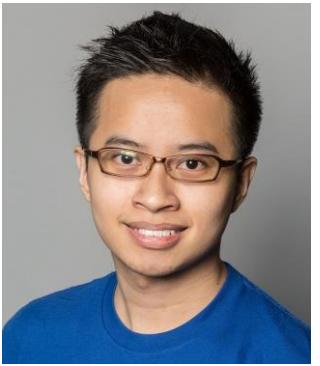


# Melek Series : Building an insightful dashboard with Power BI

Lee Hsiang  
Cloud Solution Architect  
Microsoft Asia Pacific



**Lee Hsiang**  
Cloud Solution Architect  
Microsoft Asia Pacific  
[Lee Hsiang | LinkedIn](#)



# 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

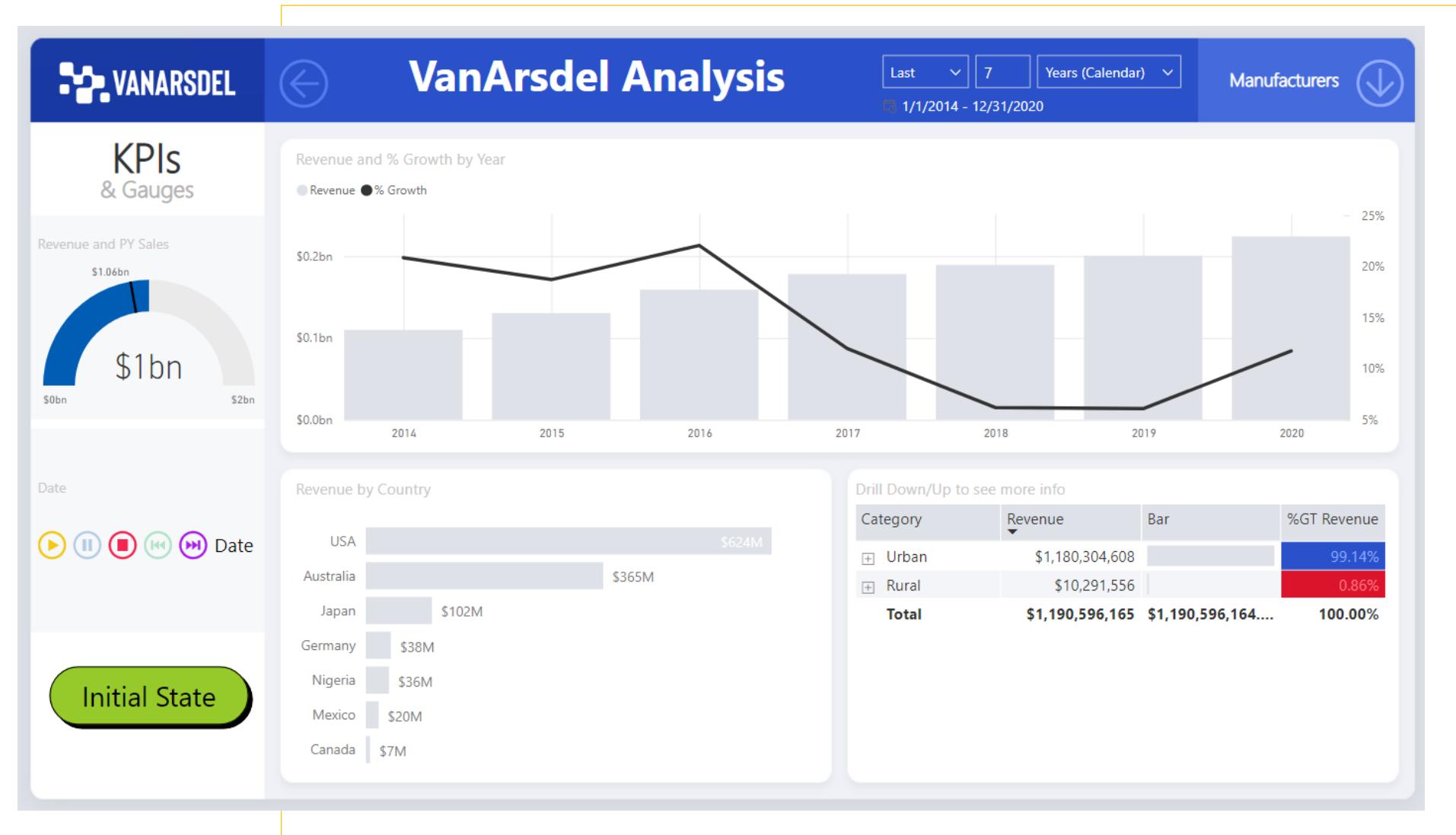
# Agenda (times are approximate and will be fluid with the class)

