

# Dashboard in a Day

## Power BI

<instructor>

June 2023 version

# Prerequisites and setup steps

- At minimum, a computer with 2-cores and 4GB RAM running Windows 8 / Windows Server 2008 R2, or later
- **Display:** At least 1440x900 or 1600x900 (16:9) recommended.
- **Internet connectivity:** You must have the ability to connect to the Internet outside your organization
- **Microsoft Power BI Desktop installed:** you should have downloaded and installed Power BI Desktop from the Microsoft Store <https://go.microsoft.com/fwlink/?linkid=2135345> or from the download center <https://go.microsoft.com/fwlink/?linkid=2135519>
- Microsoft Power BI Desktop requires Internet Explorer 10 or later.
- **Signup for Power BI:** Go to <http://aka.ms/pbidiadtraining> and sign up for Power BI with a business email address. If you cannot sign up for Power BI, let the instructor know.
- If you have an existing account, please go to <http://aka.ms/pbidiadtraining> and **Sign in** using your **Power BI account**
- **Attending Online session** – you must get the meeting invite and synchronize with the presenter prior to the event start for online attendance computability

# Agenda (times are approximate and will be fluid with the class)

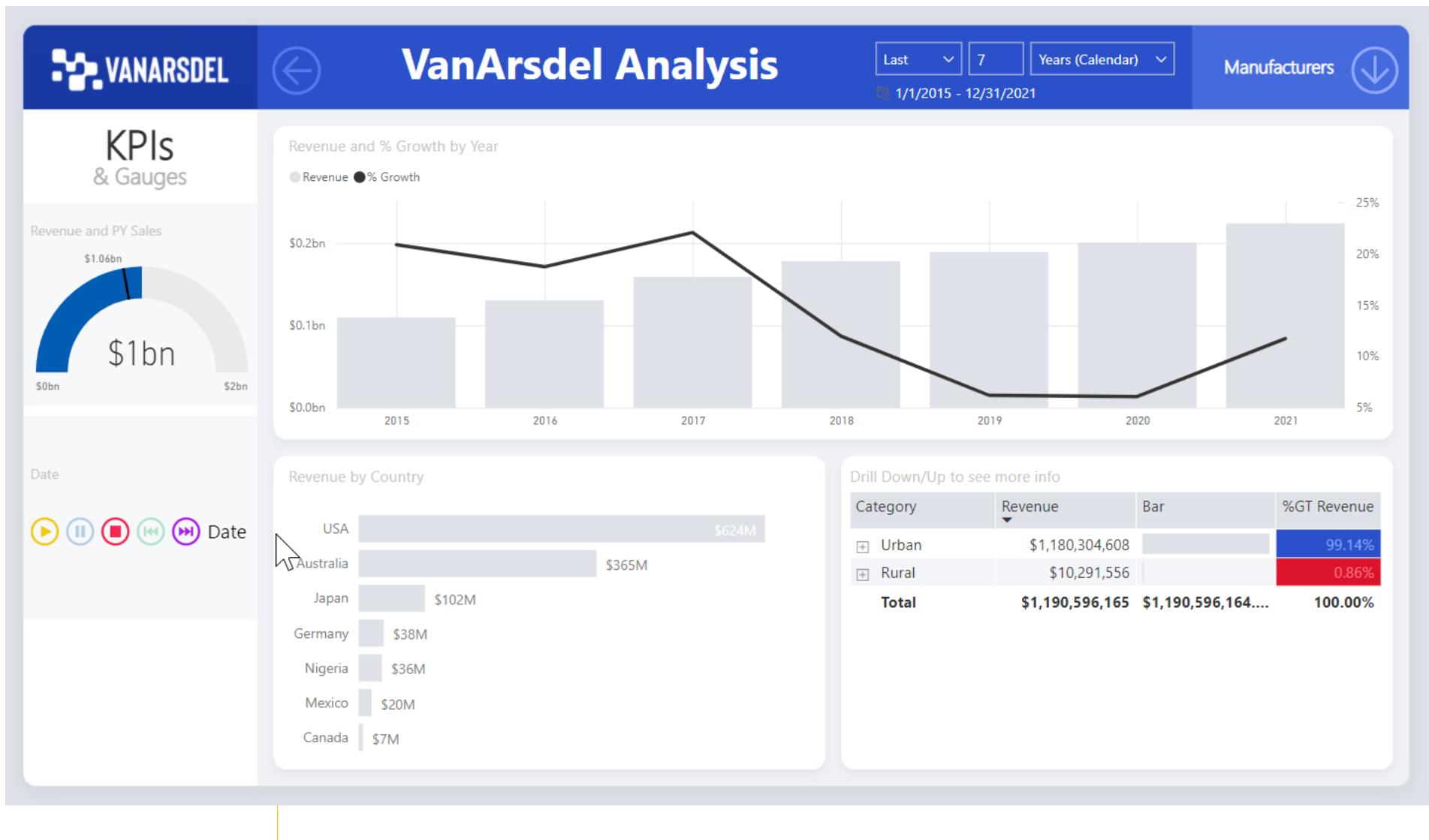
## Morning

09:00 AM – 10:00 AM	Introduction to Power BI and Power BI Demo
10:00 AM – 10:30 AM	Lab 1 Accessing & Preparing the data
10:30 AM – 10:45 AM	Break
10:45 AM – 11:15 AM	Lab 1 Solution + Questions
11:15 AM – 11:45 AM	Lab 2 Data Modeling and Exploration
11:45 AM – 12:15 PM	Lab 2 Solution + Questions
12:15 PM – 01:00 PM	Break for lunch

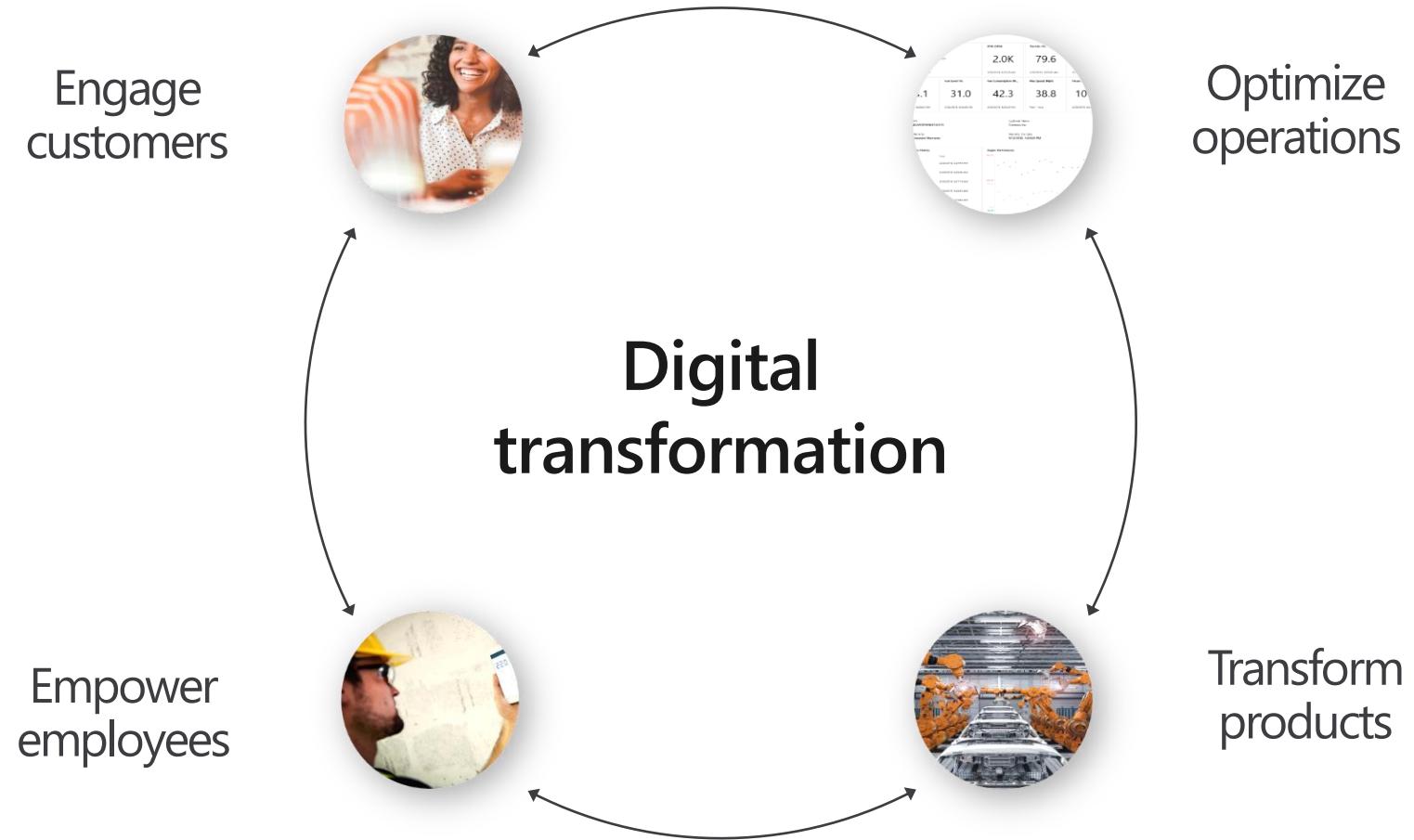
## Afternoon

01:00 PM – 01:30 PM	Lab 3 Visualizations
01:30 PM – 02:00 PM	Lab 3 Solution + Questions
02:00 PM – 02:30 PM	Lab 4 Publishing and accessing Reports (optional Power BI Service demo)
02:30 PM – 02:45 PM	Break
02:45 PM – 03:15 PM	Lab 4 Solution + Questions
03:15 PM – 03:45 PM	Lab 5 Building a Dashboard and Sharing
03:45 PM – 04:15 PM	Lab 5 Solution + Questions
04:15 PM – 05:00 PM	Q&A

