

Dashboard in a Day

Power BI

<instructor>

September 2024 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 **Microsoft Fabric 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 – 9:45 AM	Introduction to Power BI and Power BI Demo
09:45 AM – 10:30 AM	Access and prepare data for Power BI Desktop
10:30 AM – 10:40 AM	Break
10:40 AM – 12:15 AM	Build your first data model and explore the data by using Power BI
12:15 PM – 01:00 PM	Break for lunch

Afternoon

01:00 PM – 02:00 PM	Use hierarchies and DAX in your first data model
02:00 PM – 02:30 PM	Data visualization and reports in Power BI
02:30 PM – 02:40 PM	Break
02:40 PM – 03:15 PM	Import custom visuals and add bookmarks to a report in Power BI
03:15 PM – 03:50 PM	Publish and access reports in Power BI service
03:50 PM – 04:00 PM	Break
04:00 PM – 04:45 PM	Interact, Share, and Collaborate Power BI dashboards
04:45 PM – 05:00 PM	Q&A

Dashboard in a Day

VanArsdel, Ltd. Manufacturer Analysis

Sum of Revenue and PY Sales

\$129.04M \$157.58M \$315.15M

Year

2017

Initial State USA Revenue Australia Revenue

Sum of Revenue by Country

Country	Sum of Revenue
USA	\$81.06M
Austr...	\$14.32M
Japan	\$5.27M
Germ...	\$2.09M
Nigeria	\$0.94M
Mexico	
Canada	

At \$81,057,873.435, USA had the highest Sum of Revenue and was 8,528.17% higher than Canada, which had the lowest Sum of Revenue at \$939,455.7375.

USA accounted for 51.44% of Sum of Revenue.

Across all 7 Country, Sum of Revenue ranged from \$939,455.7375 to \$81,057,873.435.

At \$157,576,274.8975, Sum of Revenue has exceeded the target goal of \$129,037,310.17.

Logo

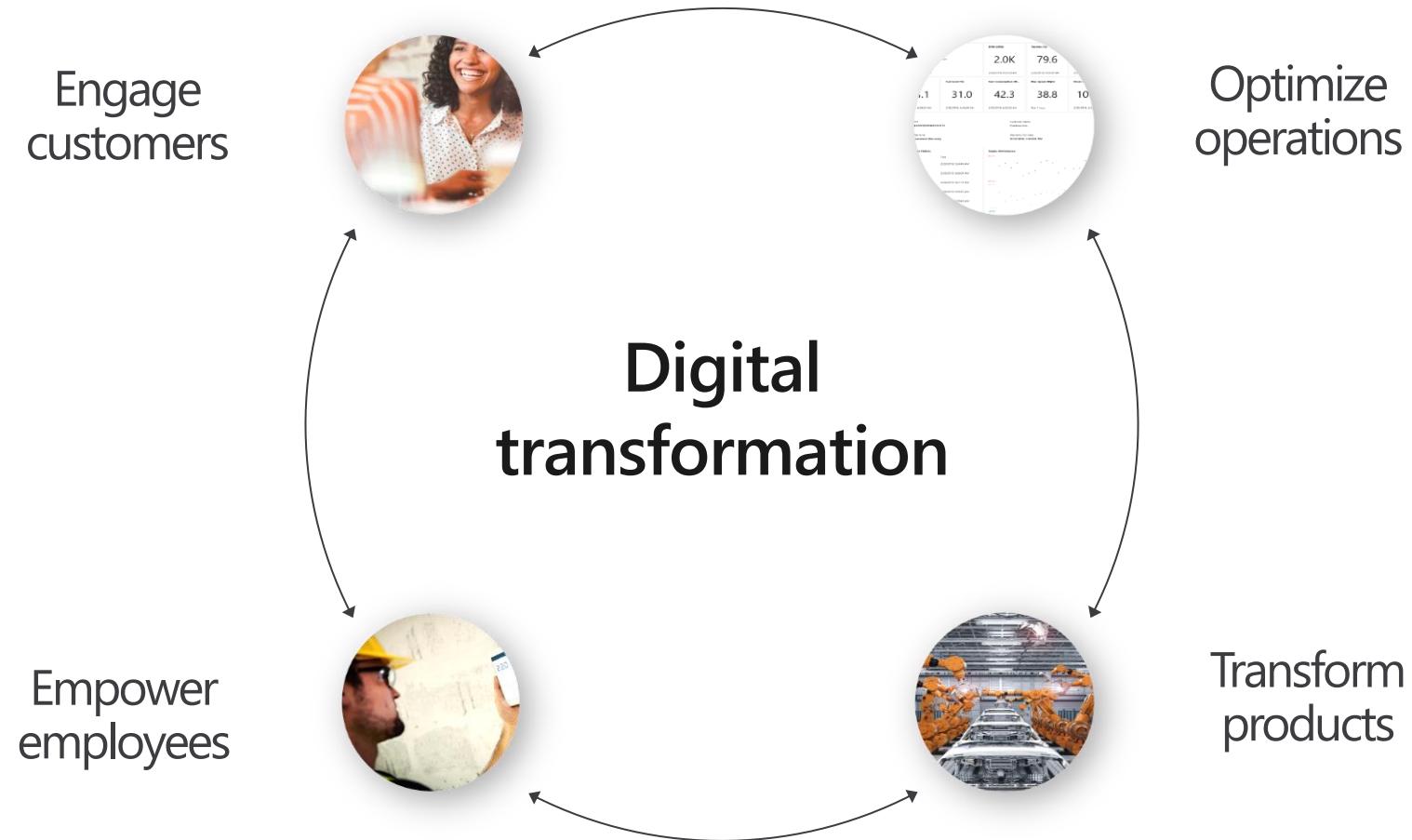
Fabrikam, Inc. Nod Publishers TAILWIND TRADERS VanArsdel, Ltd. WIDE WORLD IMPORTERS

Category	Sum of Revenue	% GT Sum of Revenue	PY Sales	% Growth
Urban	\$157,576,274.8975	100.00%	\$129,037,310.17	22.12%
Convenience	\$79,058,902.005	50.17%	\$59,442,125.5725	33.00%
Moderation	\$62,133,721.1375	39.43%	\$54,716,229.085	13.56%
Extreme	\$15,833,847.245	10.05%	\$14,035,162.9225	12.82%
Regular	\$549,804.51	0.35%	\$843,792.59	-34.84%
Total	\$157,576,274.8975	100.00%	\$129,037,310.17	22.12%

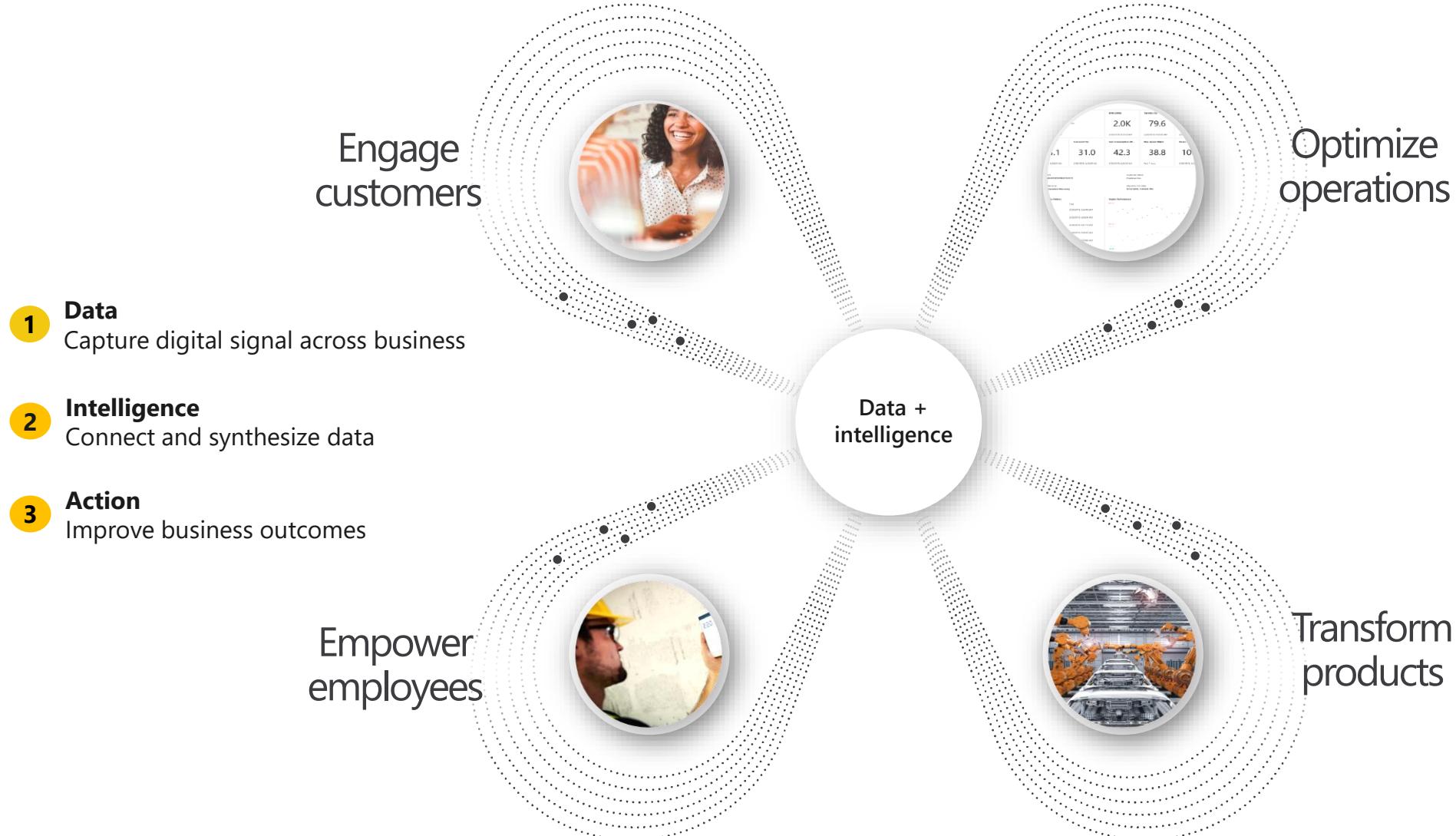
Sum of Revenue and % Growth by Year

Year	Sum of Revenue	% Growth
2014	\$0.05bn	20%
2015	\$0.06bn	30%
2016	\$0.07bn	20%
2017	\$0.08bn	30%
2018	\$0.09bn	20%
2019	\$0.1bn	30%
2020	\$0.11bn	20%

