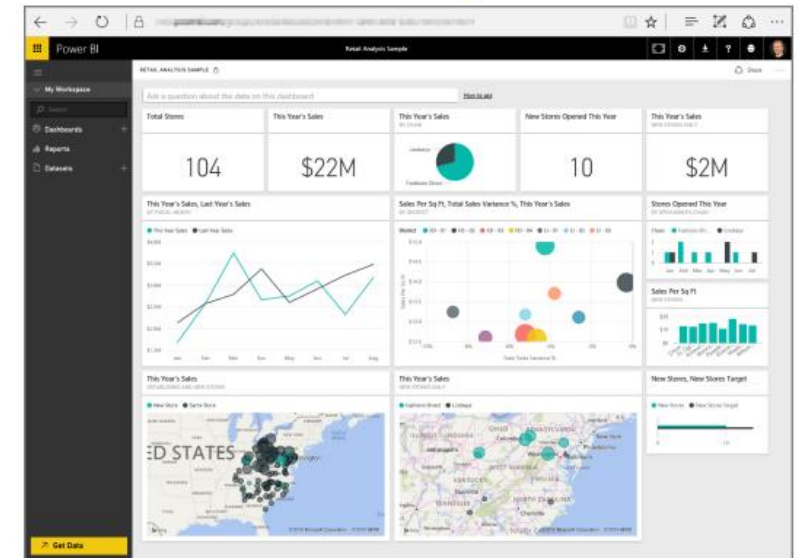
Mobile Power BI apps

- Windows phones
- Tablets
- iOS and Android devices



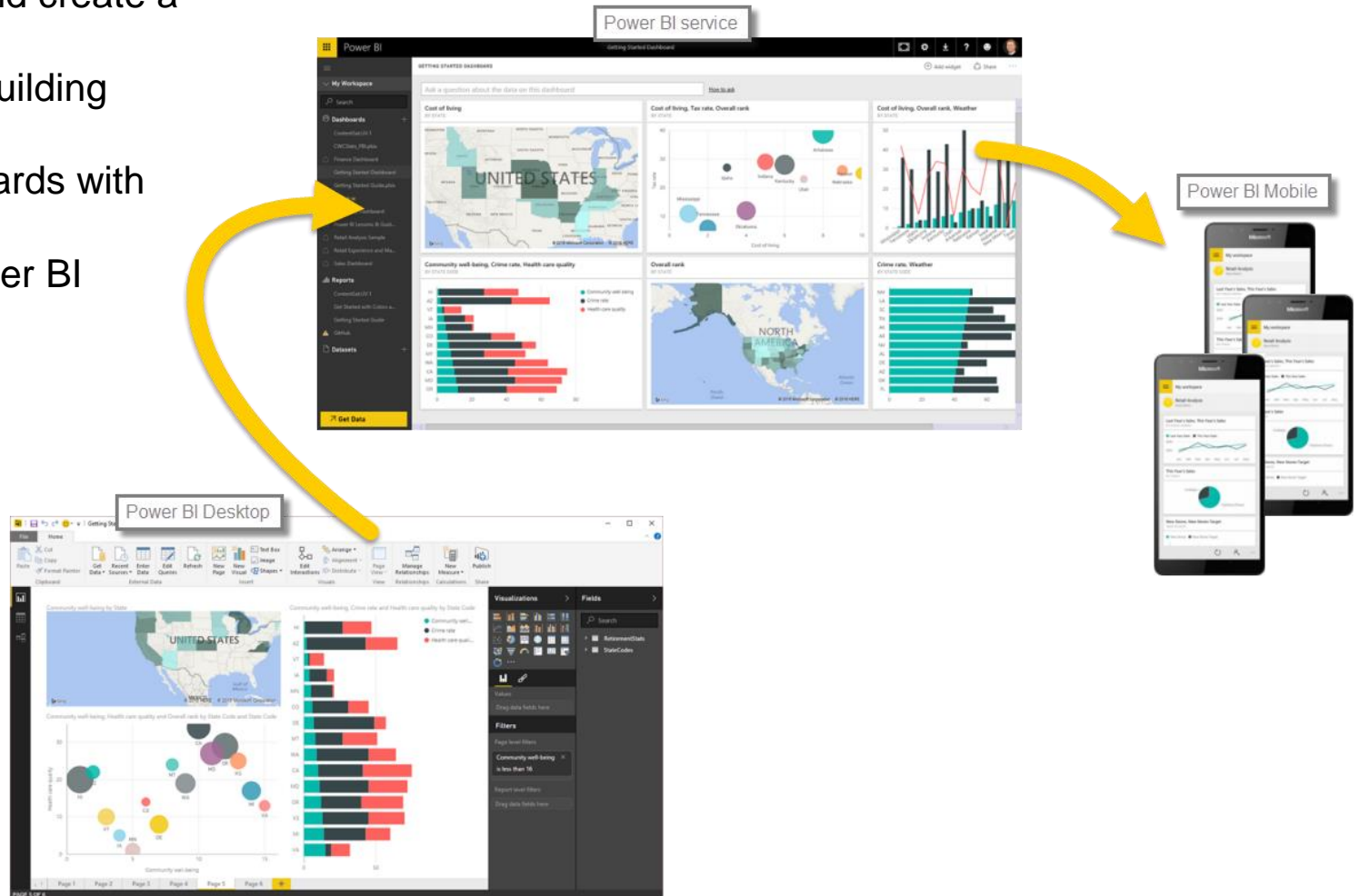
Power BI Mobile

Power BI service



Common flow

- Bring data into Power BI Desktop, and create a report.
- Publish to the Power BI service for building dashboards
- Build dashboards and share dashboards with others
- View dashboards and reports in Power BI Mobile apps



Building Blocks of Power BI

The basic building blocks in Power BI are:

- **Datasets** – a collection of data that Power BI uses to create visualizations
- **Visualizations** – a visual representation of data, sometimes just called visuals
- **Reports** – a collection of visuals from a dataset, spanning one or more pages
- **Dashboards** – a single page collection of visuals, built from a report

Datasets

A collection of data that Power BI uses to create its visualizations.

Datasets can be many different sources eg.