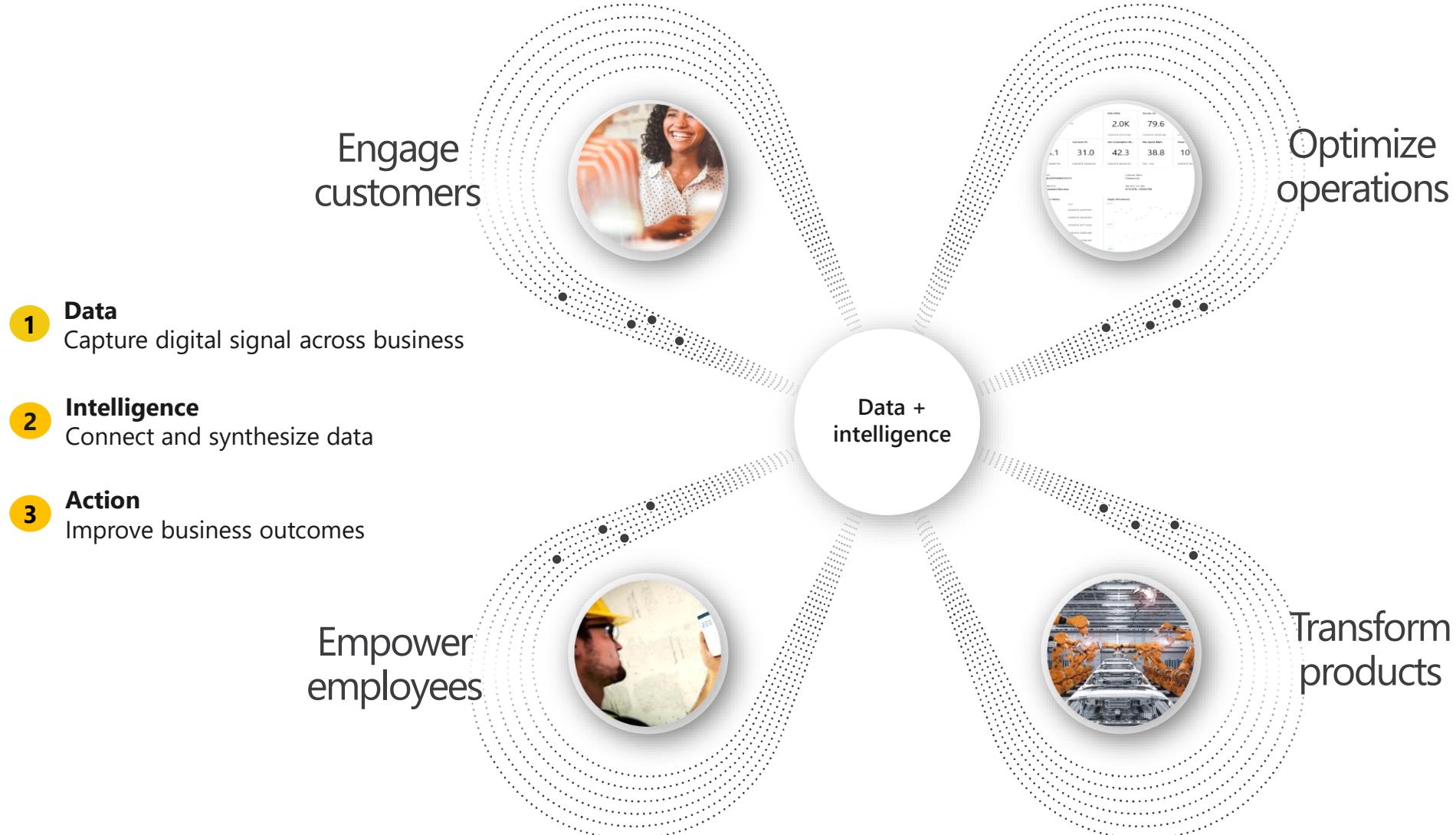
# Dashboard in a Day



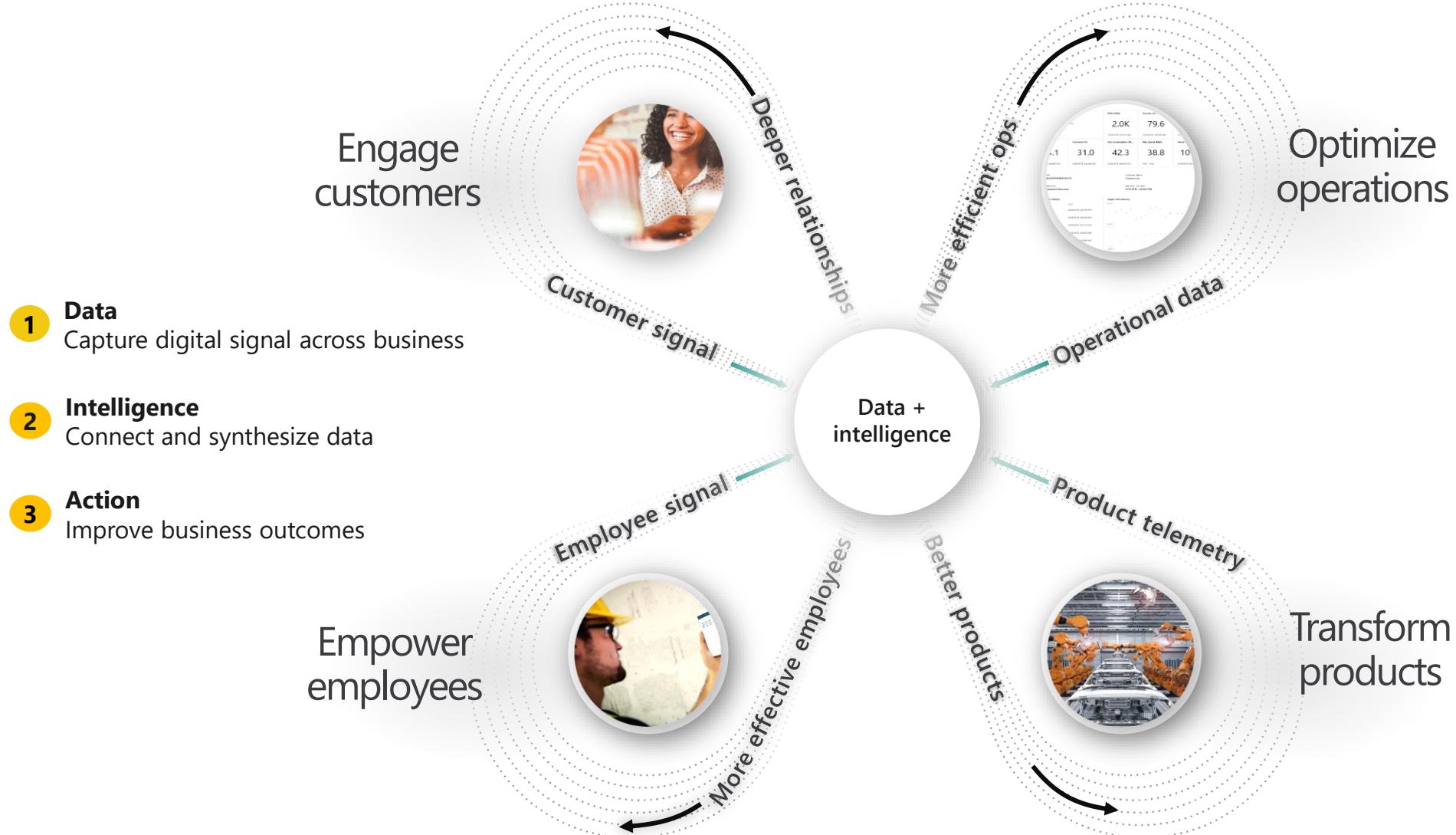
# Digital Transformation



# Digital Feedback Loop

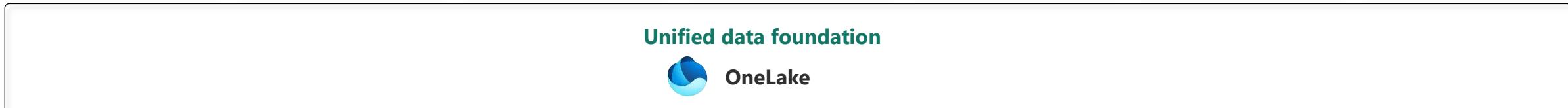
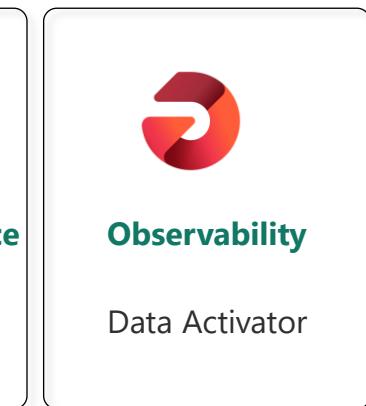
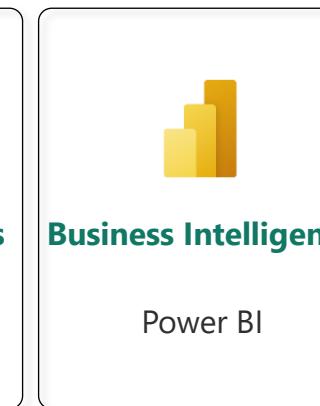
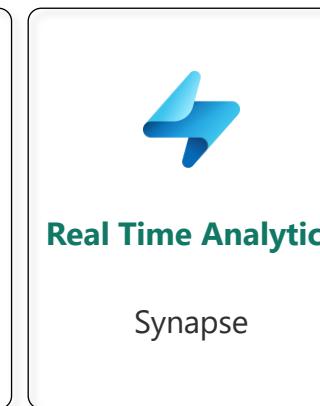
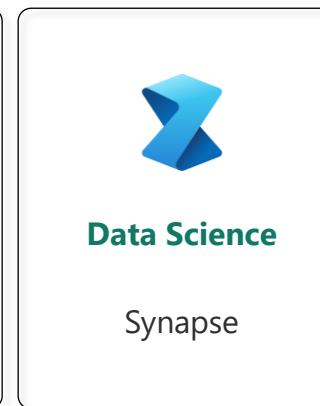
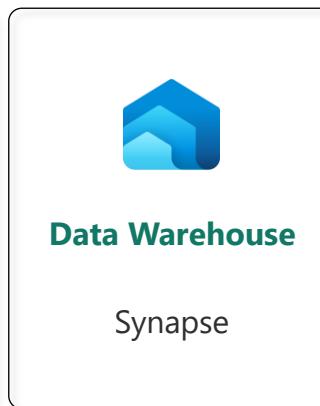
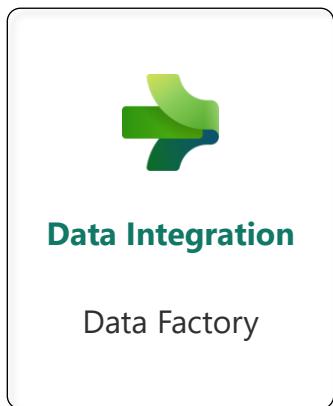