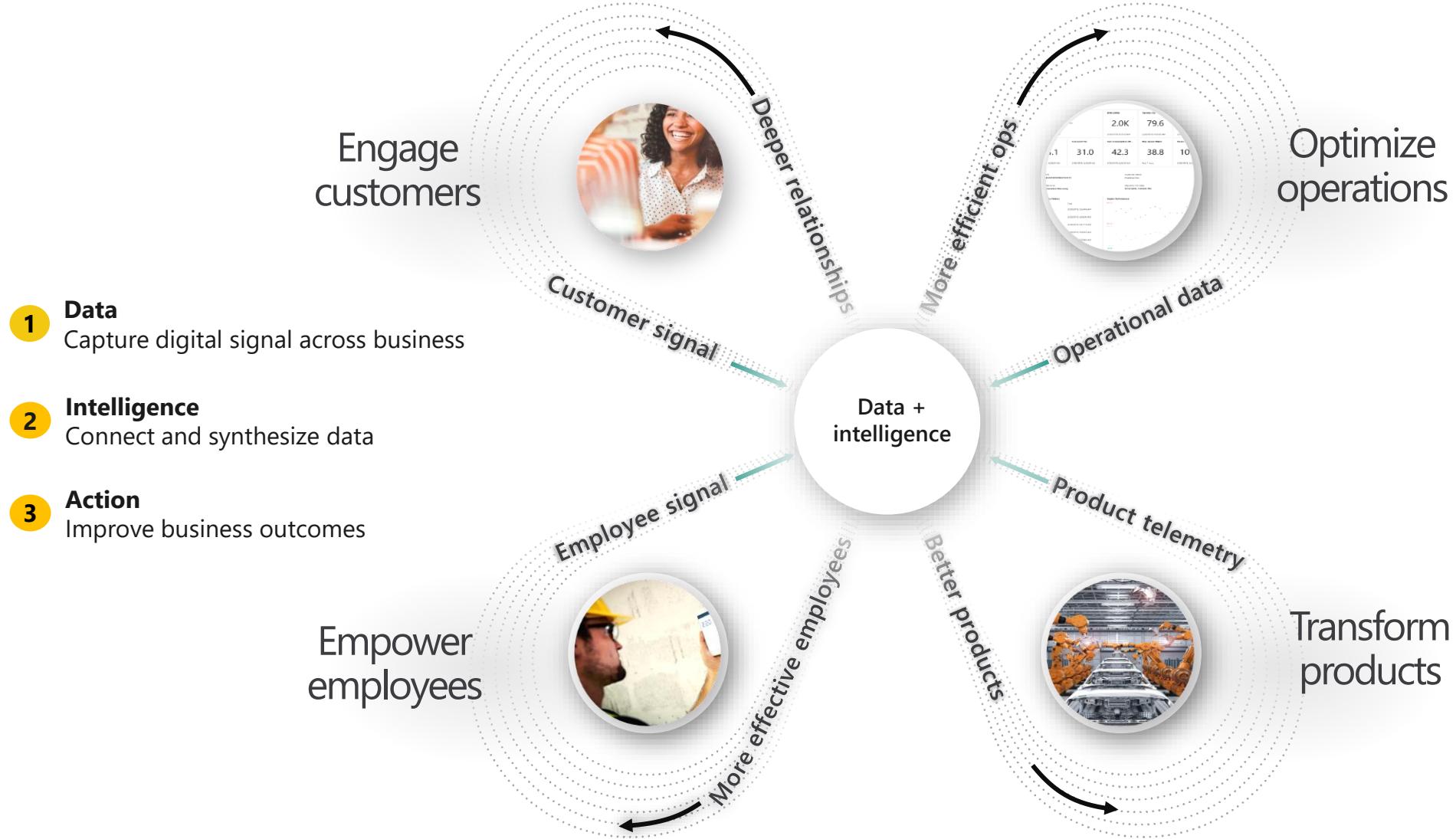
Digital Transformation



Digital Feedback Loop

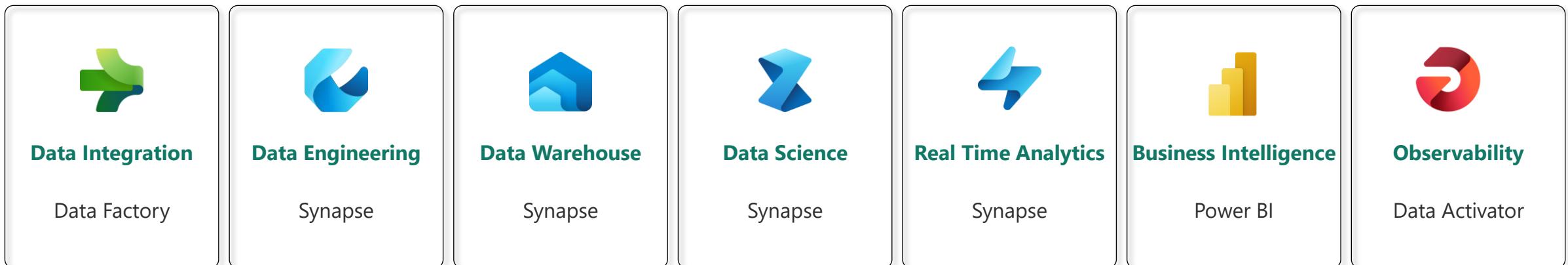


Digital Feedback Loop



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



Unified data foundation



OneLake

UNIFIED

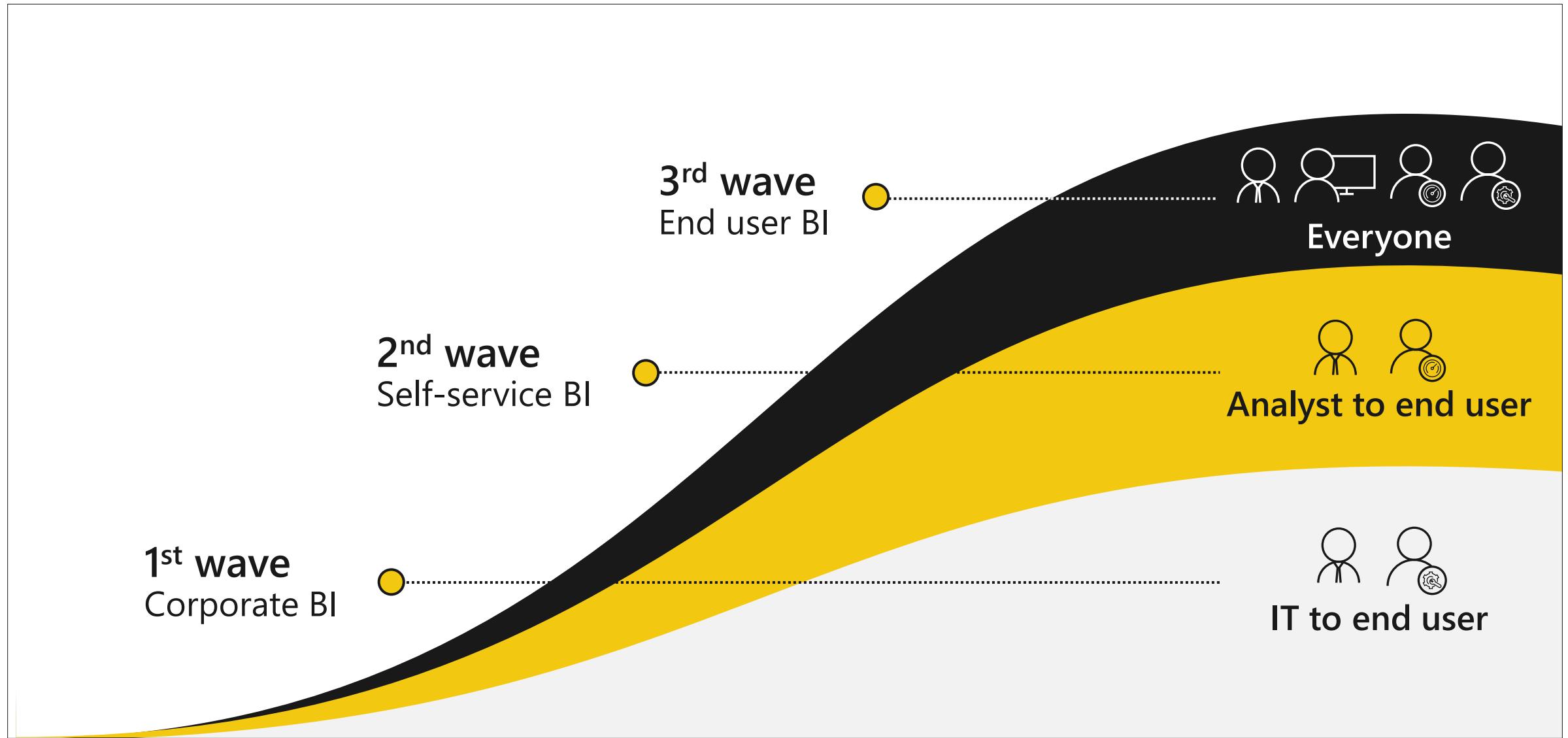
SaaS product experience

Security and governance

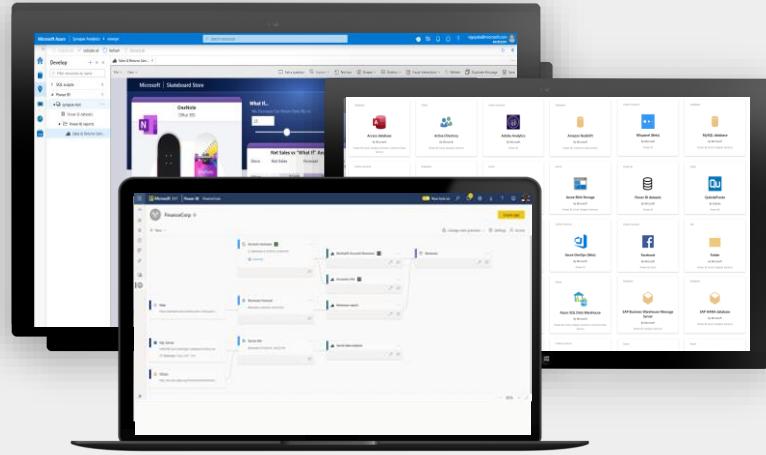
Compute and storage

Business model

The Evolution of BI



Power BI



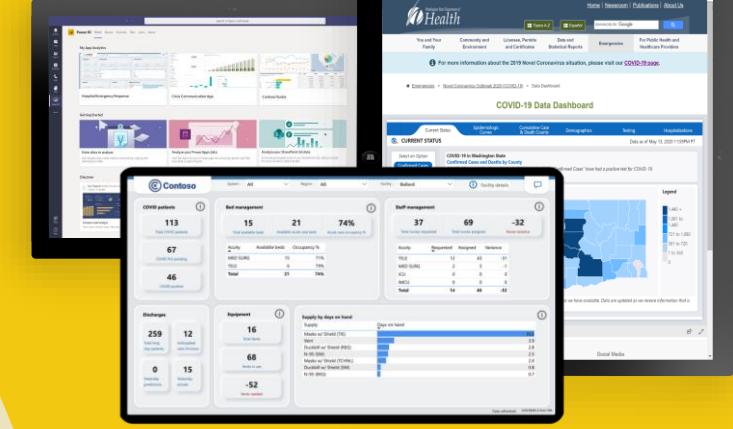
All Data

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

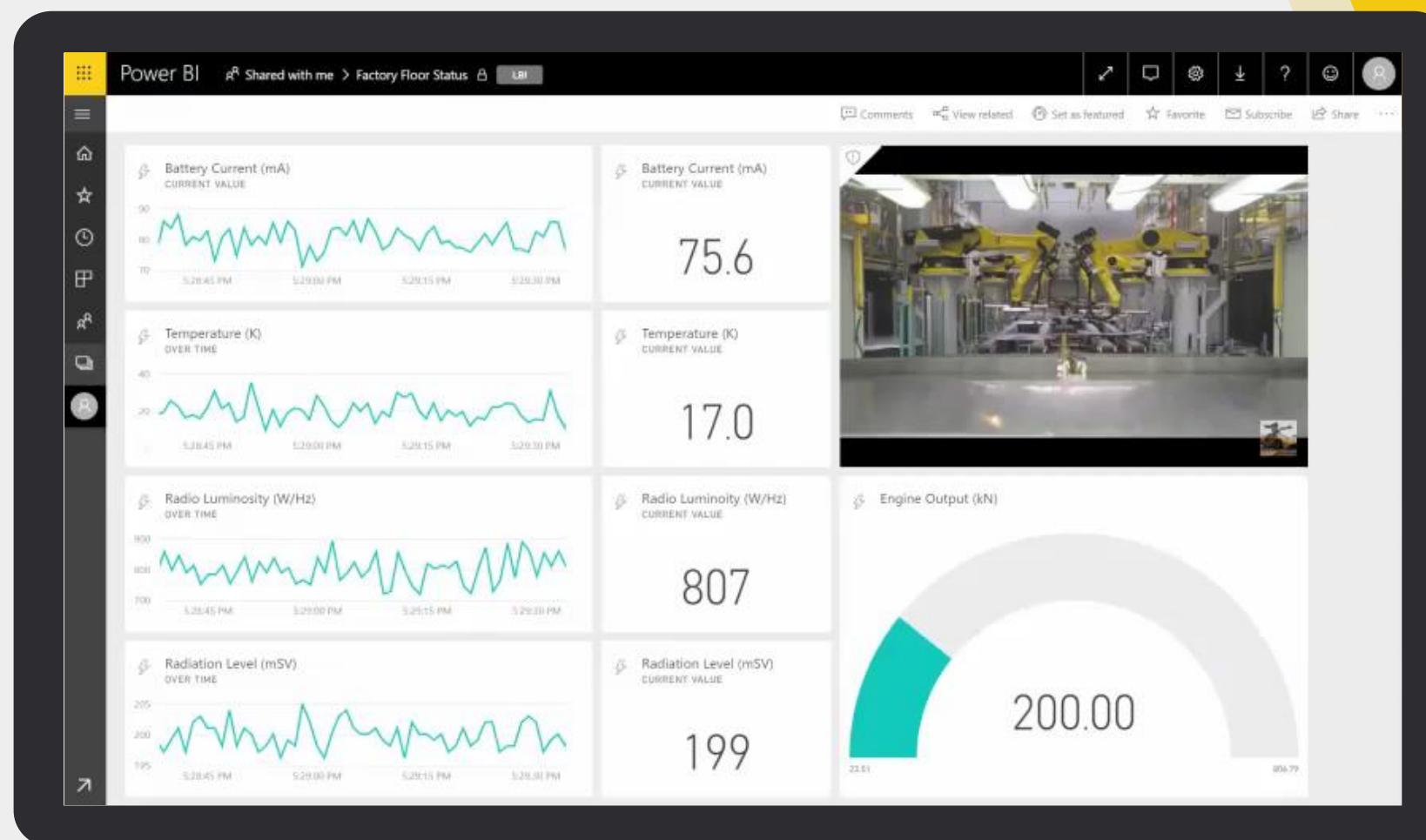


Integration with Excel, Power Point, SharePoint and Teams

Power BI Desktop is free

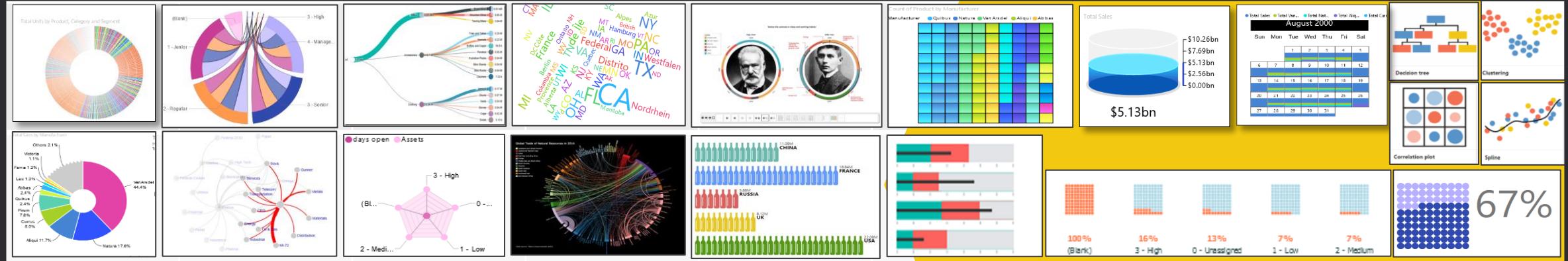
The screenshot displays a Microsoft Power BI Desktop interface. The ribbon at the top includes File, Home, Insert, Modeling, View, Help, External Tools, and Table tools. The Home tab is selected. The main area shows a dashboard titled "Microsoft | Skateboard Store". The dashboard features a "What If..." section with a slider set to 25, showing "Net Sales (Forecast) \$30,772" and "Extra Profit \$0". Below this is a table comparing Net Sales, Forecast, and Extra Profit for various stores like Abbas, Alqui, Barba, Contoso, Fama, Leo, Natura, Palma, Pirum, Pomum, Quibus, Salvus, VanArsdel, and Victoria. A total row shows \$30,772 for all three columns. To the right is a line chart titled "'What If' Analysis Forecast" showing Predicted Net Sales and Forecast from January to July 2019. The chart has a Y-axis from \$0K to \$15K and an X-axis from Jan 2019 to Jul 2019. The bottom of the screen shows a navigation bar with tabs like Net Sales, Returns, and Market Basket Analysis, and a footer with copyright information.