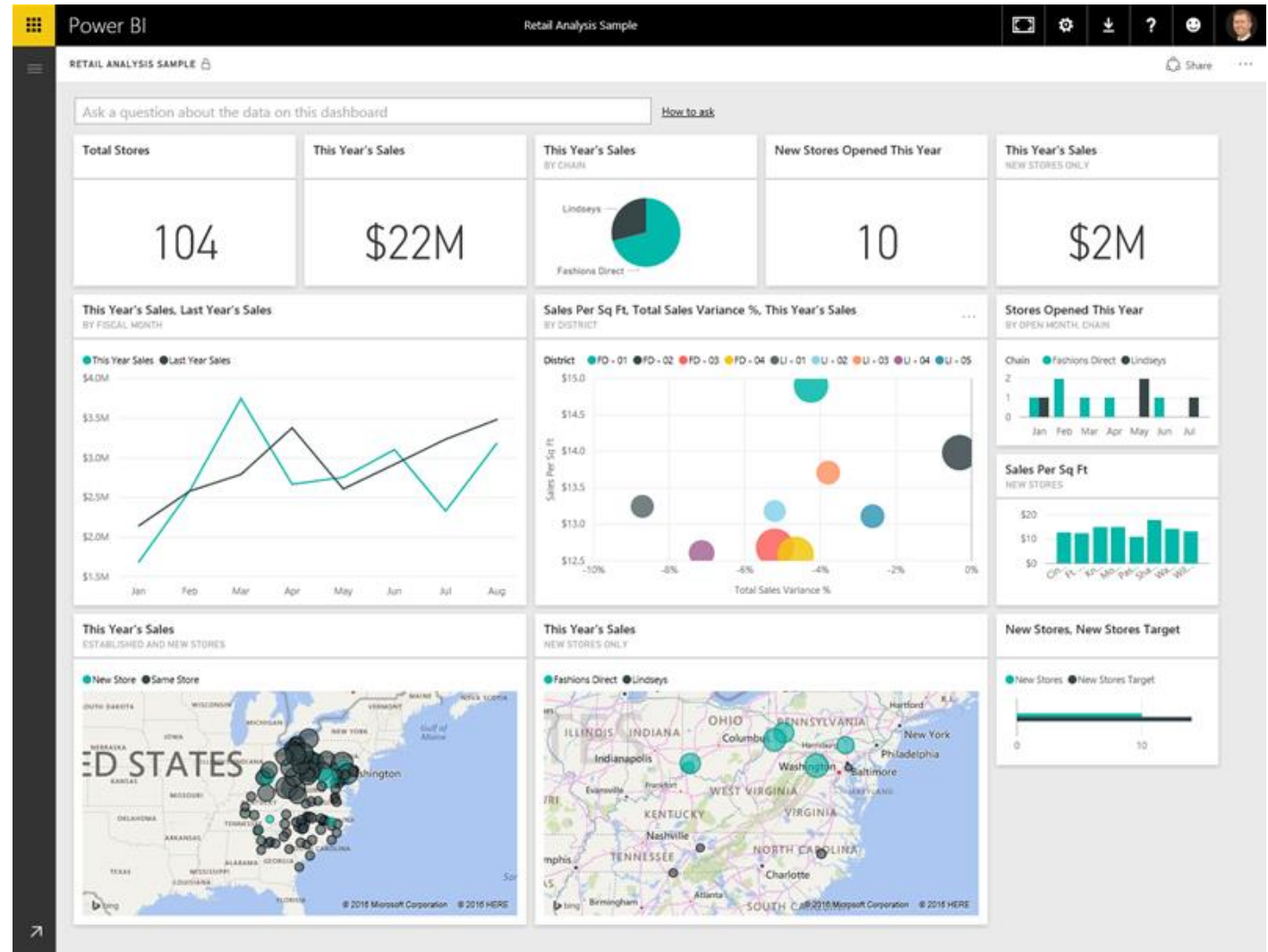
- **File** (eg. Excel, CSV, XML, Text, SharePoint Folder)
- **Database** (eg. SQL Server, Oracle, DB2)
- **Azure** (eg. Azure SQL database, Azure SQL Data Warehouse, Azure Marketplace)
- **Online Services** (eg. SharePoint Online List, Exchange Online, Dynamics CRM Online, Facebook, Salesforce Objects, Google Analytics etc.)
- **Others** (eg. Web, SharePoint List, Active Directory, Microsoft Exchange, ODBC)

Once dataset is created, you can create visualizations.