# Digital Feedback Loop

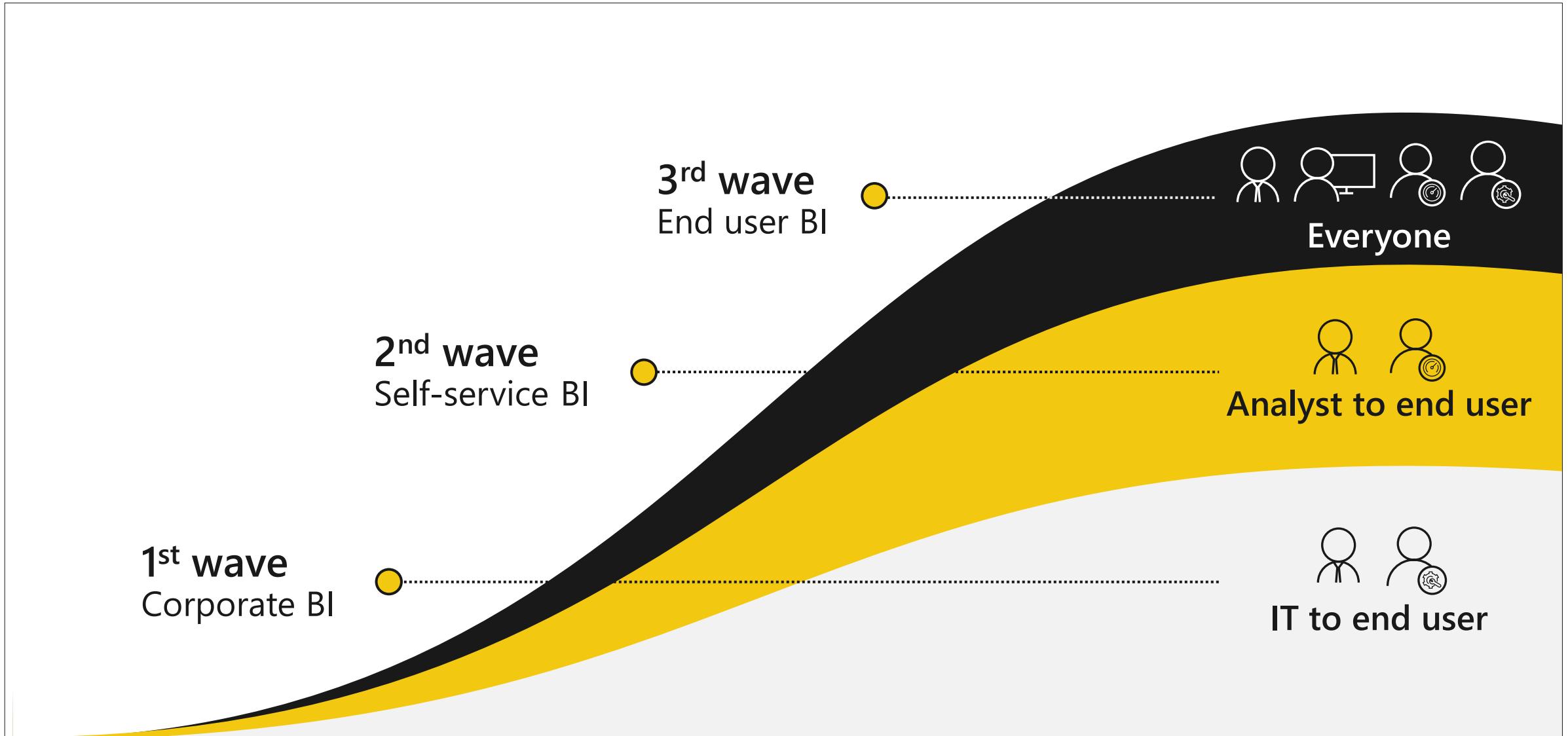


# Microsoft Fabric does it all—in a unified solution

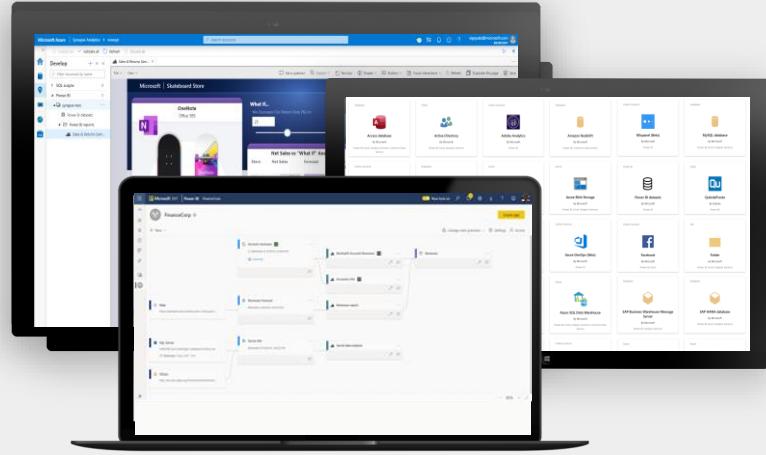
An end-to-end analytics platform that brings together all the data and analytics tools that organizations need to go from the data lake to the business user