Real time dashboards and interactive reports



Natural Language query & AI insights

The screenshot displays the Microsoft Power BI desktop application. On the left, the 'Ask a question with Q&A' pane shows a query: 'show total global sales by genre'. Below it is a horizontal bar chart titled 'Genre' with 'Global_Sales' on the x-axis (ranging from 0 to 2,000) and genres on the y-axis. The top genres are Action (~1,800), Sports (~1,400), Shooter (~1,100), Role-Playing (~900), Platform (~800), Misc (~700), Racing (~600), Fighting (~500), Simulation (~400), Adventure (~300), Puzzle (~200), Strategy (~150), Action-Adventure (~100), Music (~50), Sandbox (~50), Party (~50), MMO (~50), Visual Novel (~50), and Board Game (~50). On the right, there are two visualizations: a donut chart titled 'Number of games by publisher' and a bar chart titled 'Sentiment by platform'. The donut chart shows percentages for four publishers: 23.79% (purple), 20.59% (blue), 18.44% (pink), and 18.21% (orange). The bar chart shows sentiment scores for five platforms: PS2 (~0.63), DS (~0.63), Wii (~0.61), PS3 (~0.56), and X360 (~0.56). A 'Visualizations' pane on the right lists various chart types, and a 'Filters' pane on the far right contains settings like 'Suggestion' (On), 'Title' (Off), 'Background' (On), 'Lock aspect' (Off), 'General' (Off), 'Border' (Off), and 'Visual he...' (On).