---

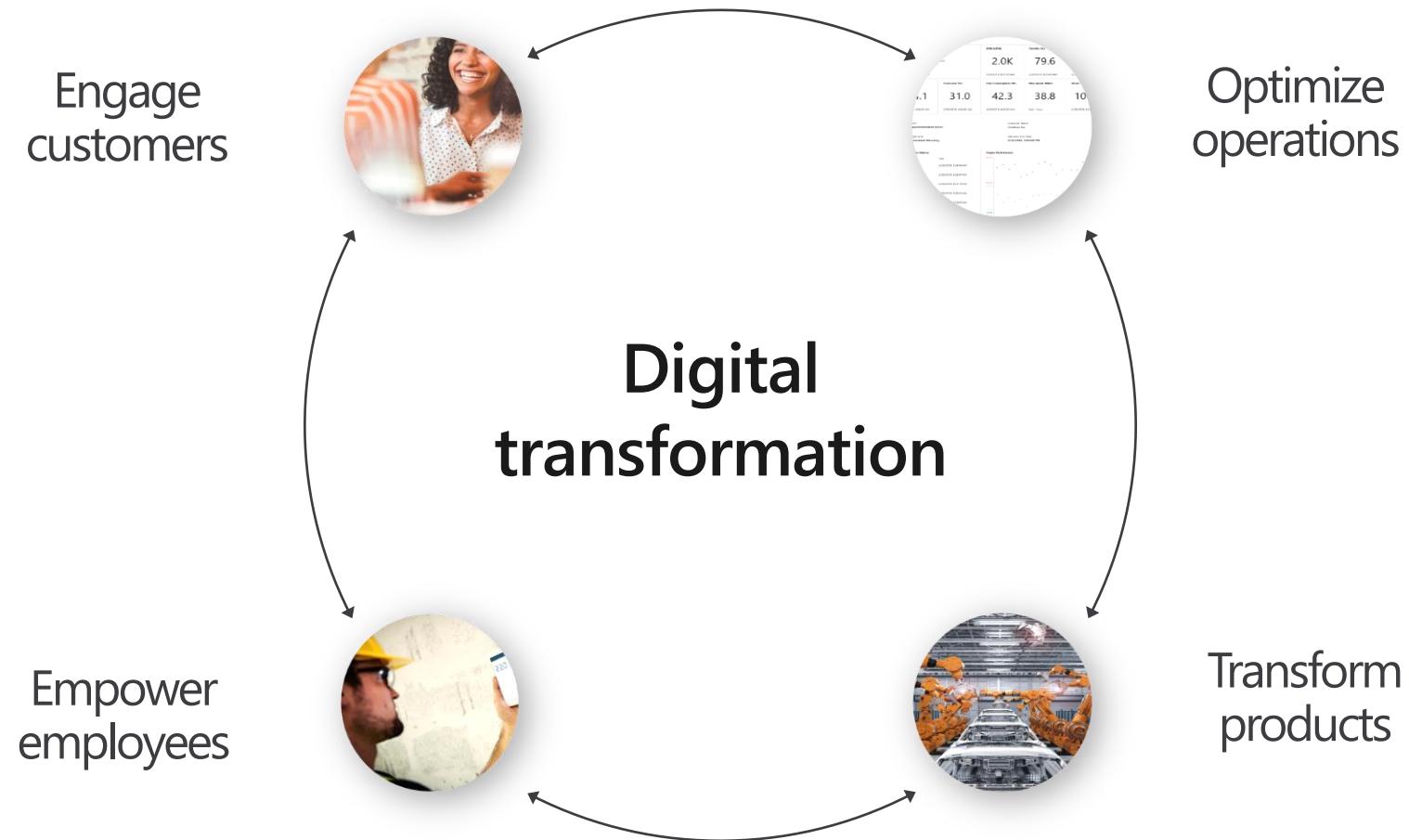
## Agenda

10:30 AM – 11:00 AM	Introduction to Power BI
11:00 AM – 11:30 AM	Power BI Lab 1
11:30 AM – 11:40 AM	Quiz
11:40 AM – 12:20 PM	Create your own report
12:20 PM – 12:30 PM	Quiz and Q&A