# The Evolution of BI



# Power BI



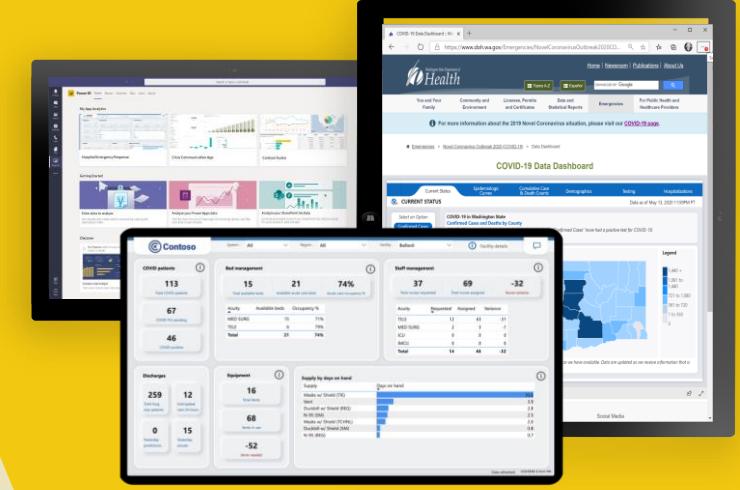
## All Data

Break down data silos and enrich your data with intelligence



## For Everyone

Create rich-interactive data experiences with AI infused insights



## For Every Decision

Integrate trusted and secure BI into the fabric of your organization and apps

Power BI drives a data culture for everyone and every decision

# Why Power BI?



Power BI Desktop is free



Real time dashboards and interactive reports



Natural Language query & AI insights



Custom visualizations and custom connectors

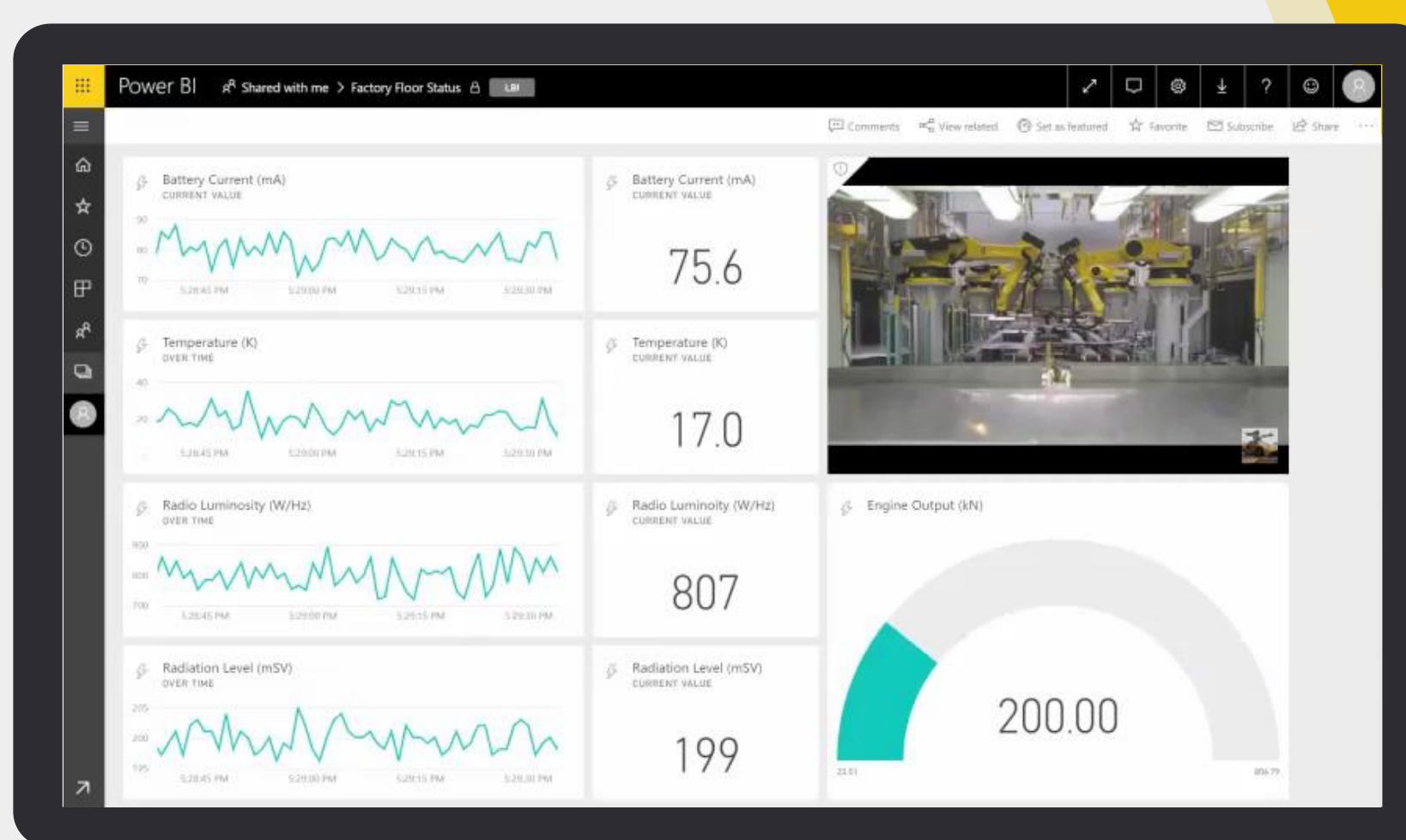


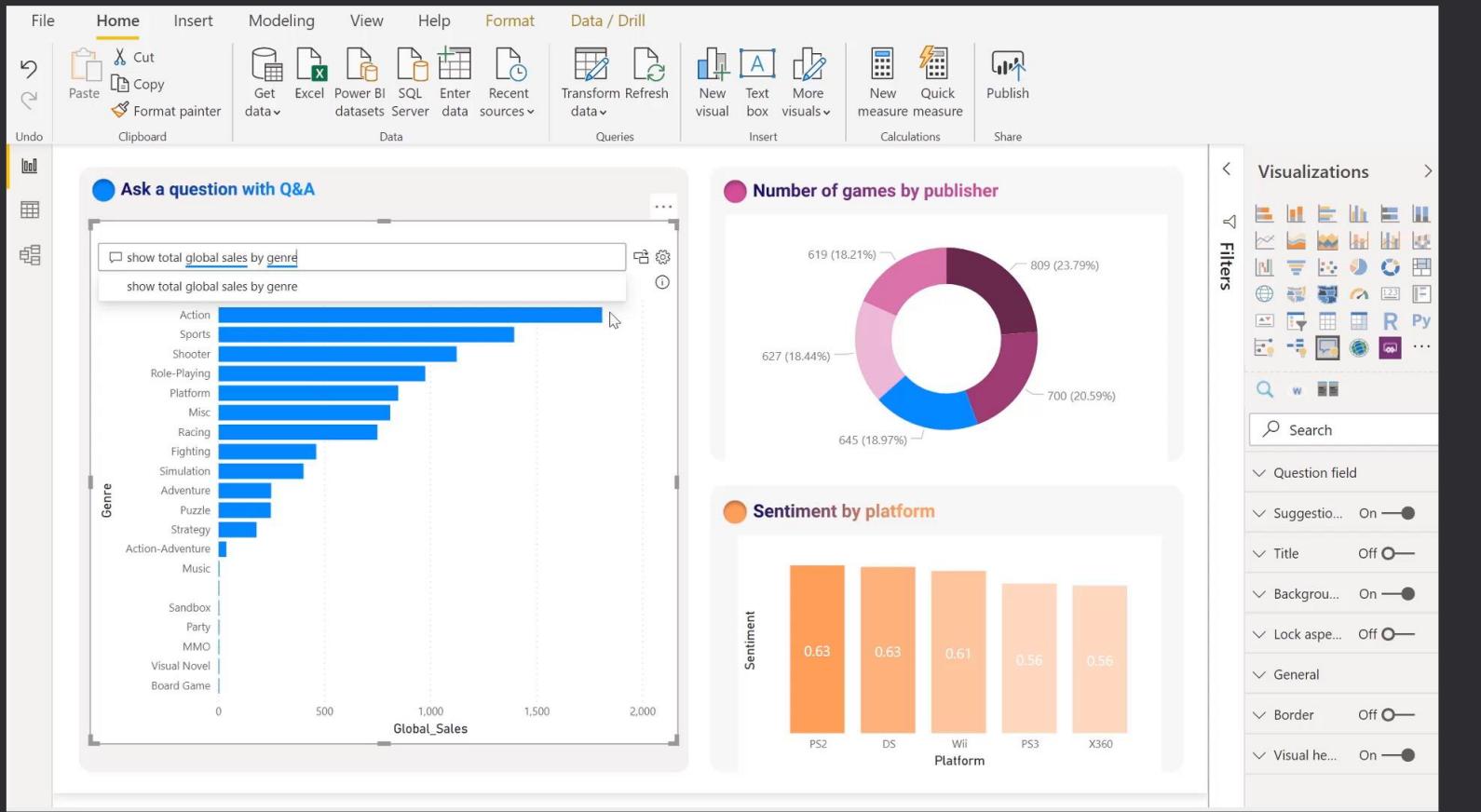
Integration with Excel, Power Point, SharePoint and Teams

# Power BI Desktop is free

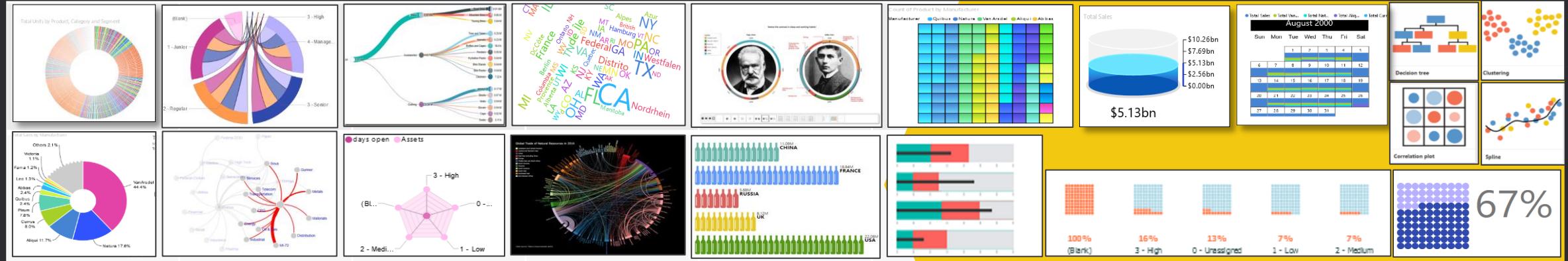
The screenshot displays a Microsoft Power BI Desktop interface. The ribbon at the top includes File, Home, Insert, Modeling, View, Help, External Tools, and Table tools. The Home tab is selected, showing various icons for data management and visualization creation. Below the ribbon is a title bar for "Microsoft | Skateboard Store" with a subtitle "Last Refresh: Jun 30th, 2019 / Chicago, IL, USA".  
  
The main area features a "What If..." section where users can change the "Return Rate" from 25% to 24%. It also displays "Net Sales (Forecast)" as \$30,772 and "Extra Profit" as \$0. A "Net Sales vs 'What If' Analysis" table provides detailed sales data for various stores like Abbas, Aliqui, Barba, Contoso, Fama, Leo, Natura, Palma, Pírum, Pomum, Quibus, Salvus, VanArsdel, and Victoria, comparing Net Sales, Forecast, and Extra Profit.  
  
A "What If" Analysis Forecast chart shows predicted net sales over time from January to July 2019, with a shaded area representing the forecast range. The interface also includes a "Visualizations" pane on the right containing a list of available visualizations and a "Fields" pane showing a list of fields such as Last 2 Months, Net Sales, Profit Difference, and Return Rate.

# Real time dashboards and interactive reports





# Natural Language query & AI insights



**Microsoft | Skateboard Store**

Last Refresh: Jun 30th, 2019 / Chicago, IL, USA

**Key Influencers**  
Analyzes your data, ranks the factors that matter, and displays them as key influencers.

**Decomposition Tree**  
Enables users to drill into any dimension to understand what is driving a key metric.

**Category Breakdown**

Product	Net Sales
Power BI	\$52K
Word	\$36K
OneNote	\$31K
PowerPoint	\$30K
XBOX	\$27K
PowerApps	\$23K
Excel	\$21K
Skype	\$20K
Publisher	\$19K
XBOX ONE	\$18K

**Store Breakdown**

Store	Units Sold
Fama	7,868
Contoso	7,868
VanAarsdel	7,868
Aliqui	7,868
Abbas	7,868
Barba	7,868
Leo	7,868
Pomum	7,868
Salvus	7,868
Natura	7,868

**Visualizations**

**Filters**

Net Sales vs net sales PM by date as stacked column chart

● Net Sales ● Net Sales PM

Net Sales and Net Sales PM

\$100K

\$50K

\$0K

May 05 Jun 02 Jun 09 Jun 16 Jun 23 Jun 30

Date

Restart Q&A

# 250+ Custom visuals

# Integration with Excel, Power Point, SharePoint and TEAMS

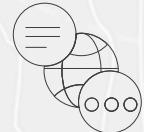
This screenshot shows a Microsoft Excel spreadsheet titled "Quality Analysis - Excel". The main area displays a PivotTable with data from various plants across different material types. A "PivotTable Fields" pane is open on the right side, showing fields for "Material type" (Batteries, Composites, Corrugate, Drives, Film, Hardware) and "Defect City SPLY" (Bangor, MI; Davenport, IA; Dayton, OH; Gary, IN; Indianapolis, IN; Kalamazoo, MI; Lansing, MI; Milwaukee, WI; Monroe, IN; Northbrook, IL; Rockford, IL; Skokie, IL). Below the table, a "Create Forecast Worksheet" button is visible. To the right, a "Visual Forecast Worksheet" is displayed, showing historical data from 2014 to 2019. The chart includes a line for "Values" (Actual Data), a line for "Forecast", and shaded areas for "Lower Confidence Bound" and "Upper Confidence Bound". The Y-axis represents "Total Defect Qty" ranging from 0 to 8,000,000.

This screenshot shows a Microsoft SharePoint site titled "Sales and Returns" (Private group). The main page features a "Microsoft | Skateboard Store" dashboard with key metrics: Net Sales (\$387.1K), Units Sold (7,868), and Key Influencers. It also includes a "Category Breakdown" bar chart and a "Net Sales by Location" map. On the left, there's a sidebar with "Quick links" for "Learn about a team site" and "Learn how to add a page". Below the dashboard, there's a "Documents" section with a list of files: "App Documentation.docx" and "Q3 Review.pptx". The SharePoint navigation bar includes Home, Conversations, Documents, Notebook, Pages, Site contents, Recycle bin, and Edit. A Microsoft Teams integration is shown at the bottom.

This screenshot shows a Microsoft Power BI dashboard titled "Microsoft | Skateboard Store". The dashboard includes a summary card with Net Sales (\$387.1K) and Units Sold (7,868), followed by "Key Influencers", "Decomposition Tree", and "Category Breakdown" and "Store Breakdown" cards. Below the dashboard, a "Slide Show" interface is visible, showing a sequence of slides related to sales analysis.

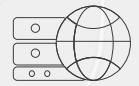
This screenshot shows a Microsoft Teams "General" channel. On the left, there's a sidebar with "Teams" and "Hidden teams". The main area displays a "Customer 360 Report" for "Contoso". The report includes a "Revenue by Status" donut chart, a "Revenue by Closed Date" line chart, a "Open Opportunity by Sales Stage" bar chart, a "Revenue by Product - Rank" bar chart, and a "Revenue by Location" world map. At the bottom, there's a "Customer 360 Report" section with a "Total Case Count" of 158 and a "Case Resolved %" of 7.0%.

# The **LARGEST GLOBAL FOOTPRINT**



**43**

Languages



**40**

Primary and backup  
datacenters worldwide



## National Clouds

US Government,  
China & Germany



China GB 18030



PCI  
Security  
Standards  
Council



European  
Commission



GOV.UK



FedRAMP



Bundesamt  
für Sicherheit  
in der  
Informationstechnik



March 2022

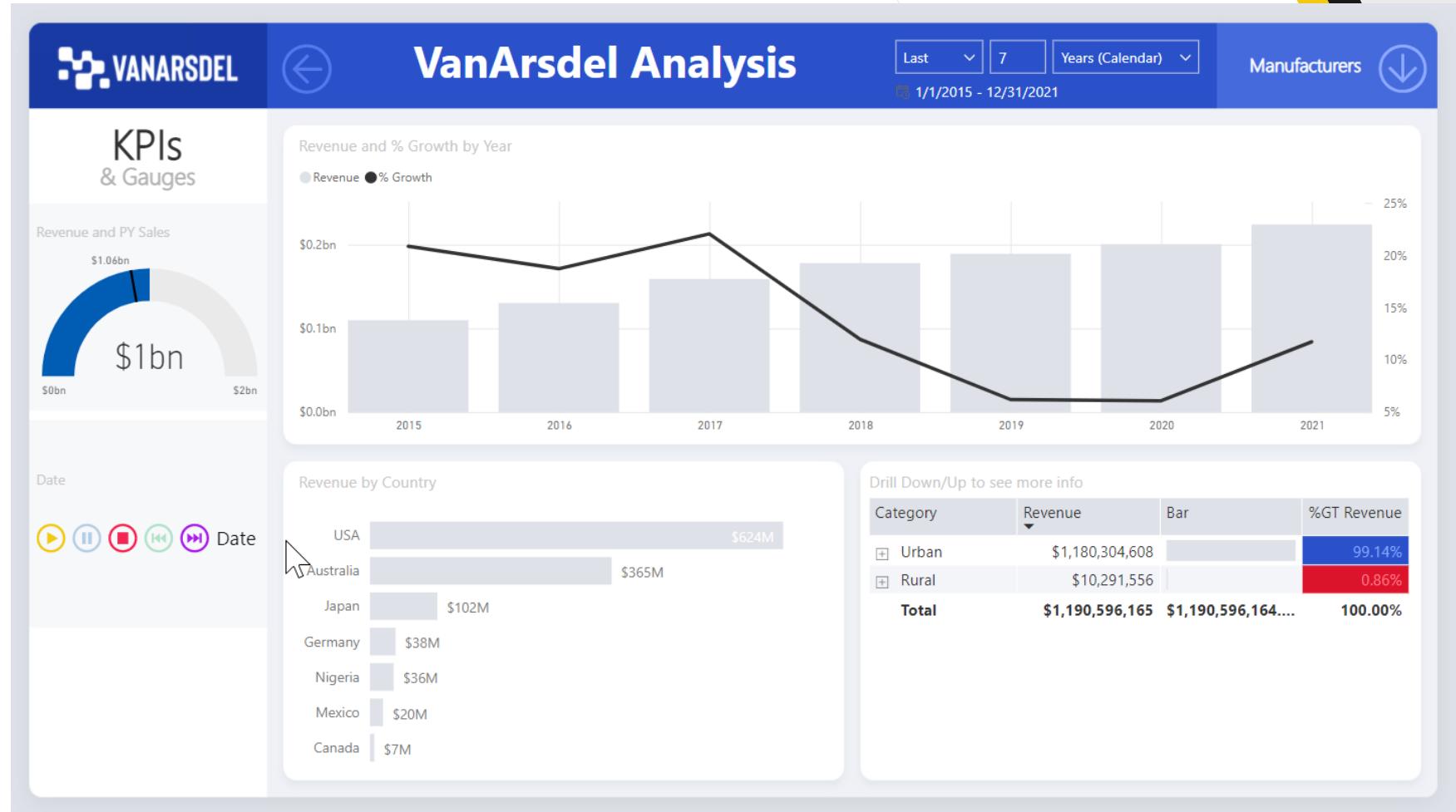
# Gartner Magic Quadrant for Analytics and Business Intelligence Platforms\*



\* Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose. This graphic was published by Gartner, Inc. as part of a larger research document and should be evaluated in the context of the entire document. The Gartner document is available upon request from [Microsoft](#).

# Power BI

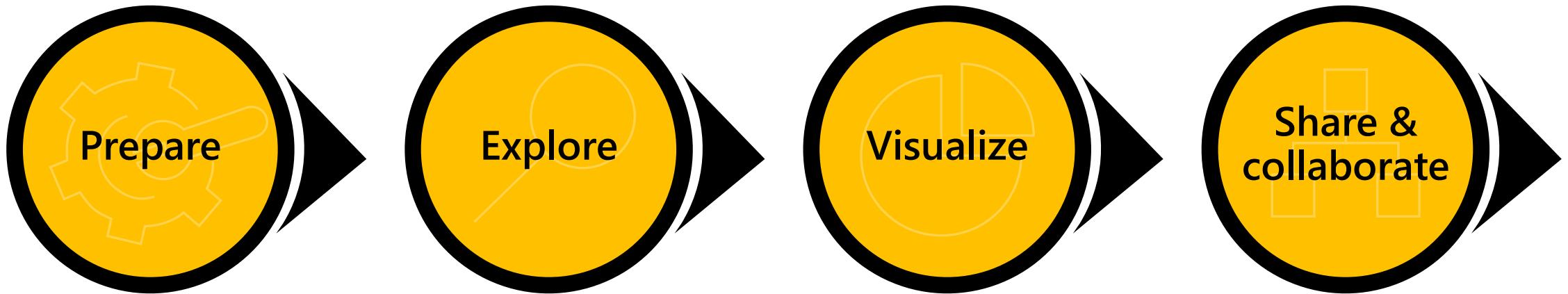
## Demo



# End User Needs



# Lab overview



# Access all your DATA



## Data sources



**SaaS solutions**  
e.g. Marketo, Salesforce, GitHub, Google Analytics



**Organizational**  
Corporate data sources or external data services



**On-premises Data**



**Azure services**  
Azure SQL, Stream Analytics...



**Excel files**



**Power BI Desktop files**  
Data from files, databases, Azure, and other sources

**Connect to 135 + data sources, both on-premises and cloud**

**Data from Applications**

- SaaS services that you already use

**Data from your organization**

- Content published by others in your org (Datasets and Dataflows)

**Big data and more**

- Azure data services, e.g. SQL DW, ADLS.
- On-premises data sources, e.g. Oracle & SSAS

**Data from files**

- Import data from Text, CSV, Excel and Power BI Desktop files

The screenshot shows the 'Get Data' interface in Power BI, which allows users to discover and create new content from various sources. It includes sections for 'Discover content' (My organization, Services) and 'Create new content' (Files, Databases). Below these are links to 'Samples', 'Organizational Content Packs', 'Partner Showcase', and 'Service Content Packs'. To the right, the Power BI app store displays a grid of available apps, categorized under 'All apps', 'Organizational apps', and 'Template apps'. Examples of apps shown include Microsoft Sample, COVID-19 Track, NFL Analytics by P3, Dynamics 365 Business Central, Sales Analytics for LinkedIn, Microsoft Forms Pro, Google Analytics Reporting, and Covid-19 Daily Update.

# Clean and mash-up your DATA



## Consolidate data from a broad range of sources

- Merge or append queries to combine data from multiple queries into a single query

## Transform data to fit your needs using intuitive UI

- Select data for inclusion
- Cleanse data and remove errors

## Define calculations to generate new fields for use in reports

## Develop advanced analytics using a combination of measures and relationships

- Uncover correlations, highlight exceptions and understand business outcomes

The screenshot illustrates the Microsoft Power BI Data Editor interface. The top window shows a data grid for a query named 'ProductID' with columns 'Date' and 'Zip'. The bottom window shows the 'Data Model' view, which is a data warehouse diagram. It includes tables for 'Geography', 'Sales', 'Date', 'Manufacturer', and 'Product', along with their relationships. A tooltip on the 'Sales' table indicates it has 11 columns: SalesID, Date, Geography, ProductID, Revenue, Units, Zip, Category, Currency, ManufacturerID, MSRP, and Segment.

Lab 01 -

# Accessing & Preparing the data

# Explore your DATA

Explore data in a variety of ways and across multiple visualizations using drag and drop canvas

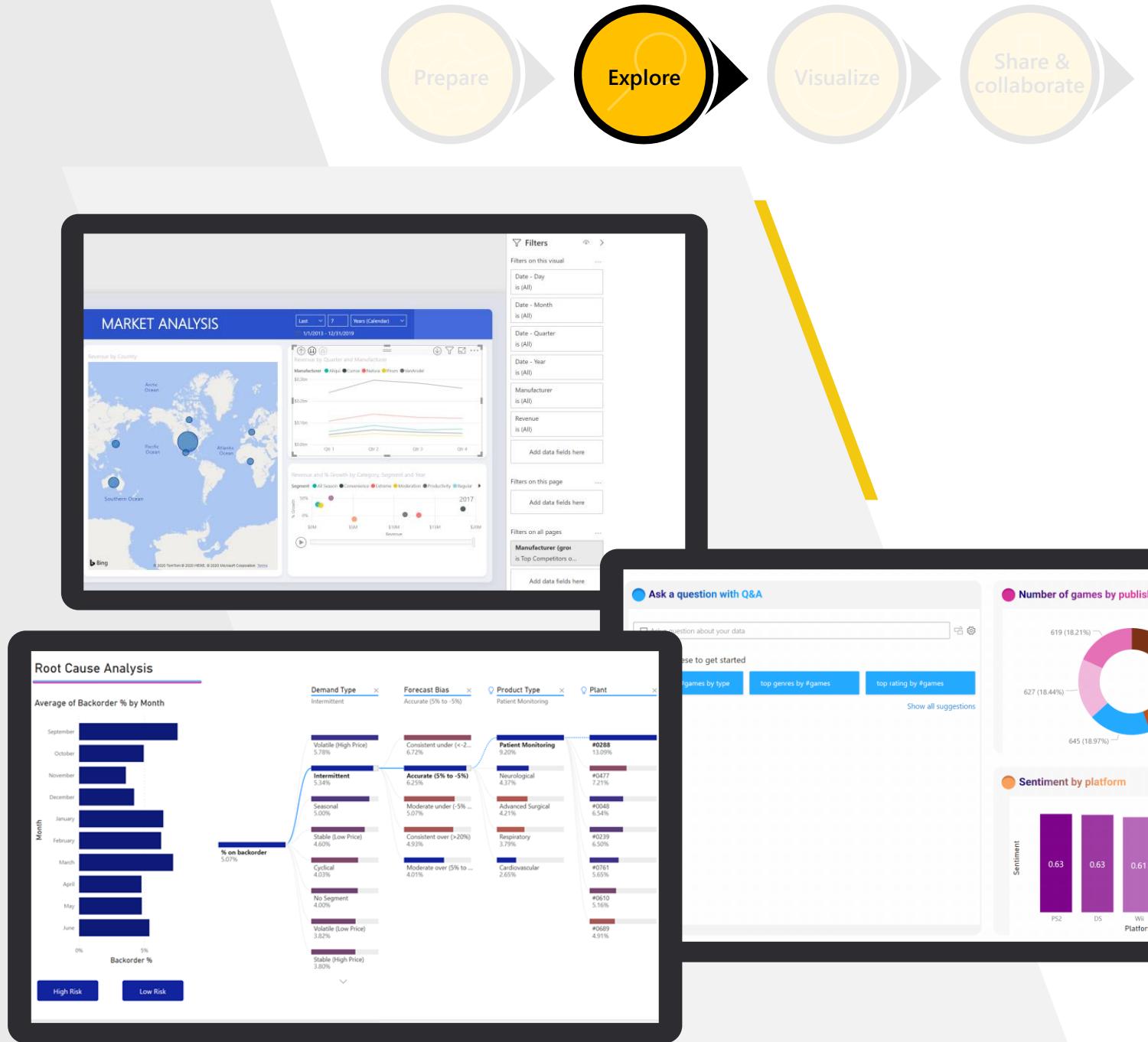
## Dig deeper into your reports

- Drill-down in your hierarchical data
- Filter, sort, hover over and highlight data

## Leverage Quick Insights to find insights in your data

## Ask questions of your data in natural language with Q&A

- Type questions in plain language
- Q&A intelligently filters, sorts, aggregates, groups and displays data based on the question