The Microsoft Power BI interface is shown, featuring a dashboard titled "Microsoft | Skateboard Store". The dashboard includes the following metrics:

- Net Sales: \$387.1K (+72.7% m/m)
- Units Sold: 7,868 (+71.4% m/m)
- Key Influencers
- Decomposition Tree

The dashboard also displays two bar charts:

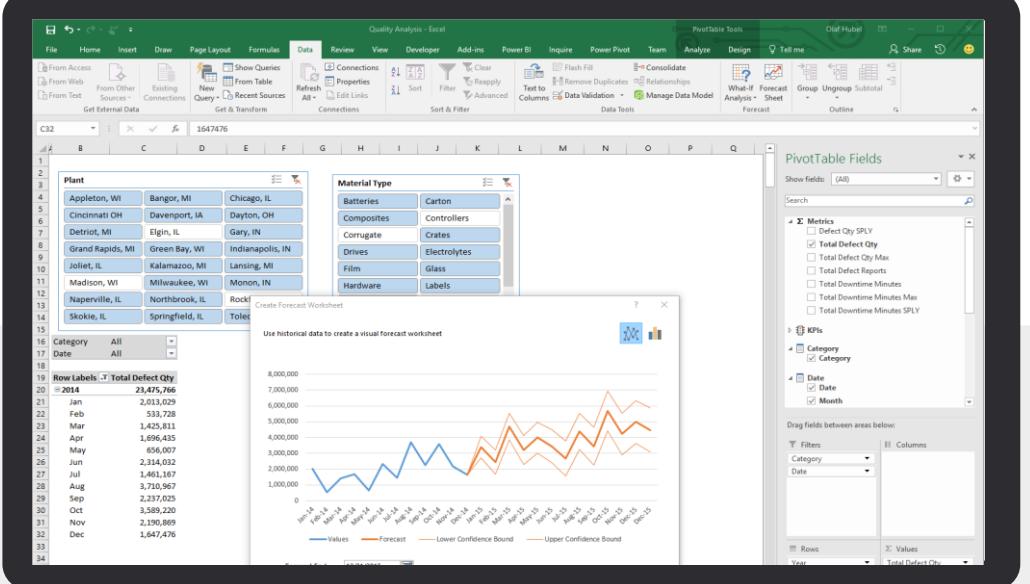
- Category Breakdown:**

Product	Value
Power BI	\$52K
Word	\$36K
OneNote	\$31K
PowerPoint	\$30K
XBOX	\$27K
PowerApps	\$23K
Excel	\$21K
Skype	\$20K
Publisher	\$19K
XBOX ONE	\$18K
- Store Breakdown:**

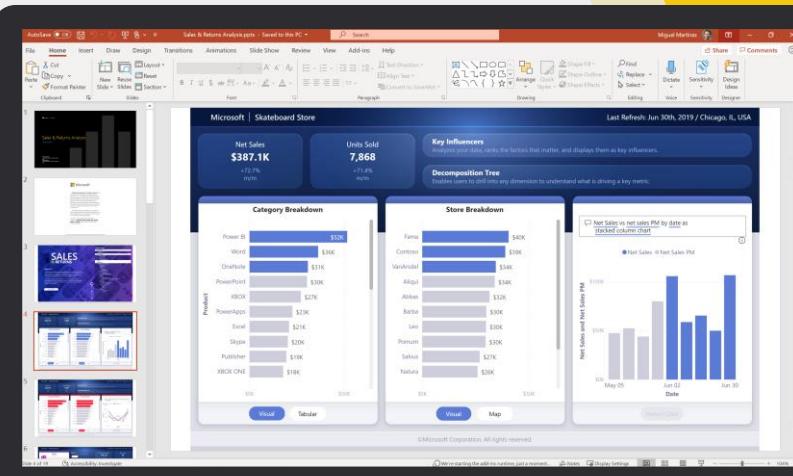
Store	Value
Fama	\$40K
Contoso	\$39K
VanArdsel	\$34K
Aliqui	\$34K
Abbas	\$32K
Barba	\$30K
Leo	\$30K
Pomum	\$30K
Salvus	\$27K
Natura	\$26K

To the right, the "Visualizations" pane shows a library of available chart types, and the "Filters" pane contains settings for drillthrough, cross-report, and keep all filters.

600+ Custom visual



This screenshot shows a Microsoft SharePoint site named "Sales and Returns". The main page features a dashboard with a bar chart for Net Sales (\$387.1K) and a map showing Net Sales by Location in Chicago. Below the dashboard, there's a "Quick links" section with links to "Learn about a team site" and "Learn how to add a page". On the left, a navigation menu includes Home, Conversations, Documents, Notebook, Pages, Site contents, Recycle bin, and Edit. A Microsoft Teams communication panel is visible at the bottom.



Integration with Excel, Power Point, SharePoint and TEAMS



The **LARGEST GLOBAL FOOTPRINT**

43

Languages

40

Primary and backup
datacenters worldwide

**National
Clouds**

US Government,
China & Germany



China GB 18030



Security
Standards Council



Bundesamt
für Sicherheit in der
Informationstechnik



June 2024

A Leader in Analytics & BI Platforms*

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*Gartner; Magic Quadrant™ for Analytics and Business Intelligence Platforms; Kurt Schlegel, Julian Sun, David Pidsley, Anirudh Ganeshan, Fay Fei, Aura Popa, Radu Miclaus, Edgar Macari, Kevin Quinn, Christopher Long.

Figure 1: Magic Quadrant for Analytics and Business Intelligence Platforms



Power BI

Demo

VanAarsdel, Ltd. Manufacturer Analysis

Sum of Revenue and PY Sales

Year

2017

Initial State USA Revenue Australia Revenue

Sum of Revenue by Country

Country	Sum of Revenue
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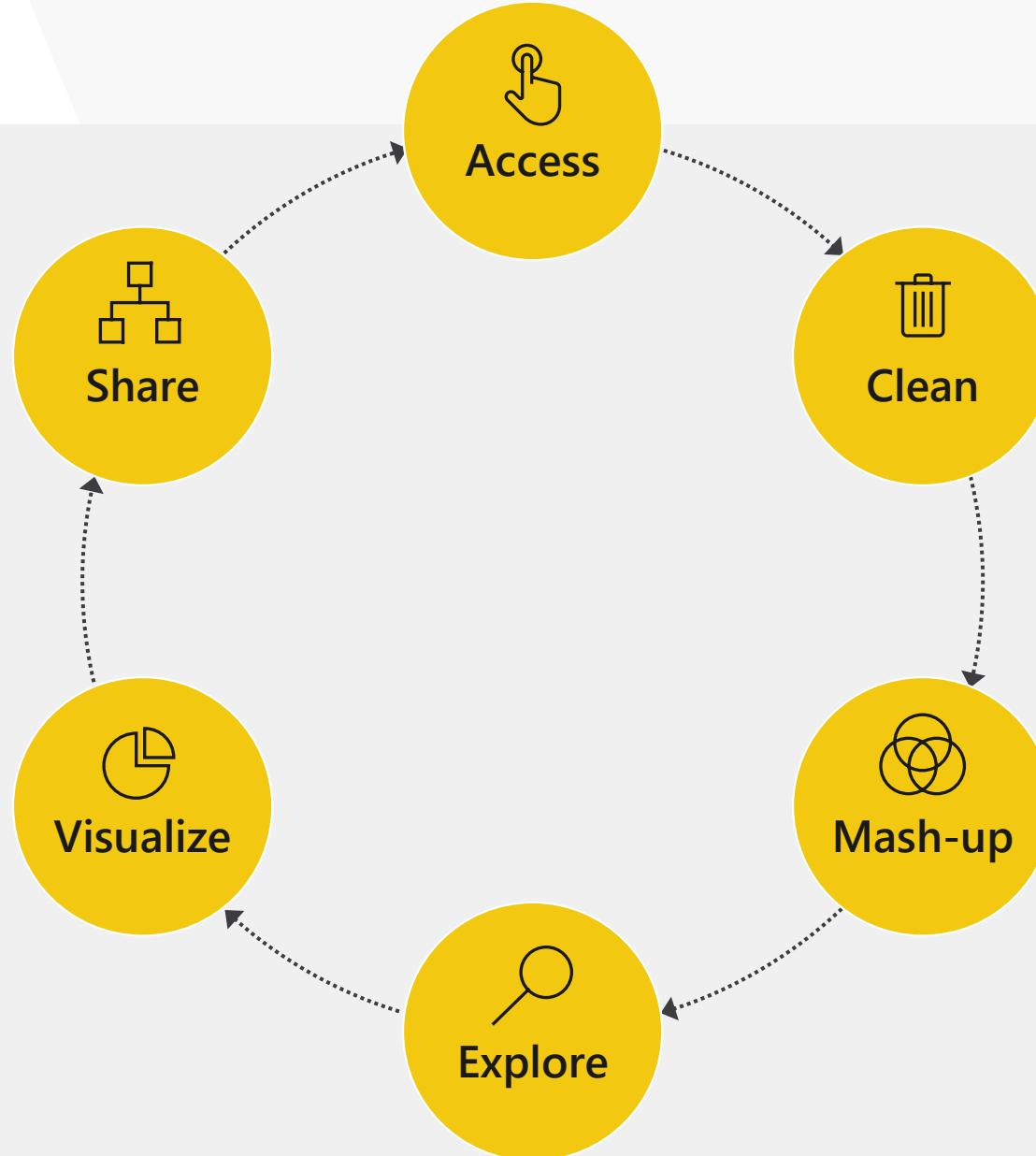
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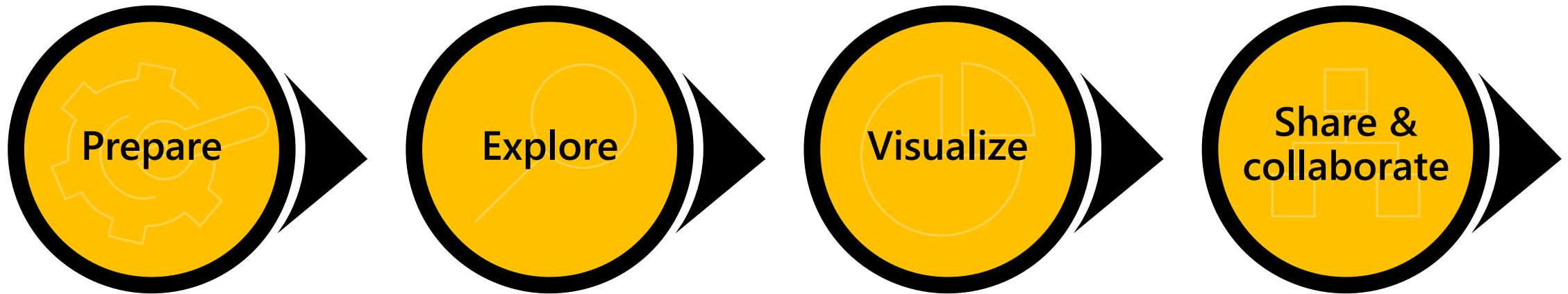
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2019	\$0.0bn	0%
2020	\$0.0bn	0%