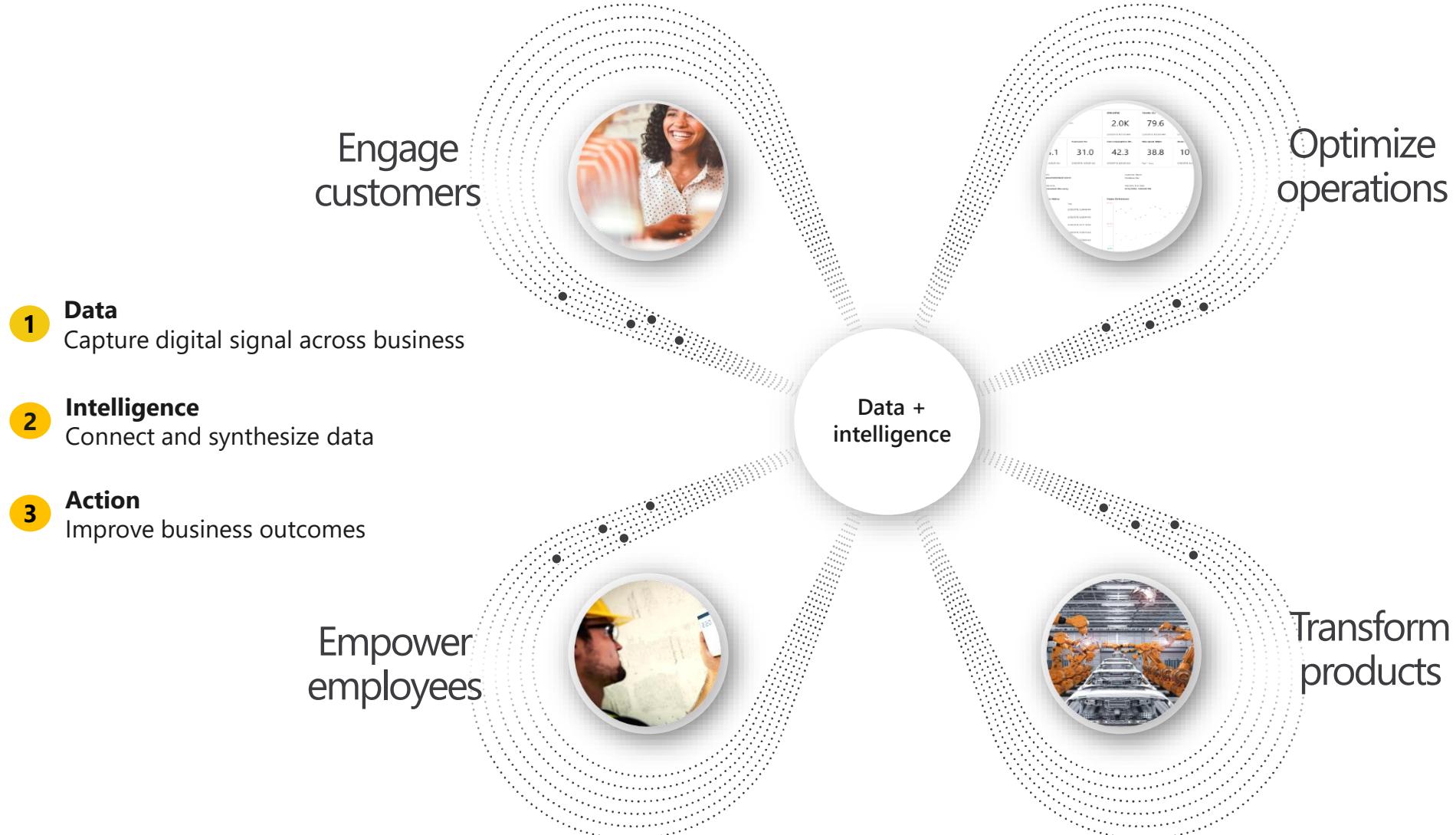
# Dashboard in a Day Demo



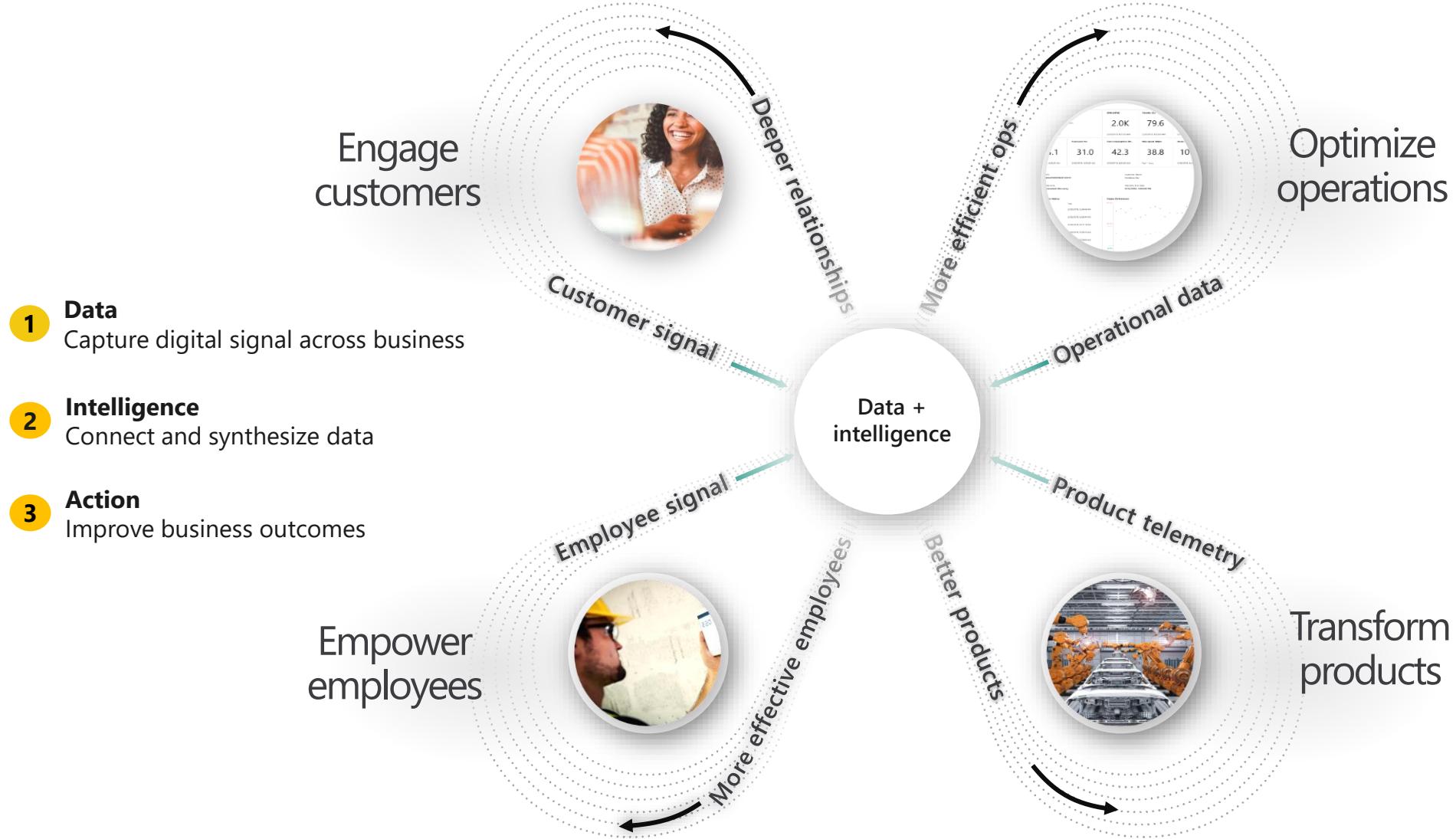
# Digital Transformation



# Digital Feedback Loop



# Digital Feedback Loop

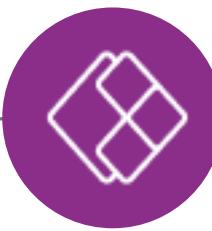


# Microsoft Power Platform

The low-code platform that spans Office 365, Azure, Dynamics 365, and standalone applications  
Innovation anywhere. Unlocks value everywhere.



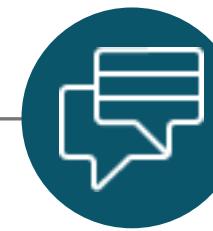
**Power BI**  
Business analytics



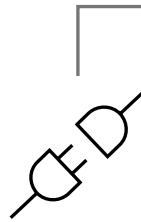
**Power Apps**  
Application development



**Power Automate**  
Process automation



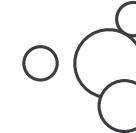
**Power Virtual Agents**  
Intelligent chatbots