Lab 02 -

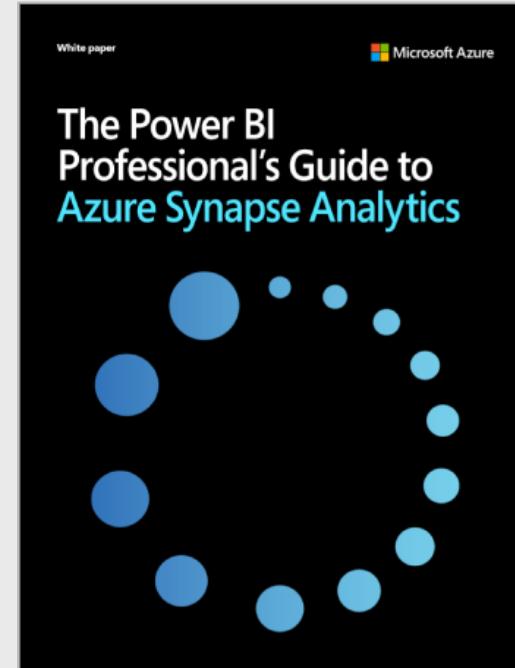
# Data Modelling and Exploration

# Community

# Maximize your BI investments with Azure Synapse Analytics



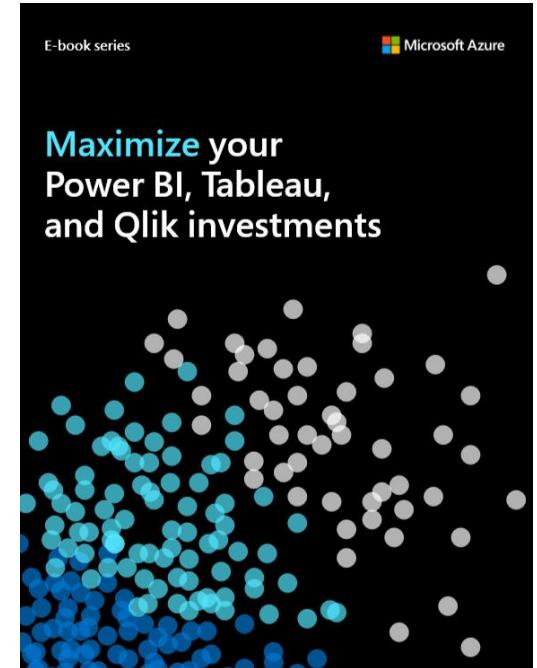
Free Infographic



Free Whitepaper



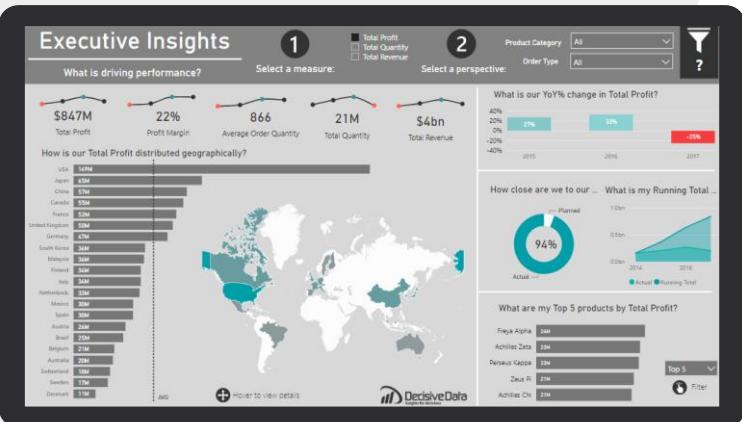
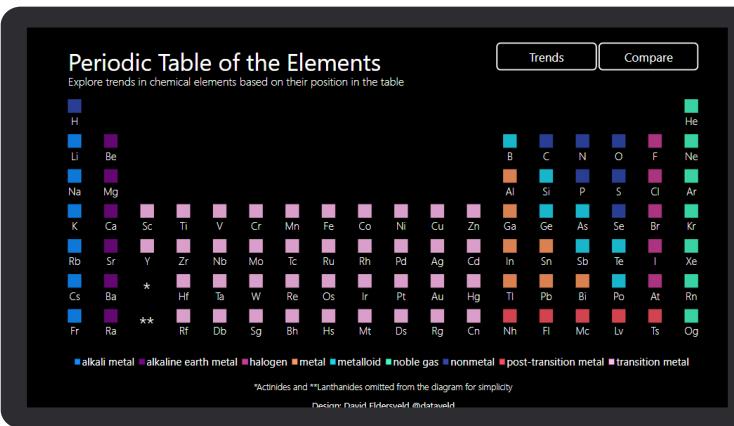
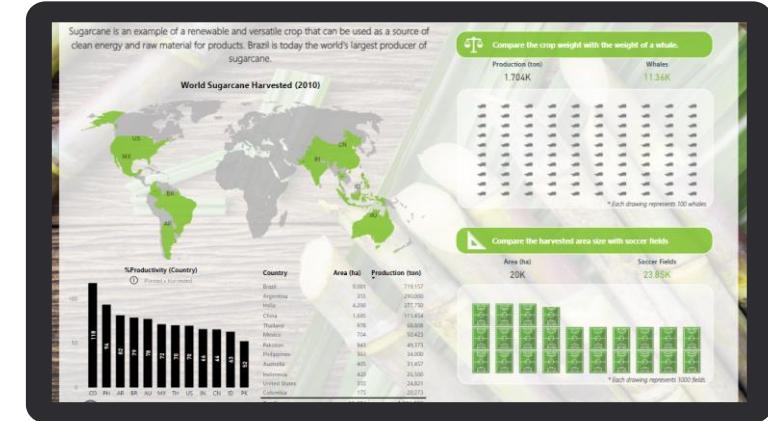
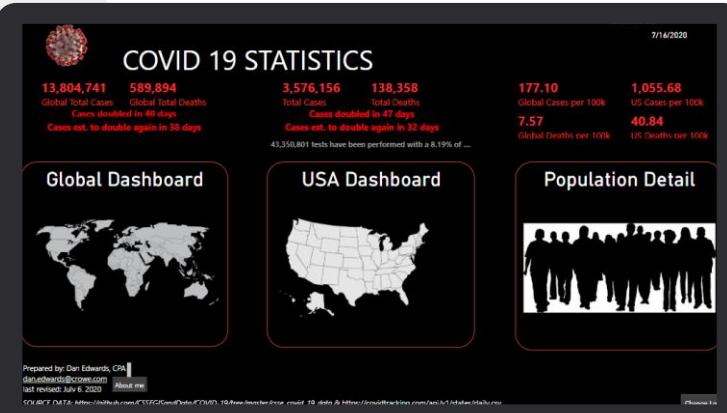
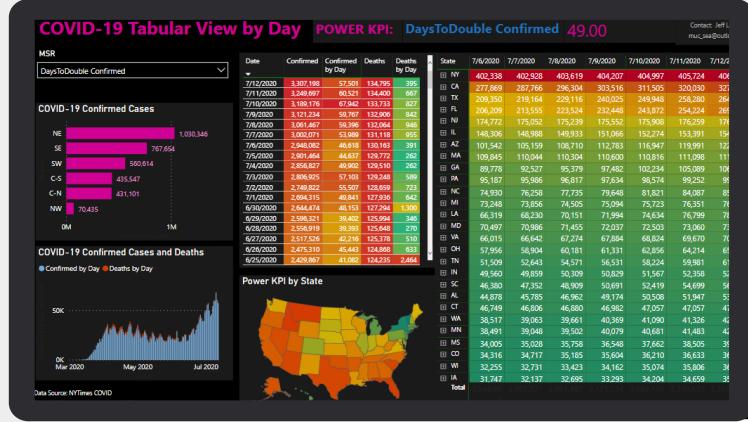
Free eBook



Free eBook

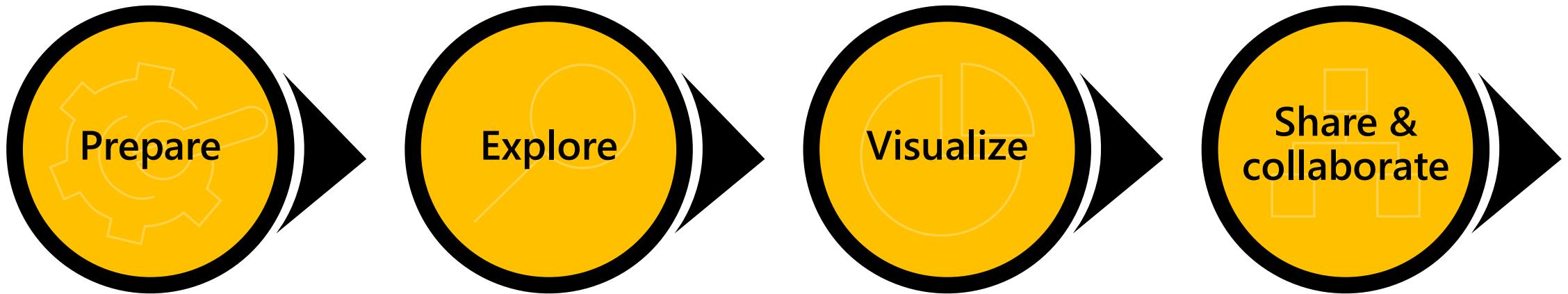
[Get Started Today with a Free Azure Synapse Analytics Trial](#)

# Explore and share your data stories



In the Data Stories Gallery  
And  
COVID-19 Data Stories Gallery

# Lab overview



# Visualize your DATA



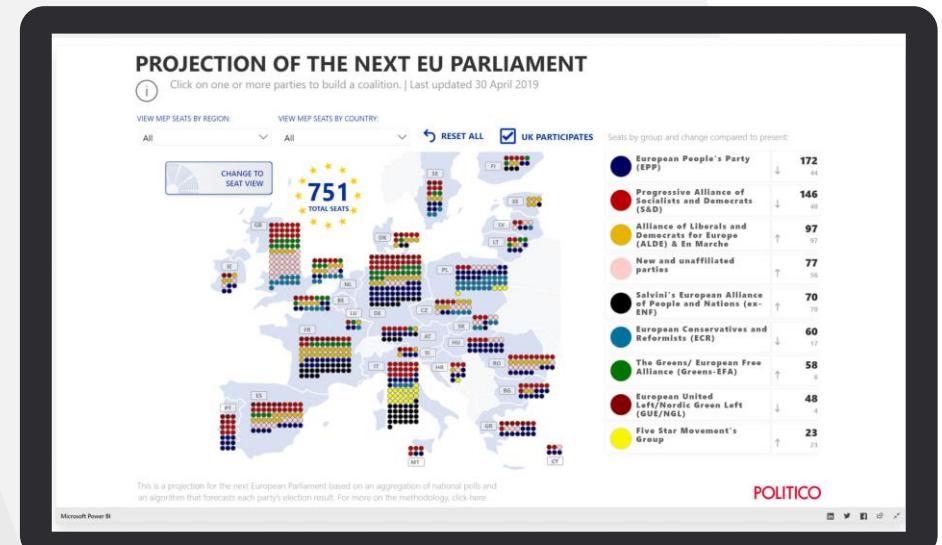
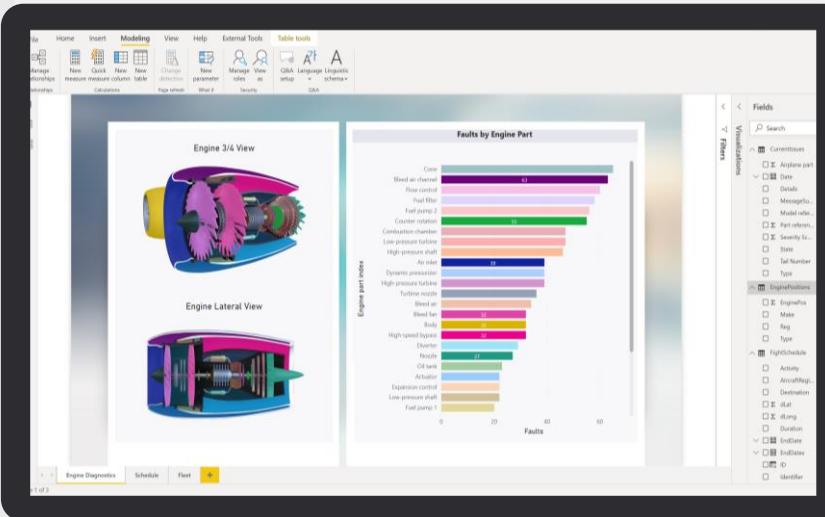
Visualize data in a variety of ways