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 200+ 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 on the left, which includes sections for 'Discover content' (My organization, Services) and 'Create new content' (Files, Databases). Below these are links for 'Samples', 'Organizational Content Packs', 'Partner Showcase', and 'Service Content Packs'. To the right, there is a grid of 'Power BI apps' from the 'Template apps' category, featuring various analytical and business intelligence applications like Microsoft Sample, COVID-19 Track, NFL Analytics, Dynamics 365 Business Central, and many others.

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

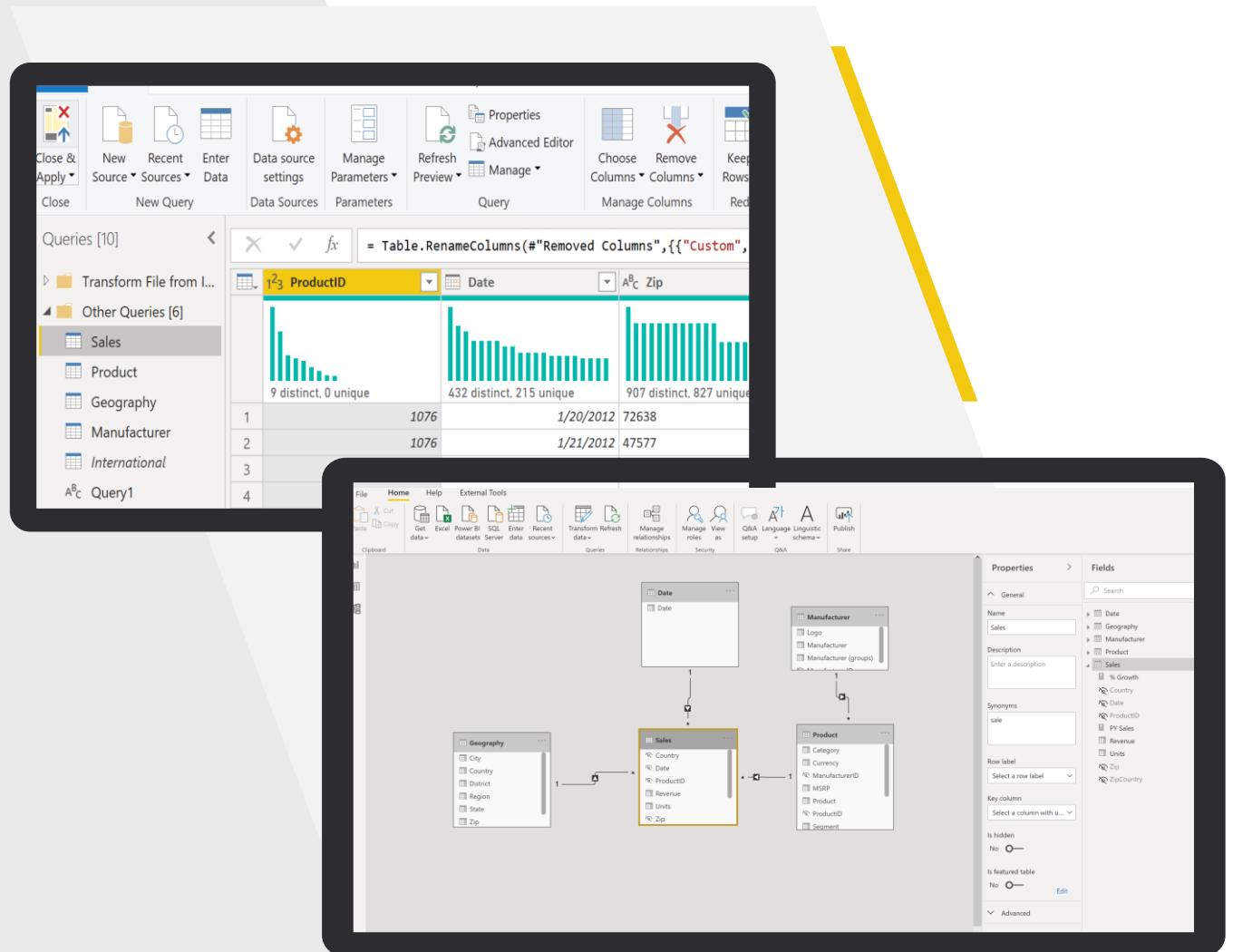
Transform data to fit your needs using intuitive UI