**Data connectors**



**Portals**

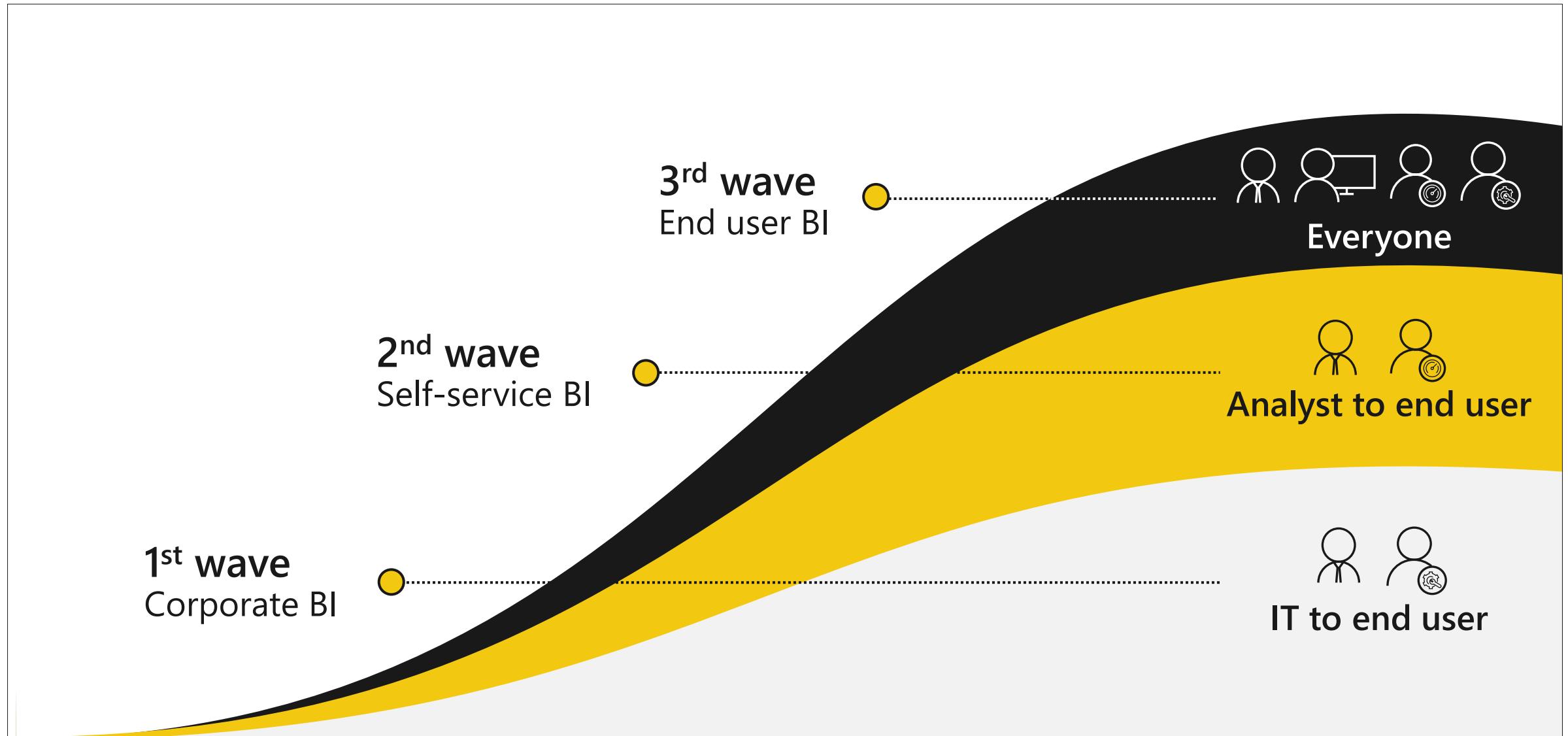


**AI Builder**

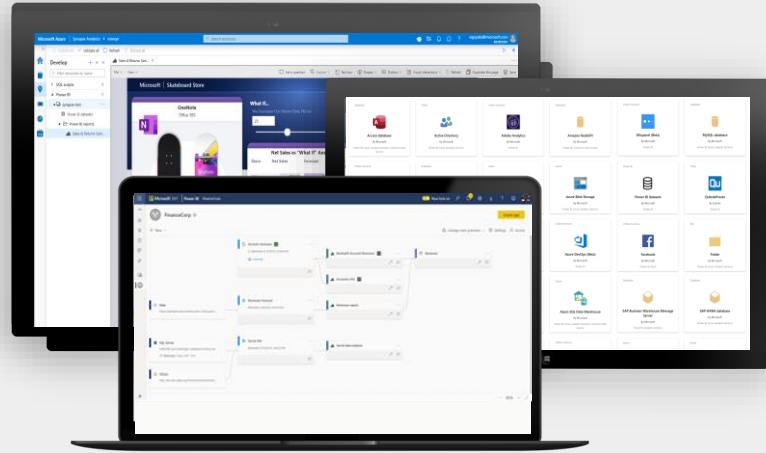


**Dataverse**

# The Evolution of BI



# Power BI



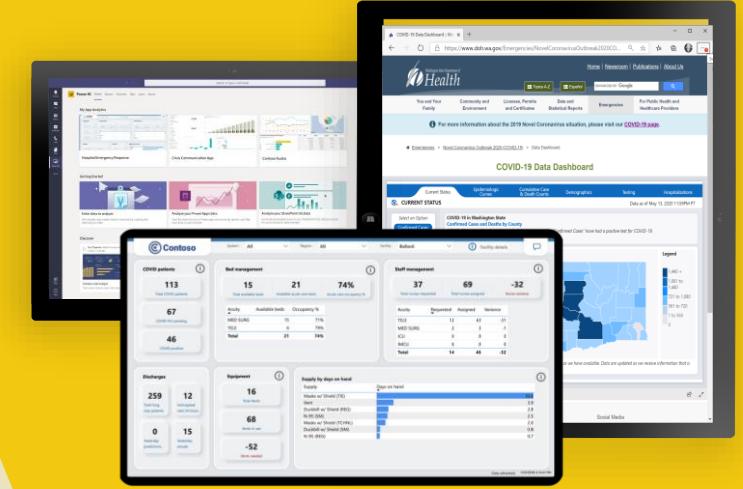