Growing number of visualization types

- Donuts, basic area, waterfall, filled maps, tree maps, funnel, gauges combo charts and more
- Custom visuals available from Power BI Visuals Marketplace
- Tools to develop, test, package new custom visuals

Visualizations on report page are connected – select value in one visualization to change other visualizations

Full screen pop out mode for report visuals to show additional details



Lab 03 -

# Visualizations

# Bring your story to life with DATA



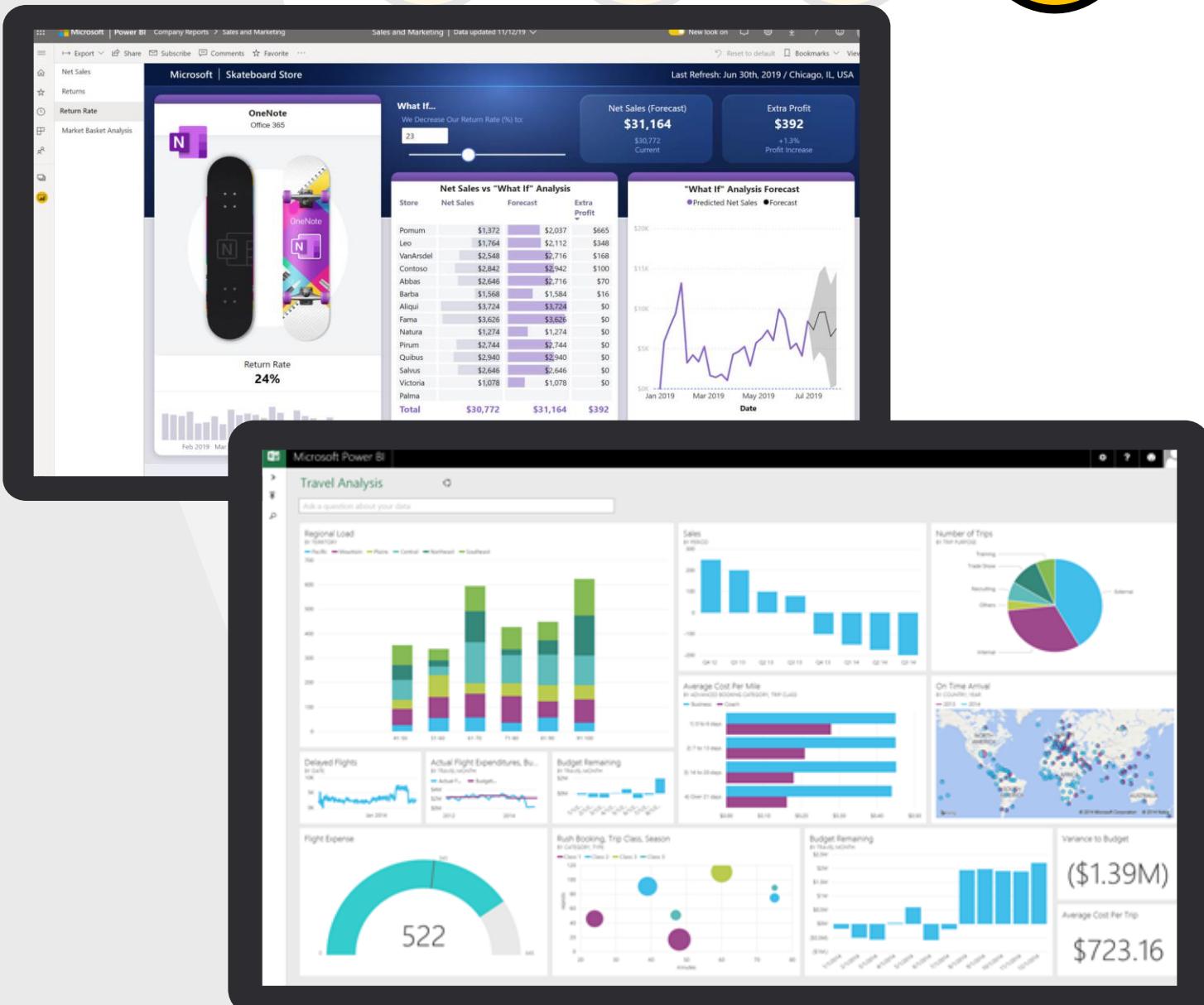
Save Power BI Desktop report files and easily publish them to powerbi.com

Access dashboards using native mobile apps for Windows, iOS and Android

Share as appropriate with other Power BI users in your organization

Package your reports in apps for easy consumption and control

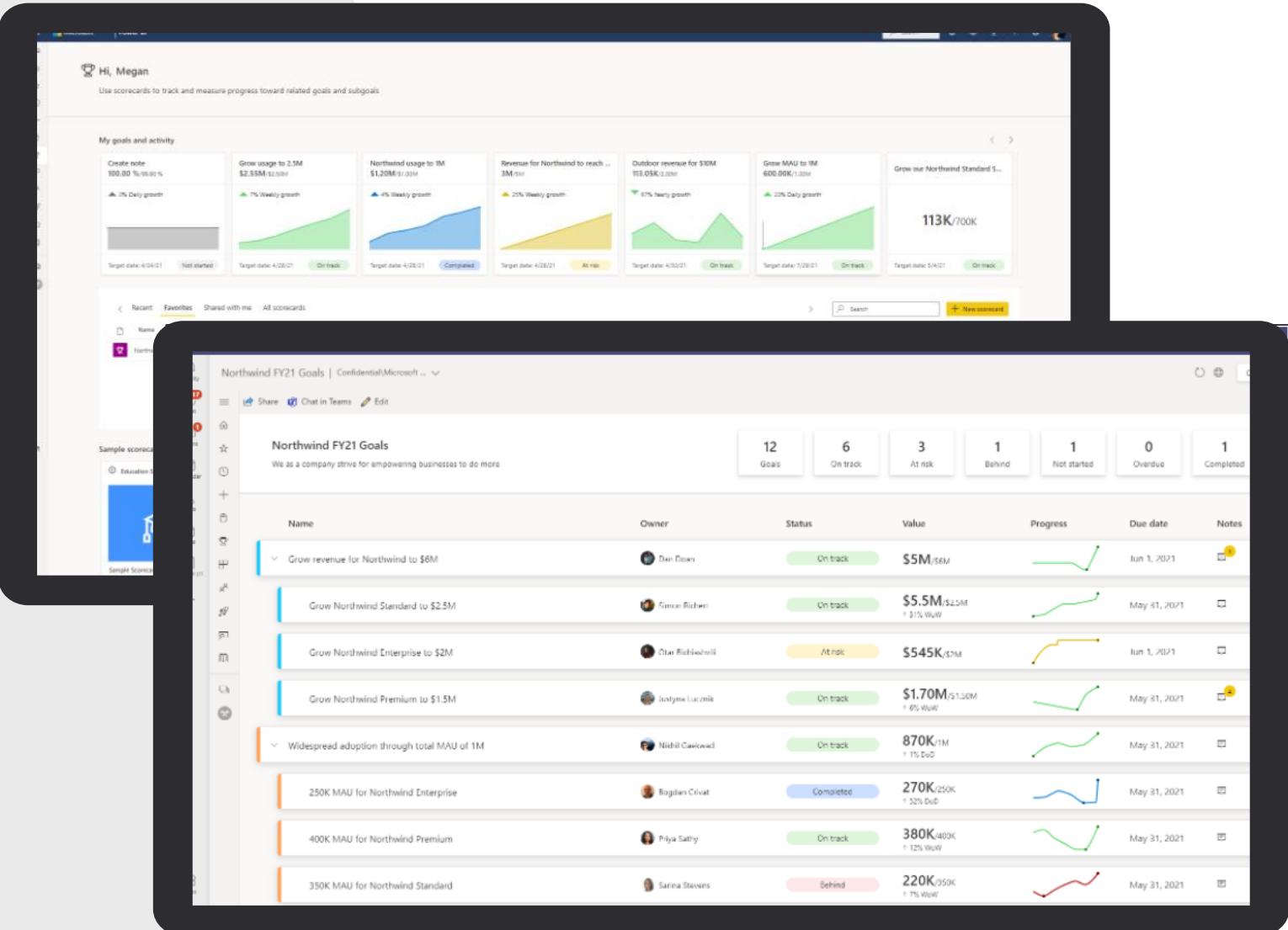
Easily embed interactive Power BI visualizations in blog posts, websites, through emails or social media With Power BI Publish to web