- 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



Lab

Accessing & Preparing the data

Explore your DATA

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

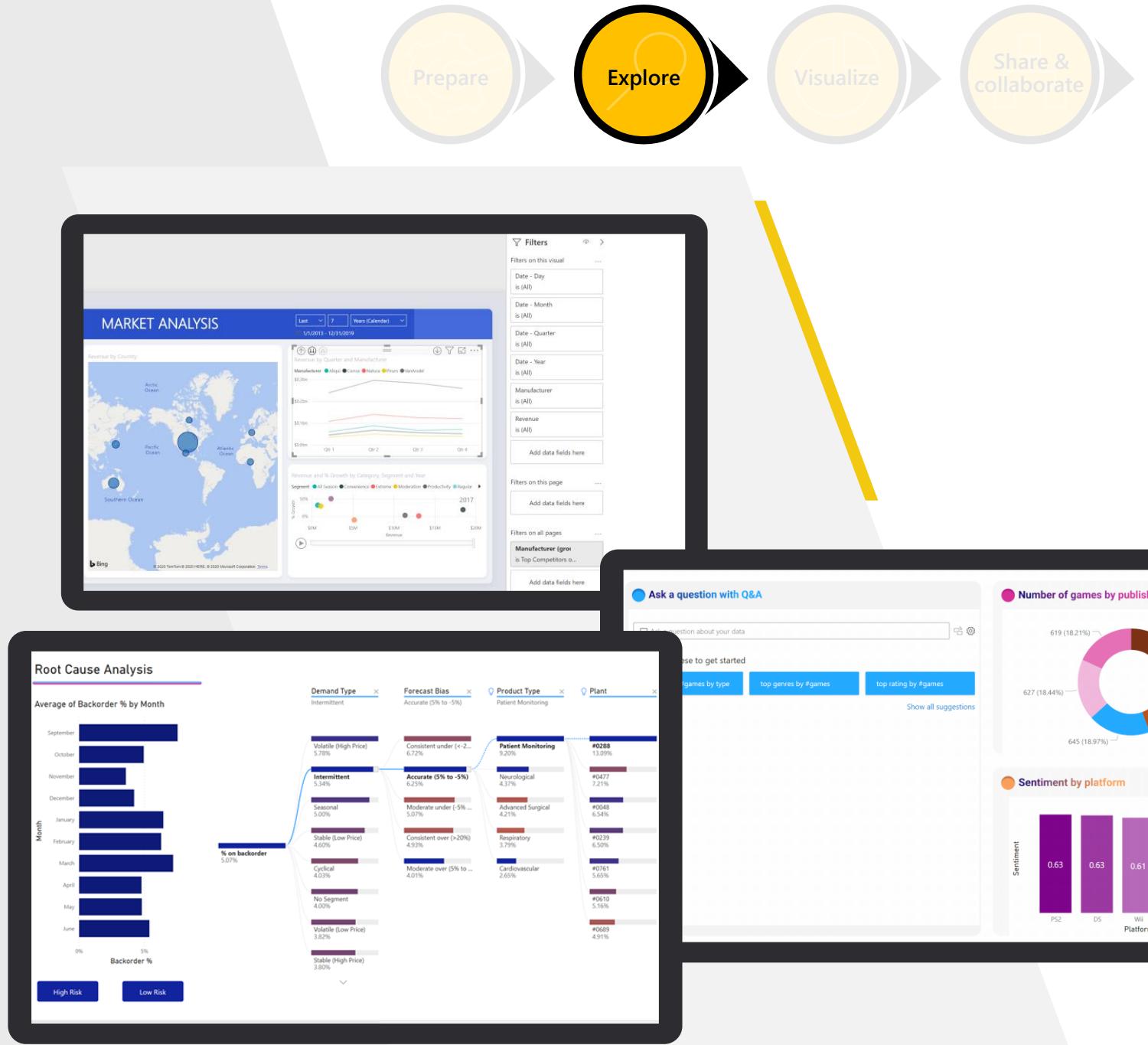
Dig deeper into your reports

- 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

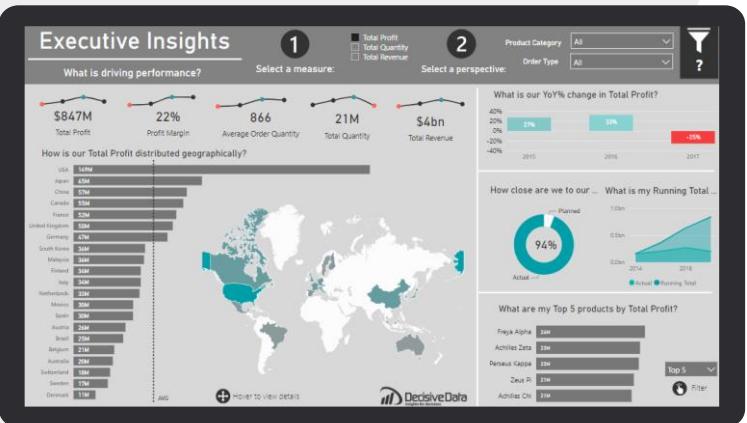
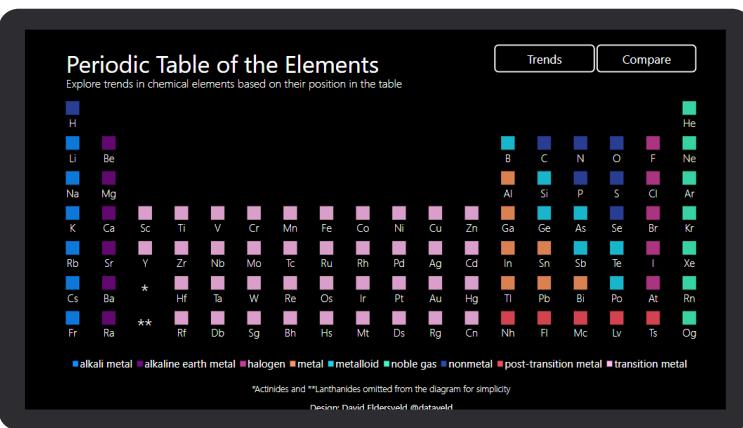
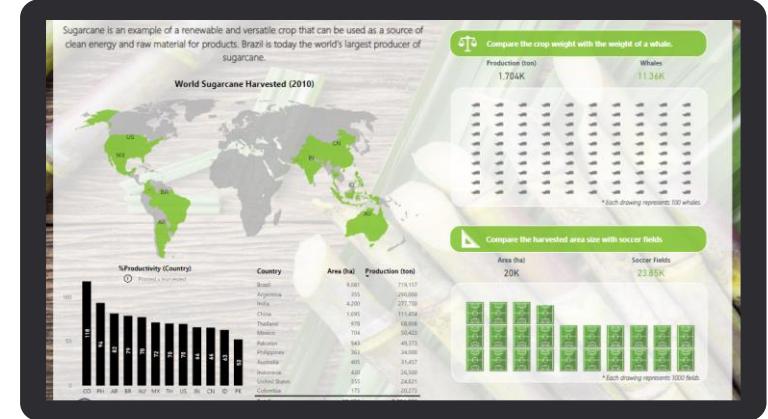
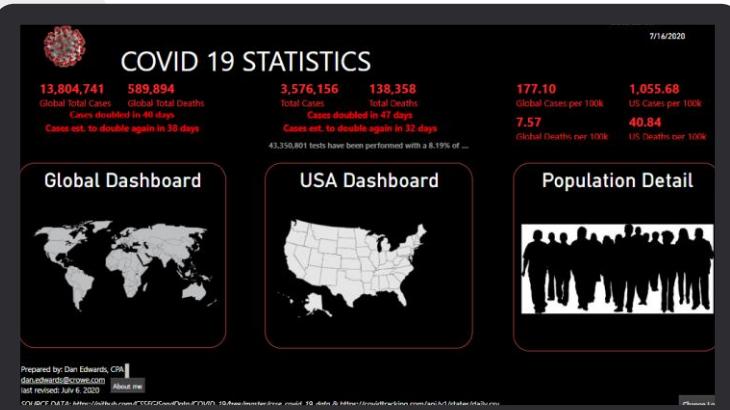
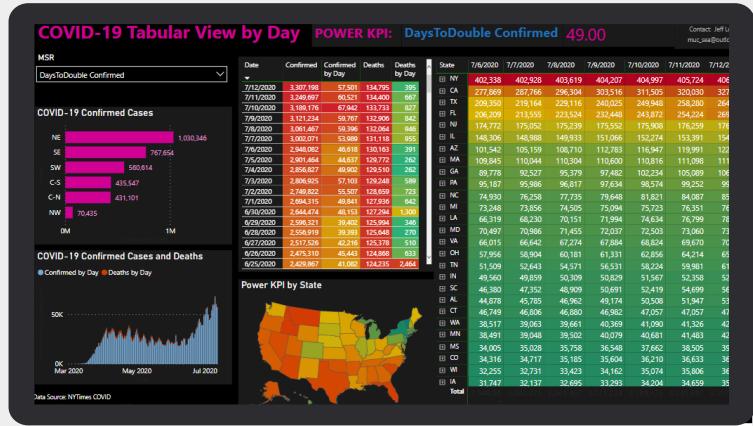


Lab

**Build your first data
model and explore the
data**

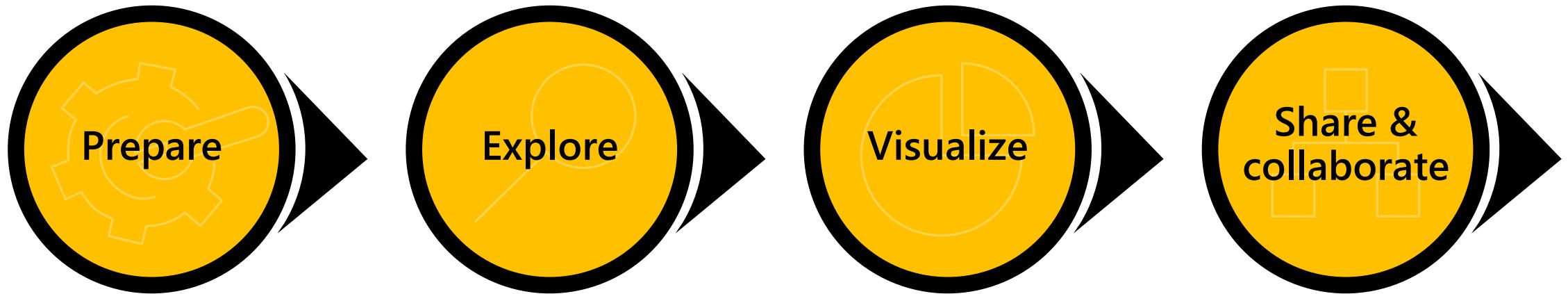
**Use hierarchies and DAX
in your first data model**

Explore and share your data stories



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

Lab overview



Visualize your DATA



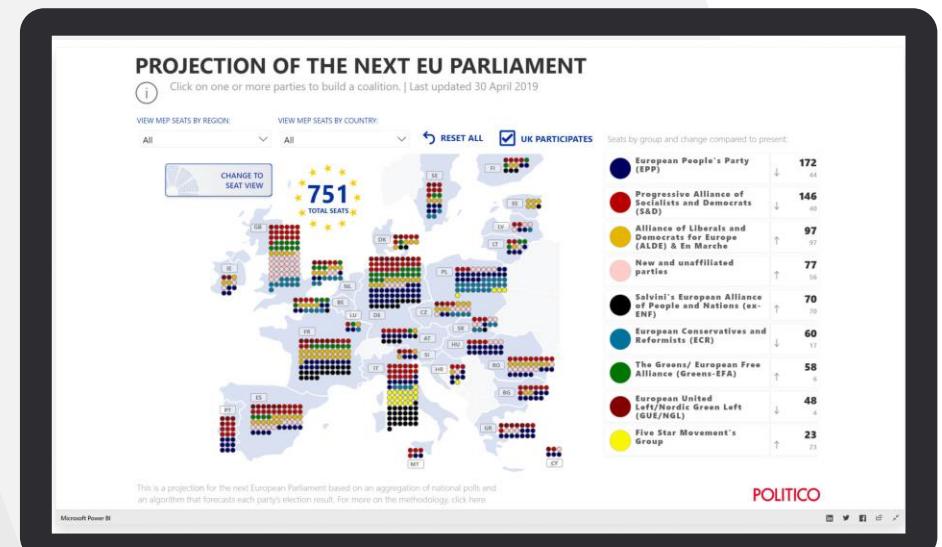
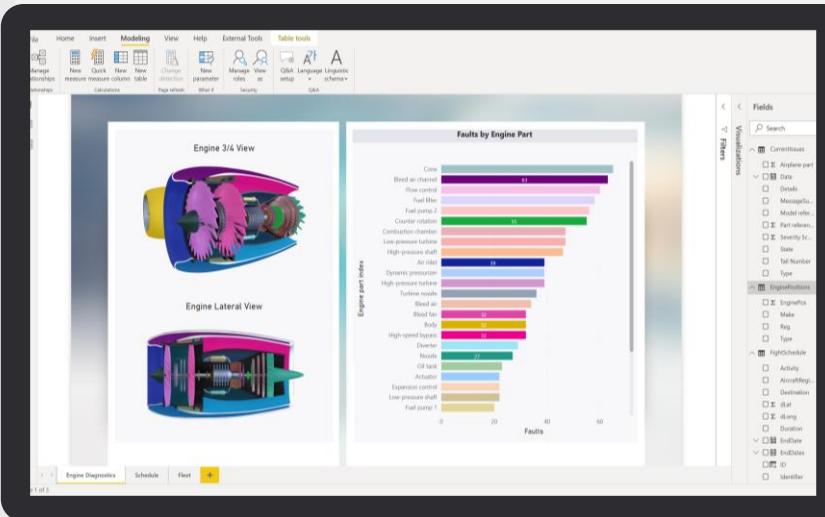
Visualize data in a variety of ways