## All Data

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

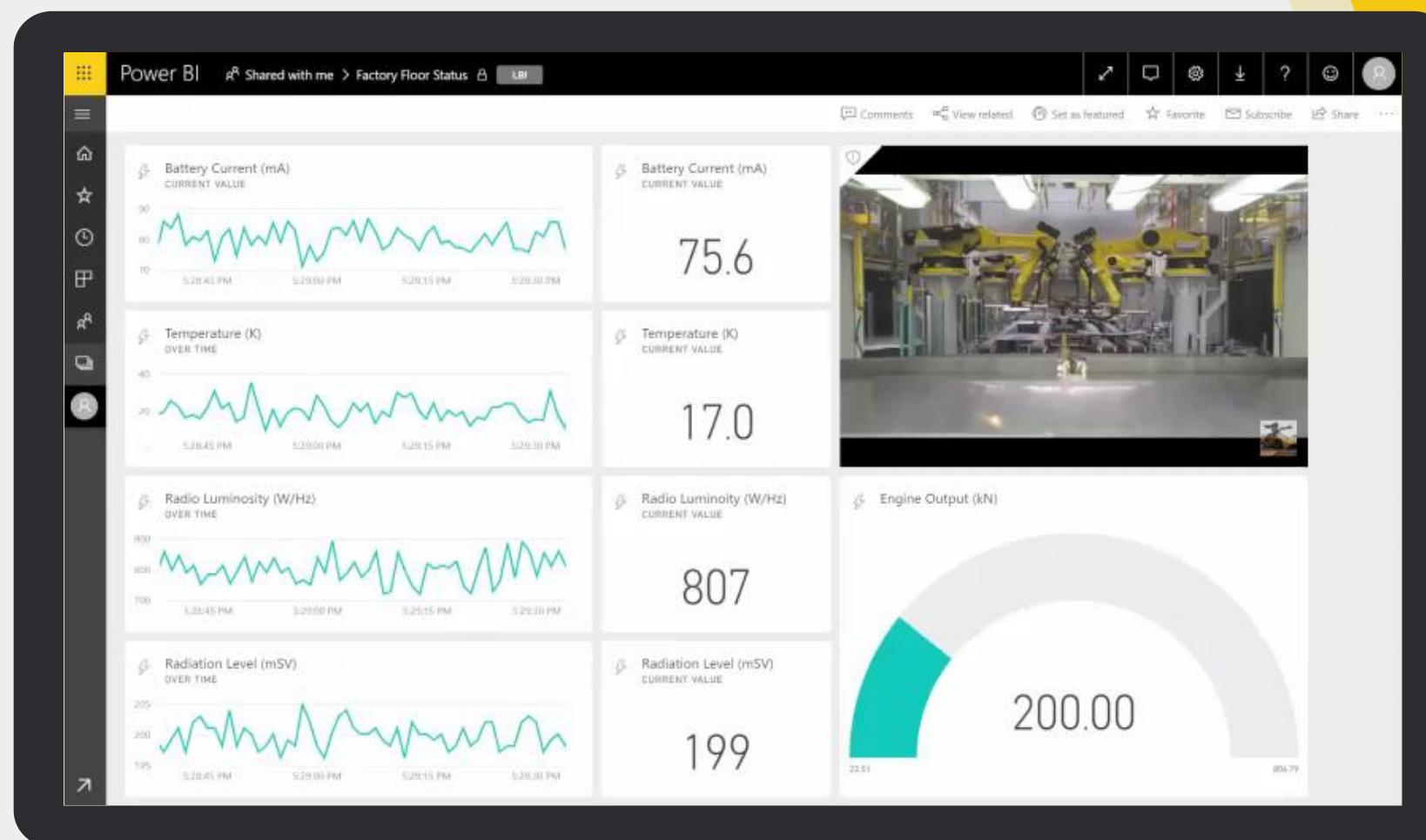


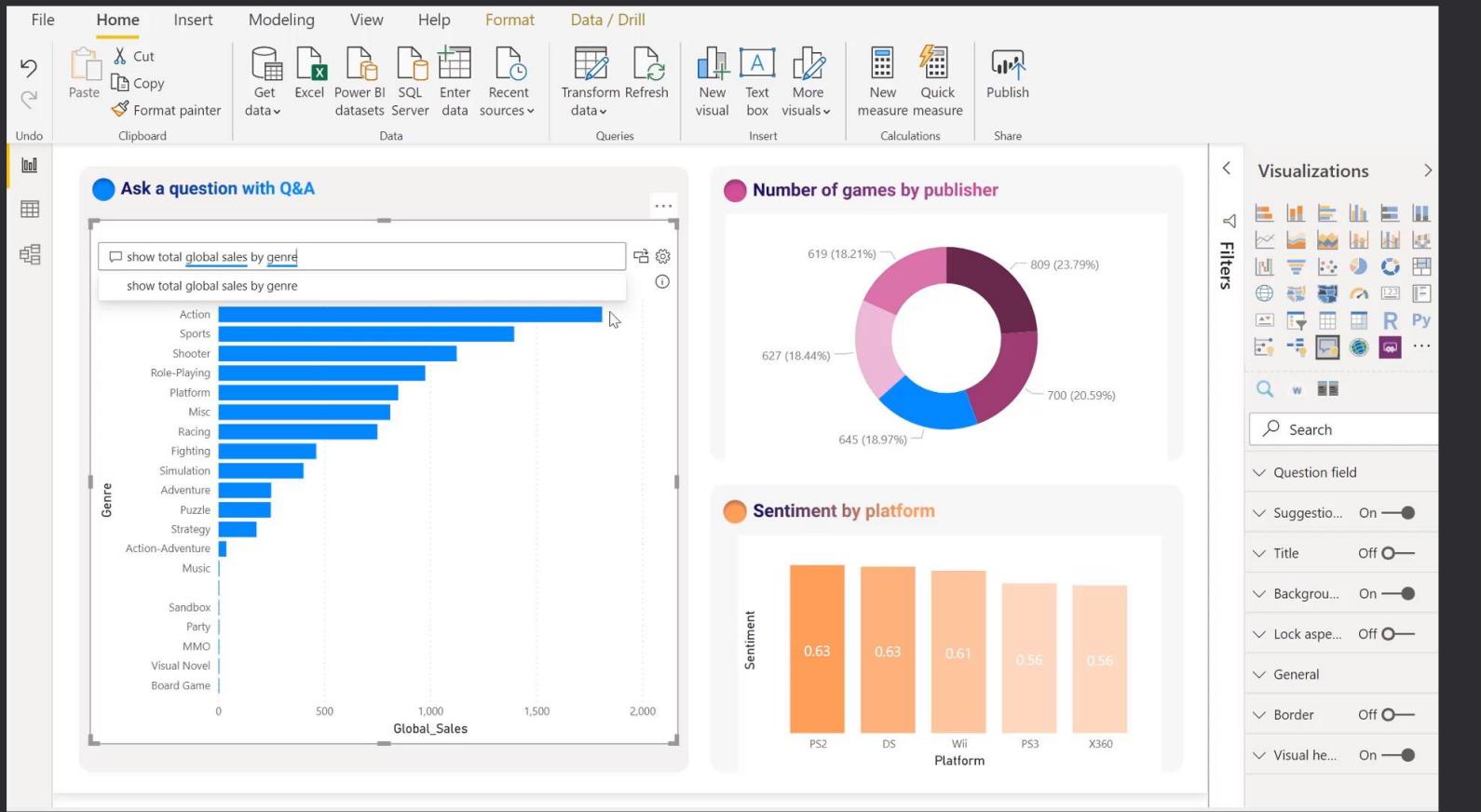
Integration with Excel, Power Point, SharePoint and Teams