Visualizations

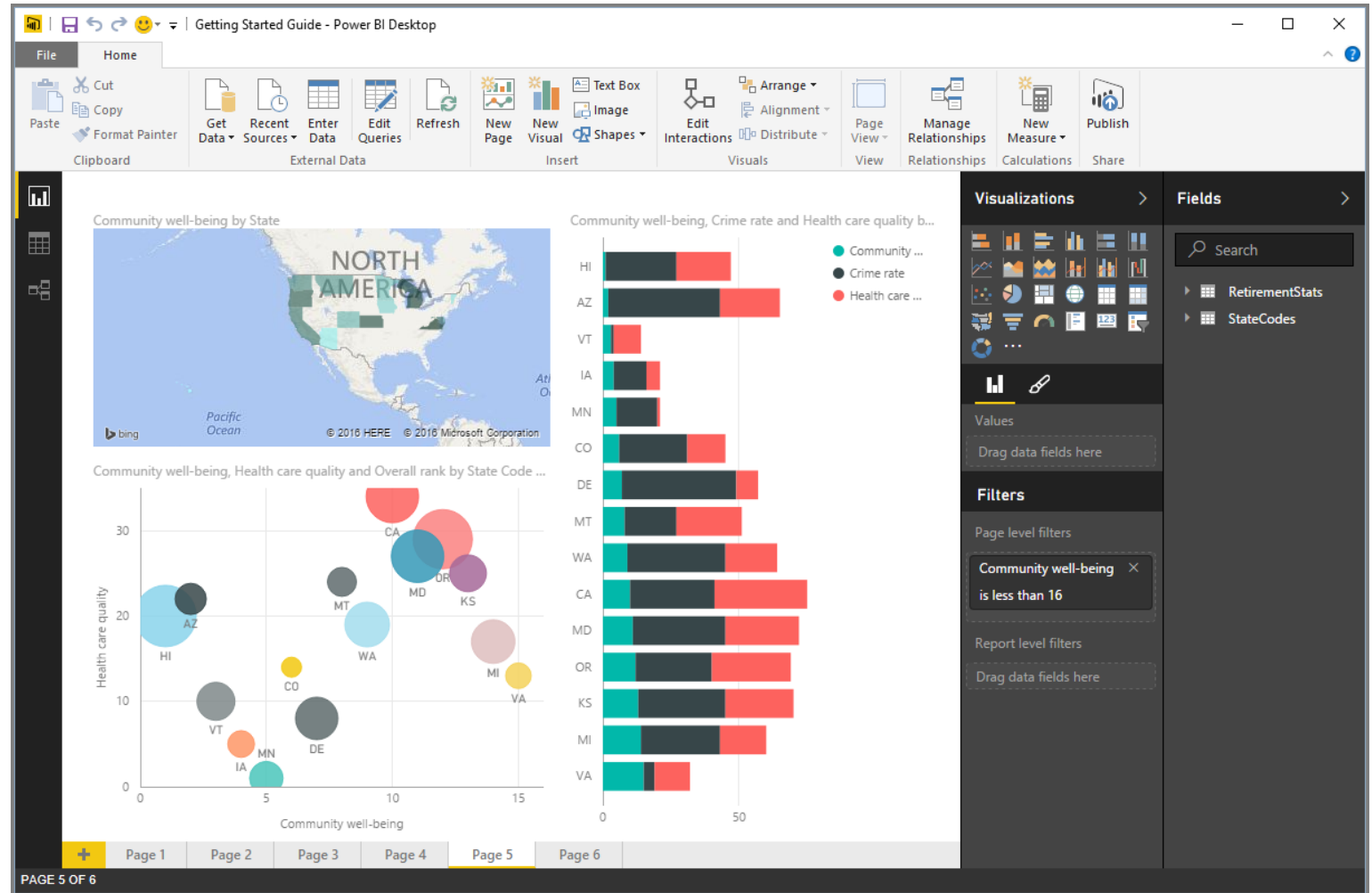
A visual representation eg:

- Bar and column charts
- Basic and Stacked Area charts
- Single number cards
- Combo charts
- Doughnut charts
- Funnel charts
- Gauge charts
- Line charts
- Pie charts
- Waterfall charts