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

Data visualization and reports

Lab

Import custom visuals
and add bookmarks to a
report

Bring your story to life with DATA



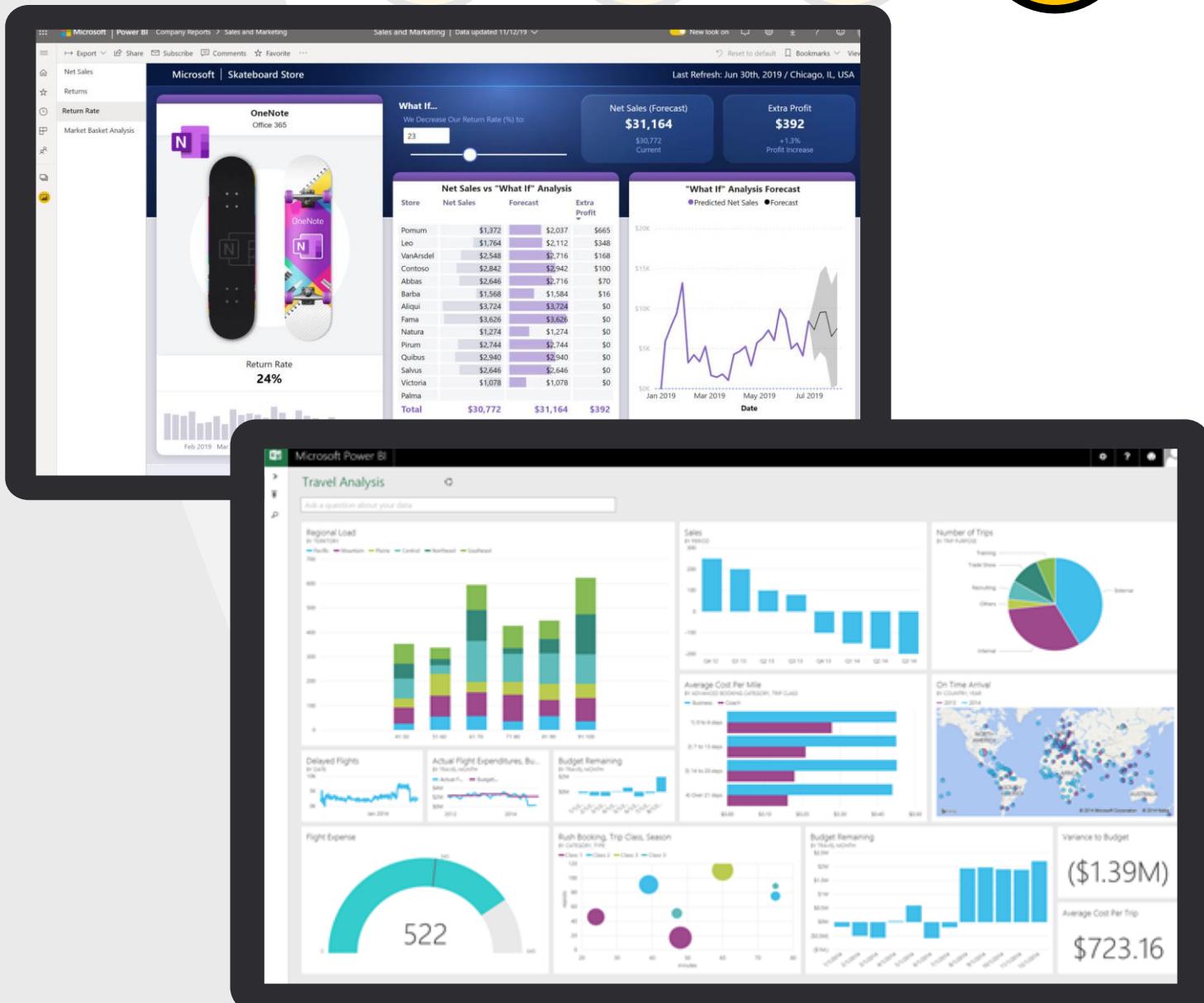
Save Power BI Desktop report files and easily publish them to powerbi.com