# Power BI Desktop is free

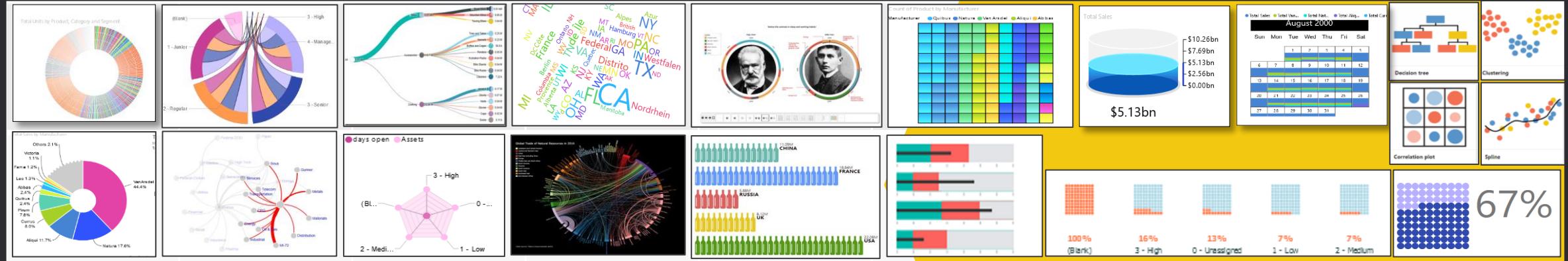
The screenshot displays a Microsoft Power BI Desktop interface. The ribbon at the top includes File, Home, Insert, Modeling, View, Help, External Tools, and Table tools. The Home tab is selected, showing various icons for data management and visualization creation. The main workspace shows a dashboard titled "Microsoft | Skateboard Store". The dashboard features a "What If..." section where users can change the "Return Rate" from 25% to 24%. It also includes a bar chart comparing "Net Sales" and "Forecast" across different stores, a line chart showing the "What If" analysis forecast over time, and a table detailing net sales for each store. The bottom of the screen shows navigation buttons and a footer with copyright information.

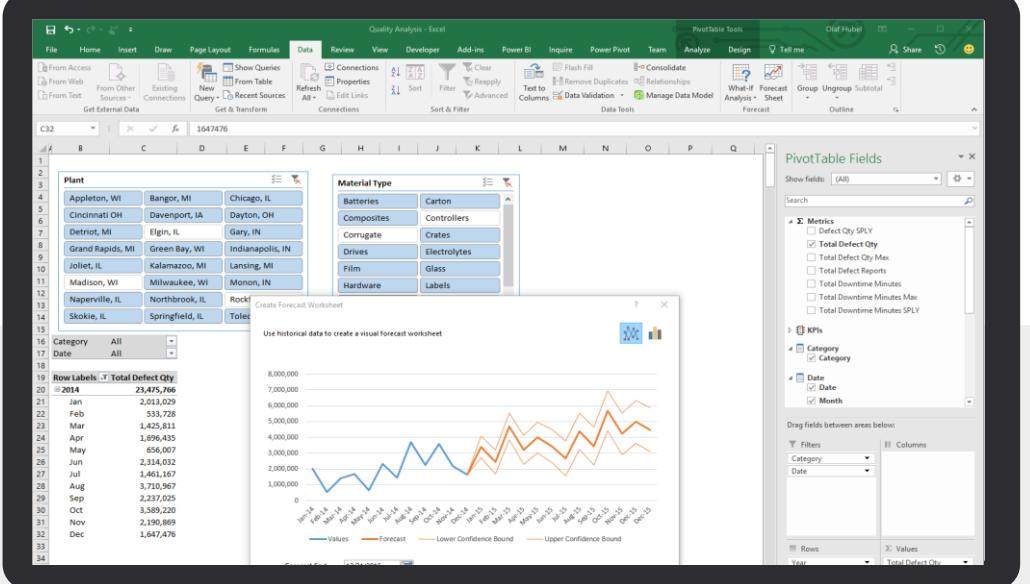
# Real time dashboards and interactive reports



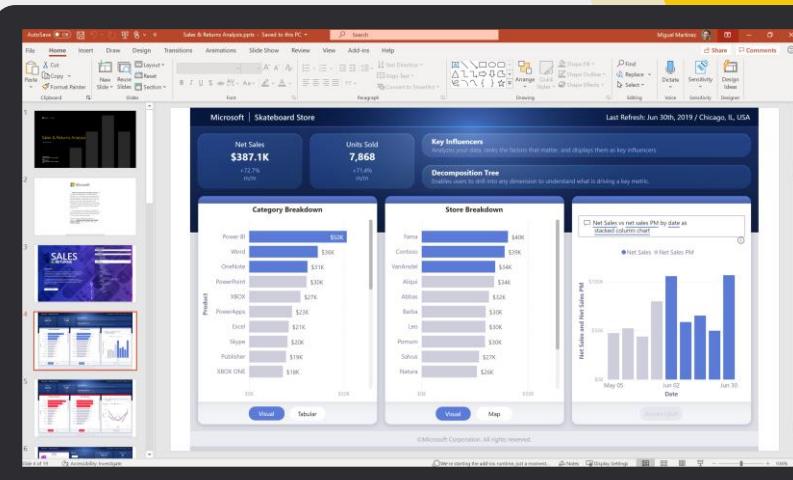


# Natural Language query & AI insights





This screenshot shows a Microsoft SharePoint page titled "Sales and Returns" within a "Private group". The page features a "Home" section with a "New" button and a "Page details" link. Below this is a "Conversations" section. The main content area displays a Power BI visualization titled "Microsoft | Skateboard Store". The visualization includes a dashboard with various charts and tables, such as "Net Sales" (\$387.1K), "Units Sold" (7,868), and "Key Influencers". It also includes a "Category Breakdown" bar chart, a "Net Sales by Location" map, and a "Decomposition Tree" chart. The page is published on 1/16/2019.



# Integration with Excel, Power Point, SharePoint and TEAMS





# Power BI Anatomy



# Power BI product portfolio

Author	Share and collaborate	Large scale deployments	Share and collaborate	App dev
 				
Power BI Desktop Power BI Report Builder  Free data analysis and report authoring tools	Power BI service  Cloud-based modern business analytics solution	Power BI Premium  Dedicated capacity for increased performance	Power BI Report Server  On-premises report server	Power BI Embedded  Visual analytics embedded in your applications 