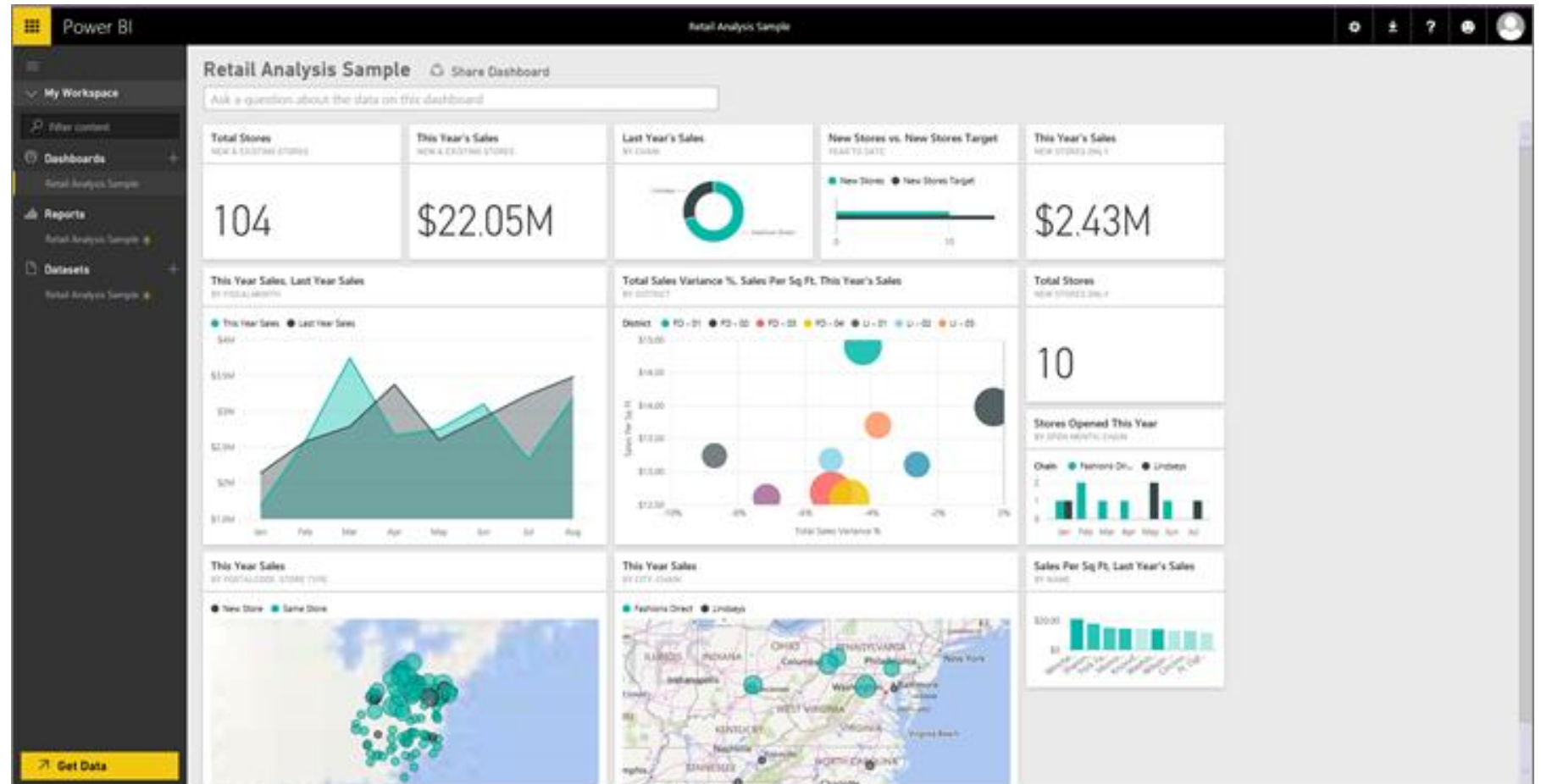
Reports

A **report** is a collection of visualizations that appear together on one or more pages.



Dashboards

A **dashboard** is a collection of visuals from a single page for sharing. It is a selected group of visuals that provide quick insight into the data.



Personal gateway vs On-premises gateway

Personal Gateway	On-premises Gateway
Can only be used by one person	Can be shared and reused by multiple users
Only schedule refresh is support	Can be used by Power BI, PowerApps, Logic Apps, and Microsoft Flow
	Support schedule refresh and live query for Power BI

IT Infrastructure requirements

Minimum Requirements:

- .NET 4.5 Framework
- 64-bit version of Windows 7 / Windows Server 2008 R2 (or later)

Recommended:

- 8 Core CPU
- 8 GB Memory
- 64-bit version of Windows 2012 R2 (or later)

Related Considerations:

- The gateway cannot be installed on a domain controller

Other requirements

End users

- For desktop user only web browser and a paid Power BI Pro account
- Support browser include
 - Microsoft Edge, IE 11, Chrome desktop, Safari Mac, Firefox desktop
- Support iOS, Android and Windows Mobile

Developers

- To create reports, Power BI Desktop (free download) is required
- Windows 7 / Windows Server 2008 R2, or later
- .NET 4.5
- Internet Explorer 9 or later
- **Memory:** At least 1 GB available, 1.5 GB or more recommended.
- **Display:** At least 1440x900 or 1600x900 (16:9) recommended. Lower resolutions such as 1024x768 or 1280x800 are not recommended, as certain controls (such as closing the startup screen) display beyond those resolutions.
- **CPU:** 1 gigahertz (GHz) or faster x86- or x64-bit processor recommended.

Mobile vs Desktop environment

- Filter can apply in Desktop environment
- Mobile no filtering