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

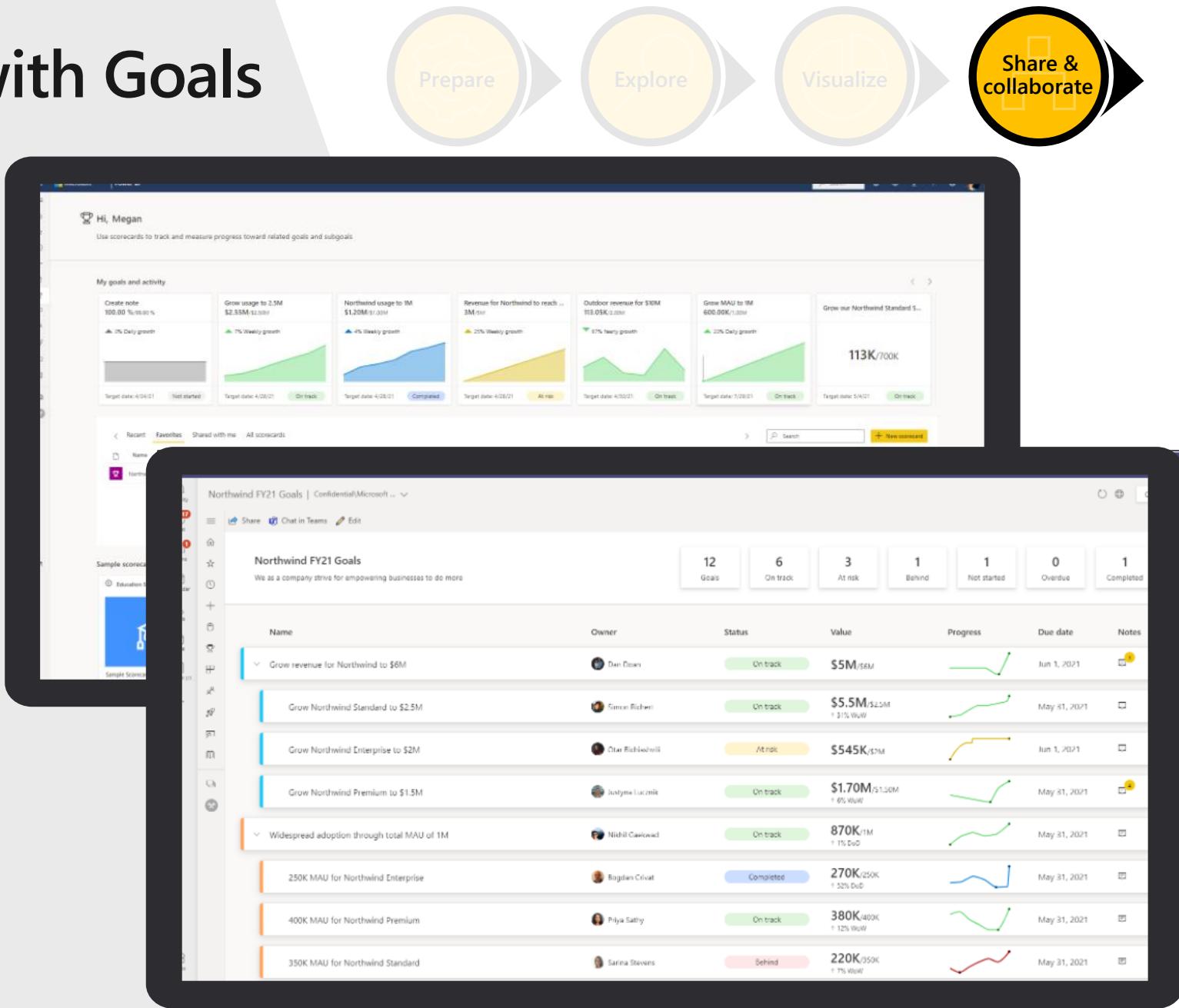


Lab

Publish and access reports in Power BI service

Track business metrics with Goals

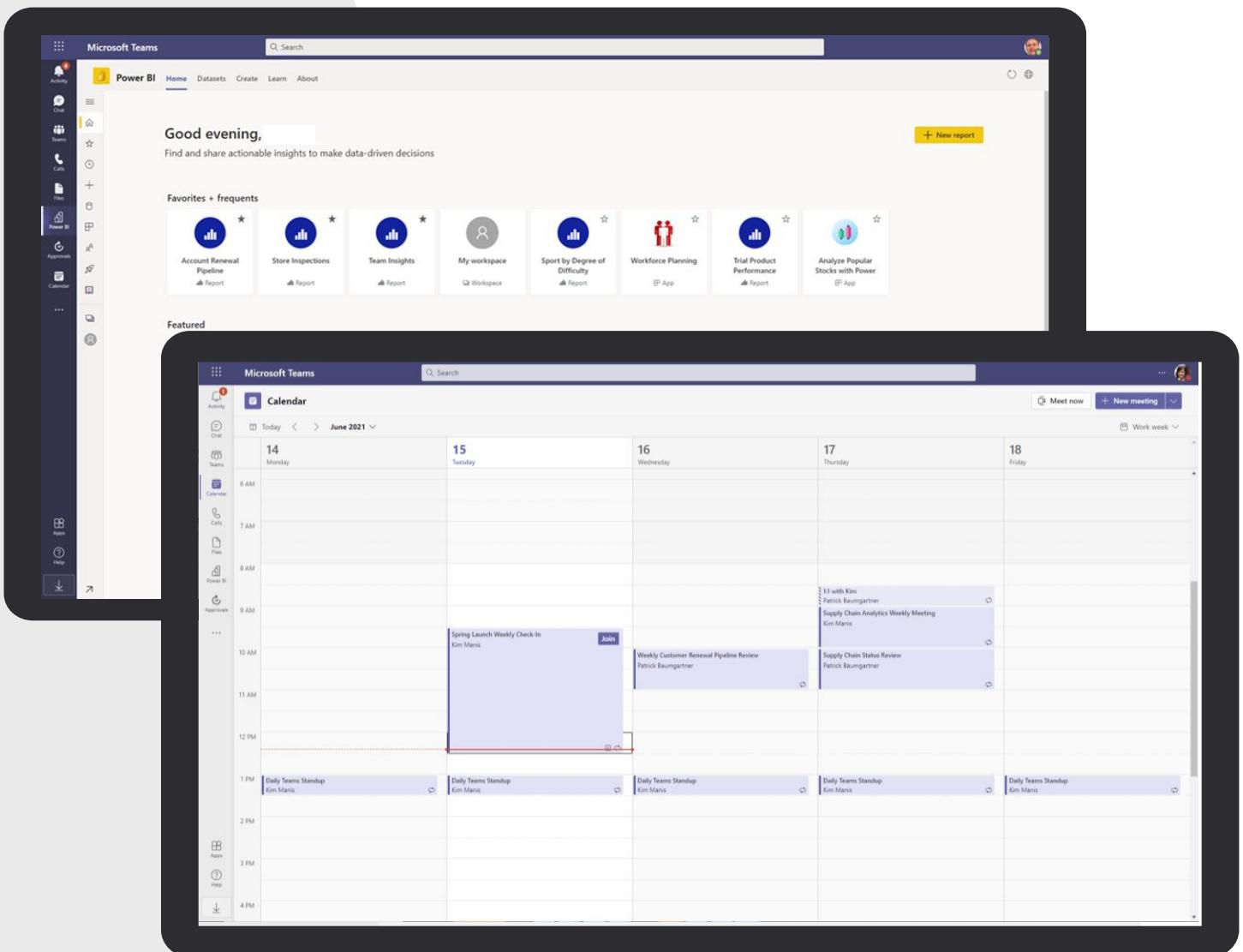
- Create scorecards
- Measure key business metrics
- Track goals in a single source
- Measure progress
- Share updates with the team
- Monitor the health of the business
- View on mobile



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

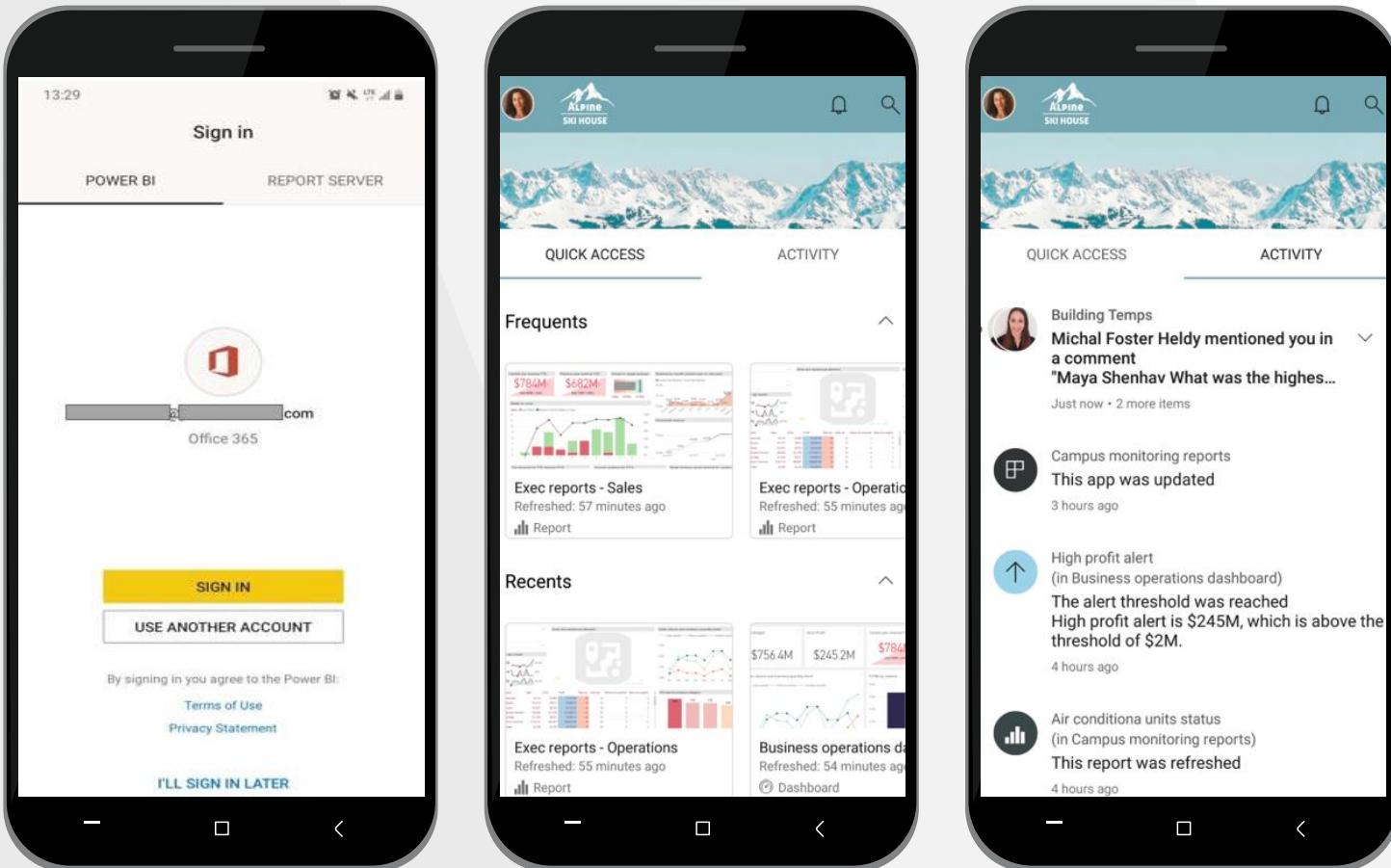


Access dashboards using native mobile apps for Windows, iOS and Android

Easy sign in page

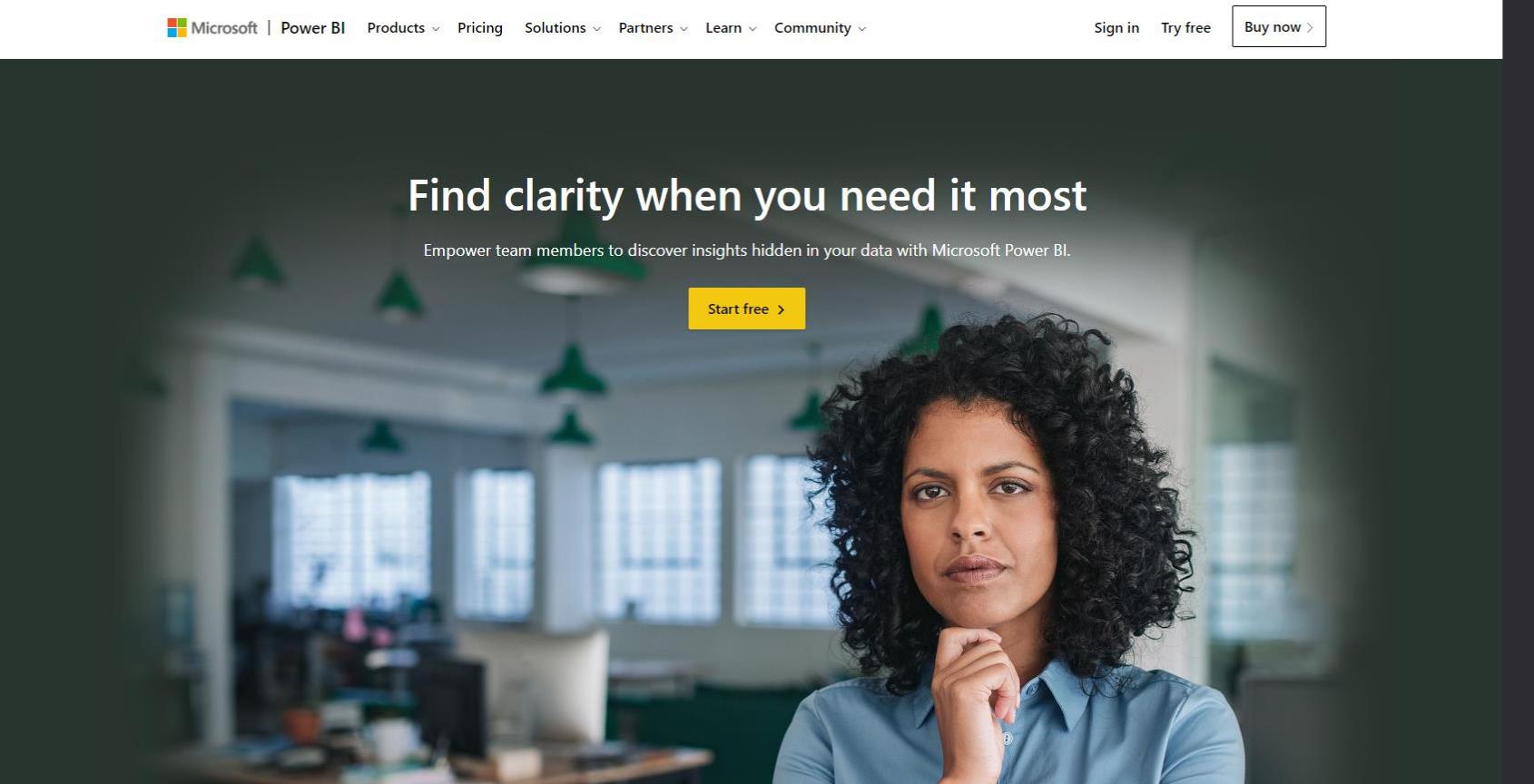
Quick Access reports

Your personal Recent Activity feed



Lab 05 -

Interact, share, and collaborate Power BI dashboards



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.

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Q&A