# Power BI Desktop

Free companion authoring tool for the Power BI service – analytic reports



## Get Data

Easily connect, clean, and mashup data



## Analyze

Build powerful models and flexible measures



## Visualize

Create stunning interactive reports



## Publish

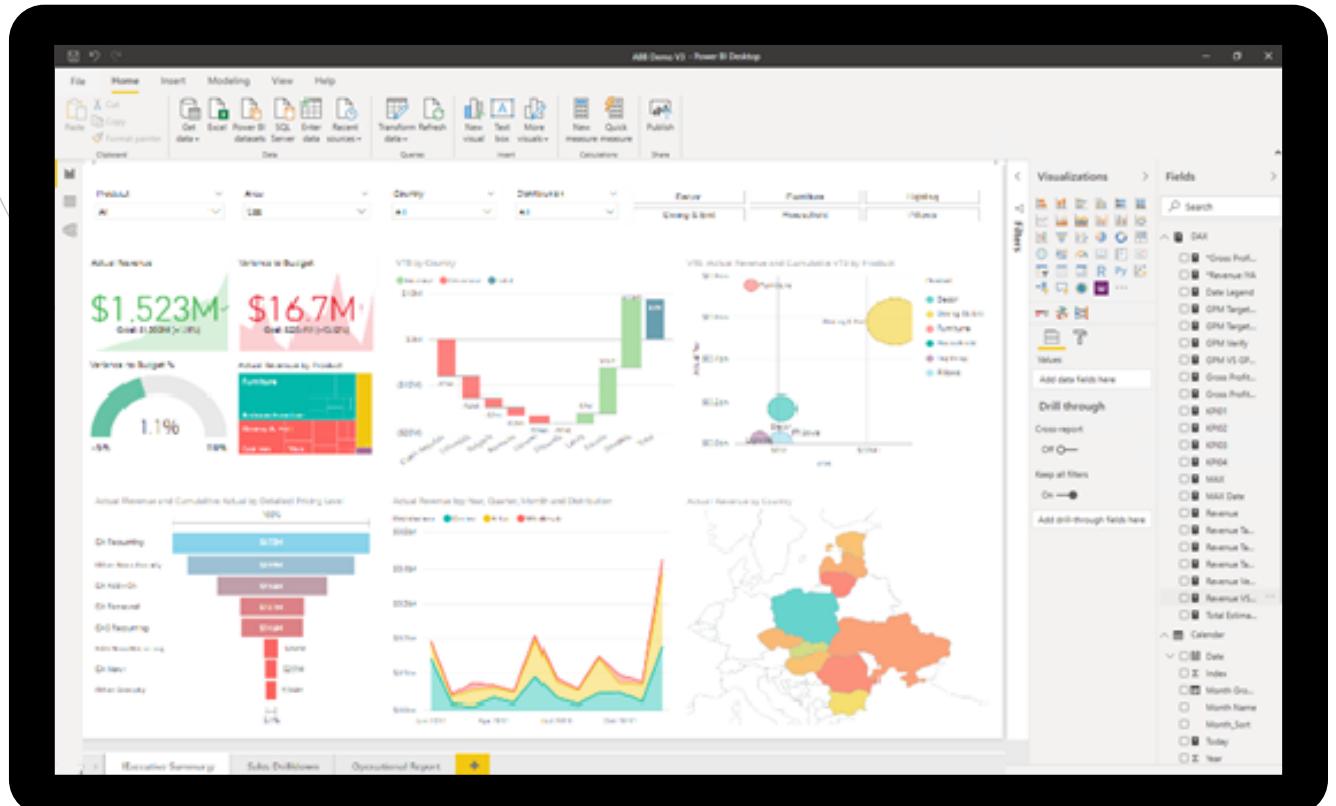
Share insights with others



## Collaborate

Empower your organization with self-service analytics

Download free from [PowerBI.com](https://PowerBI.com) or the Windows Store



# The **LARGEST GLOBAL FOOTPRINT**

**43**

Languages

**40**

Primary and backup  
datacenters worldwide

**National  
Clouds**

US Government,  
China & Germany



China GB 18030



Bundesamt  
für Sicherheit  
in der  
Informationstechnik

# Create out-of-the-box dashboards with cloud services

Power BI GitHub

Github

Search

File Share Chat in Teams Comment Subscribe Edit ...

You're viewing this app with sample data. [Connect your data](#)

Home Favorites Recent Create Datasets Goals Apps Shared with me Learn Workspaces Github

Pull Requests by Month

Open PULL REQUESTS

5

(Blank)

Pull Requests THIS WEEK

Avg Hours to Pull by Month

Pull Requests THIS MONTH

GitHub

Issues by Status, Date

Open Issues

864

Closed THIS MONTH

183

Avg Hours to Close BY DATE

Avg Age DAYS

118.3

Contributors with open issues

Contributor	Open Issues
haider392	34
pawarbi	25
CeciAc	20
Mike-H...	18
eifchl	12
asocorro	11
dhruvin...	10
edfreem...	10
gkens	10
KerryWa...	10
marcelij...	10
mpoedekl	10

Commits

Additions & Deletions

Users with > 2.5% of total c...

maggiesMSFT mihart guyina...

Get data

This dashboard provides a comprehensive overview of GitHub activity across different dimensions. Key metrics include the number of open pull requests (5), average hours to pull (13), and contributors with open issues (haider392 with 34 issues). The 'Issues by Status, Date' chart shows a significant spike in closed issues in March 2019. The 'Commits' chart shows a single commit in July 2018. The 'Additions & Deletions' chart shows a single addition in July 2018. The 'Contributors with open issues' chart lists several contributors with their respective counts.

# Step 1 : From Power BI service, select Get Data

The screenshot shows the Power BI service home page. On the left, there's a navigation sidebar with options like Home, Favorites, Recent, Create, Datasets, Apps, Shared with me, Deployment pipelines, Learn, Workspaces, and a user profile section. A large red arrow points down to the 'Get data' button at the bottom of the sidebar. The main area displays a dashboard titled 'VanArsdel' with several visualizations:

- A large card showing a value of **55.41%**.
- A bar chart titled "% Growth BY MANUFACTURER" showing growth percentages for Currus, VanArsdel, Aliqui, Pirum, and Natura.
- A table titled "VanArsdel Revenue BY COUNTRY" showing revenue in millions for USA, Australia, Japan, Germany, and Nigeria.
- A table titled "VanArsdel Market Share BY COUNTRY" showing market share percentages for Germany, Japan, USA, Nigeria, Australia, Canada, Mexico, and Canada.
- A line chart titled "Revenue BY COUNTRY" showing revenue over time from 2016 to 2019.
- A stacked bar chart titled "Revenue BY COUNTRY" showing revenue for USA, Australia, Japan, Germany, and Nigeria.

At the bottom, there's a section for "Favorites + frequent" items.