# Track business metrics with Goals



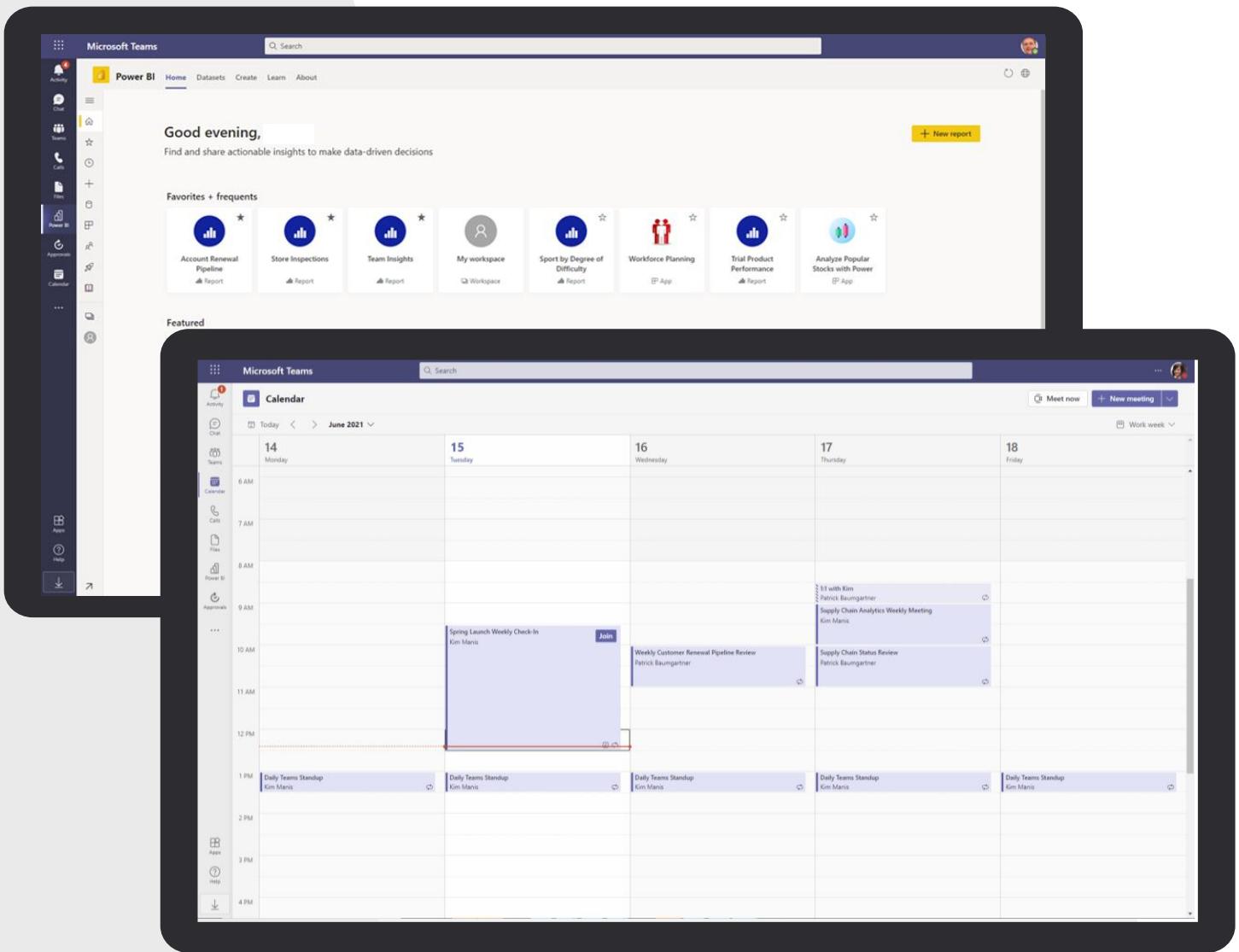
- Create scorecards
- Measure key business metrics
- Track goals in a single source
- Measure progress
- Share updates with the team
- Monitor the health of the business
- View on mobile



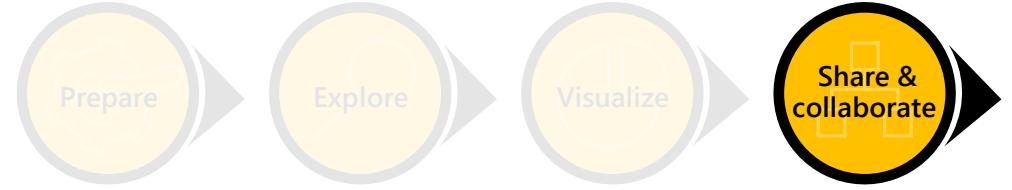
# Take collaboration to the next level in Teams



- Meet users where they are with the Power BI app in Teams.
- Keep everyone aligned with data-driven meetings.
- Use data to inform discussions in teams, chats, and meetings.
- Find data and insights to drive better decision-making with the Power BI search extension
- Learn more here:  
<https://aka.ms/LearnPBInTeams>



# Access your story everywhere with Mobile

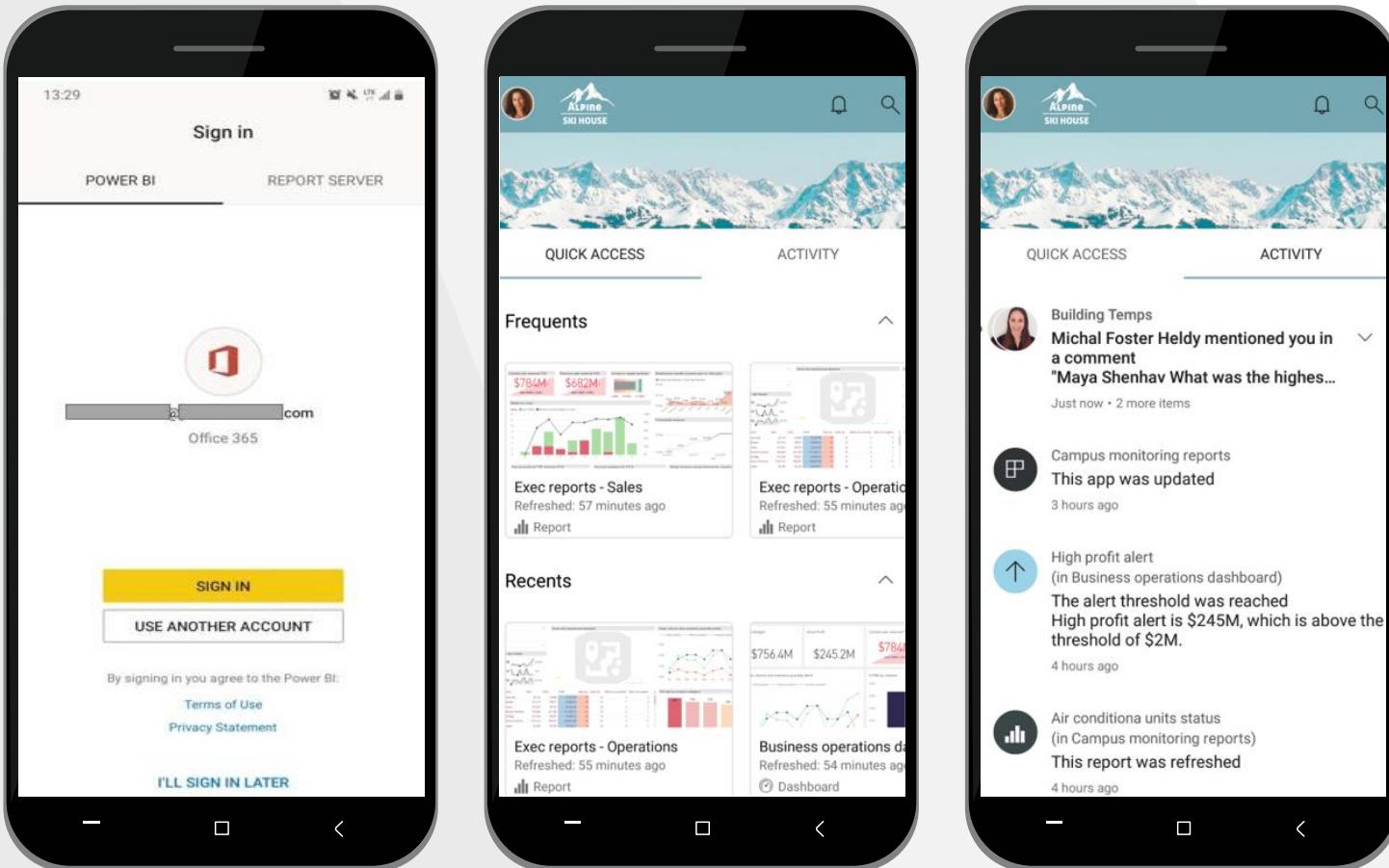


Access dashboards using native mobile apps for Windows, iOS and Android

Easy sign in page

Quick Access reports

Your personal Recent Activity feed

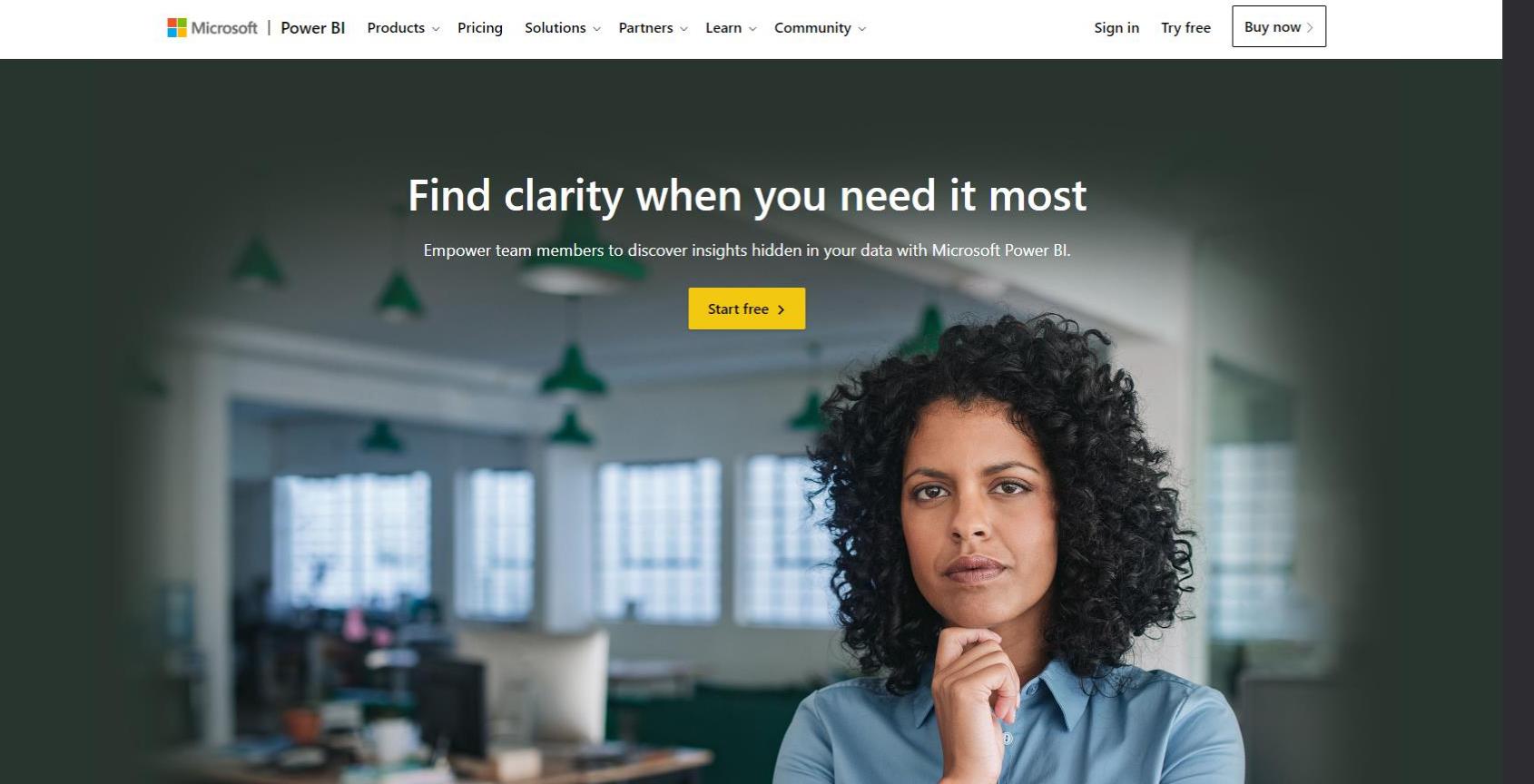


Lab 04 -

# Publishing and accessing Reports

Lab 05 -

# Building a Dashboard and Sharing



**Find clarity when you need it most**

Empower team members to discover insights hidden in your data with Microsoft Power BI.

[Start free >](#)

Learn about the latest Power BI innovations announced at Microsoft Business Applications Summit.

[Read the blog >](#)

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# Q&A