# Step 2 : Select Get from the Services Box

The screenshot shows the 'Get Data' page in the Power BI service. On the left, a sidebar lists navigation options like Home, Favorites, Recent, Create, Datasets, Apps, Shared with me, Deployment pipelines, Learn, Workspaces, and a user profile. Below the sidebar, a 'Get data' button is visible. The main content area is titled 'Get Data' and features a callout 'Download Power BI Desktop for the best report-building experience'. A 'Discover content' section contains two cards: 'My organization' (Discover apps published by other people in your organization) and 'Services' (Choose apps from online services that you use), each with a yellow 'Get' button. Below this, a 'Create new content' section contains three cards: 'Files' (Bring in your reports, workbooks, or data from Excel, Power BI Desktop or CSV files), 'Databases' (Use Power BI Desktop to connect to data in Azure SQL Database and more), and 'Dataflows' (Unify disparate data types, define ETL logic, and prepare your data for modeling), each with a yellow 'Get' button. The 'Dataflows' card also has a 'Learn more' link.

Home

Favorites >

Recent >

Create

Datasets

Apps

Shared with me

Deployment pipelines

Learn

Workspaces >

DIAD\_cort@obvi...

**Get Data**

[Download Power BI Desktop](#) for the best report-building experience

**Discover content**

**My organization**  
Discover apps published by other people in your organization.

**Services**  
Choose apps from online services that you use.

**Get** **Get**

**Create new content**

**Files**  
Bring in your reports, workbooks, or data from Excel, Power BI Desktop or CSV files.

**Databases**  
Use Power BI Desktop to connect to data in Azure SQL Database and more.

**Dataflows**  
Unify disparate data types, define ETL logic, and prepare your data for modeling.  
[Learn more](#)

**Get** **Get** **Get started**

Get data

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Dynamics 365

# Step 3 : For this lab, select Github

Power BI apps

Install apps that provide actionable insights and drive business results

All apps    Organizational apps    Template apps

Search

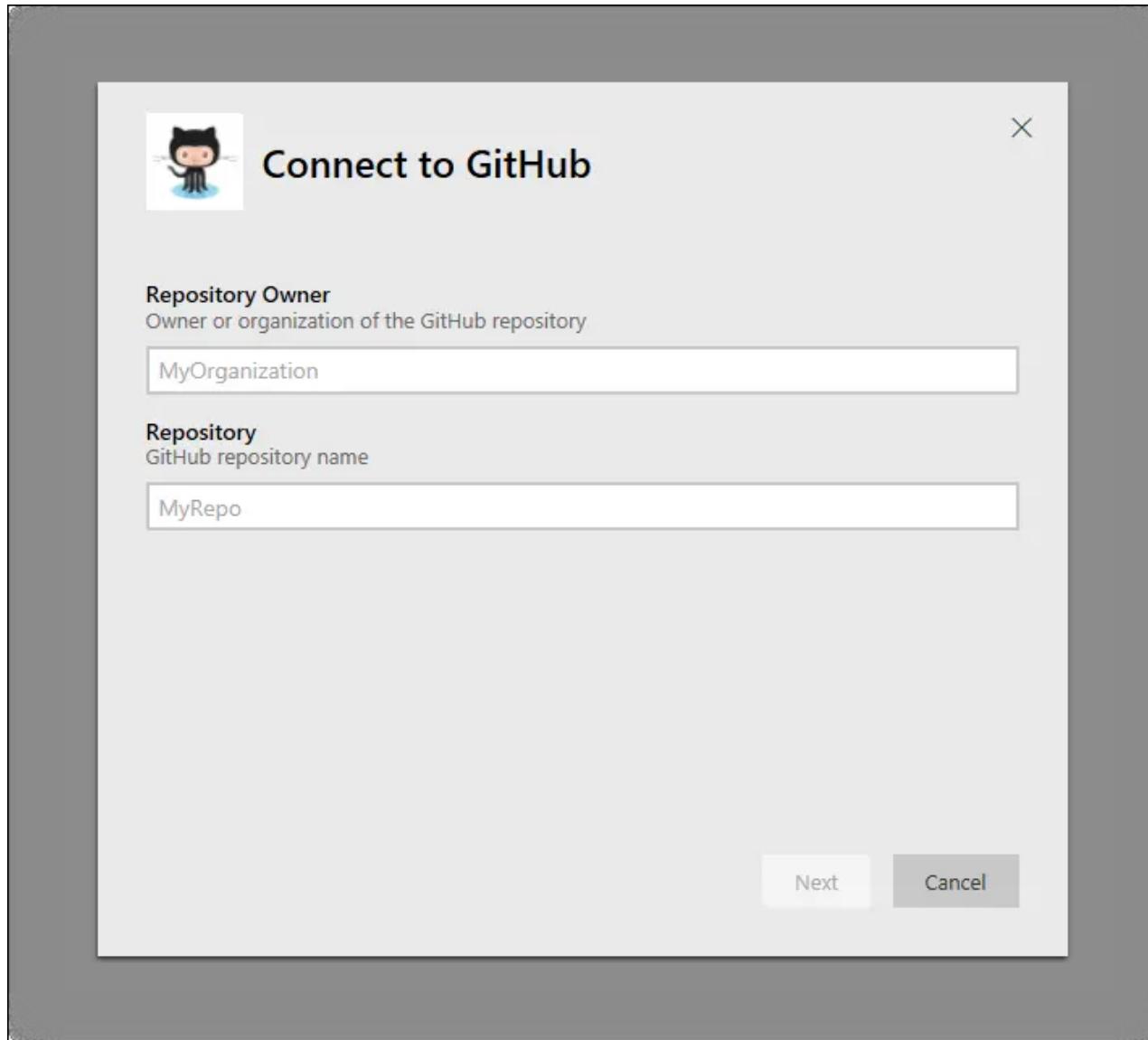
The screenshot shows the Microsoft Power BI app store interface. At the top, it says "Power BI apps" and "Install apps that provide actionable insights and drive business results". Below this, there are three tabs: "All apps" (which is selected), "Organizational apps", and "Template apps". A search bar with a magnifying glass icon and the word "Search" is located in the top right corner. An "X" button is also in the top right corner of the main content area. The main area displays a grid of app cards. The first two rows have four cards each, and the third row has three cards. Each card includes the app icon, name, author, and a "Get it now" button. Some cards also show a star rating and a "Buy" button. The third row contains the following cards:

- Samples (by Andre Fomin) - Get it now
- Azure DevOps Das... (by Data Maru) - ★★★★☆(7)
- Google Analytics R... (by Havens Consulting Inc) - ★★★★★(36)
- Github (by Microsoft) - Microsoft 365

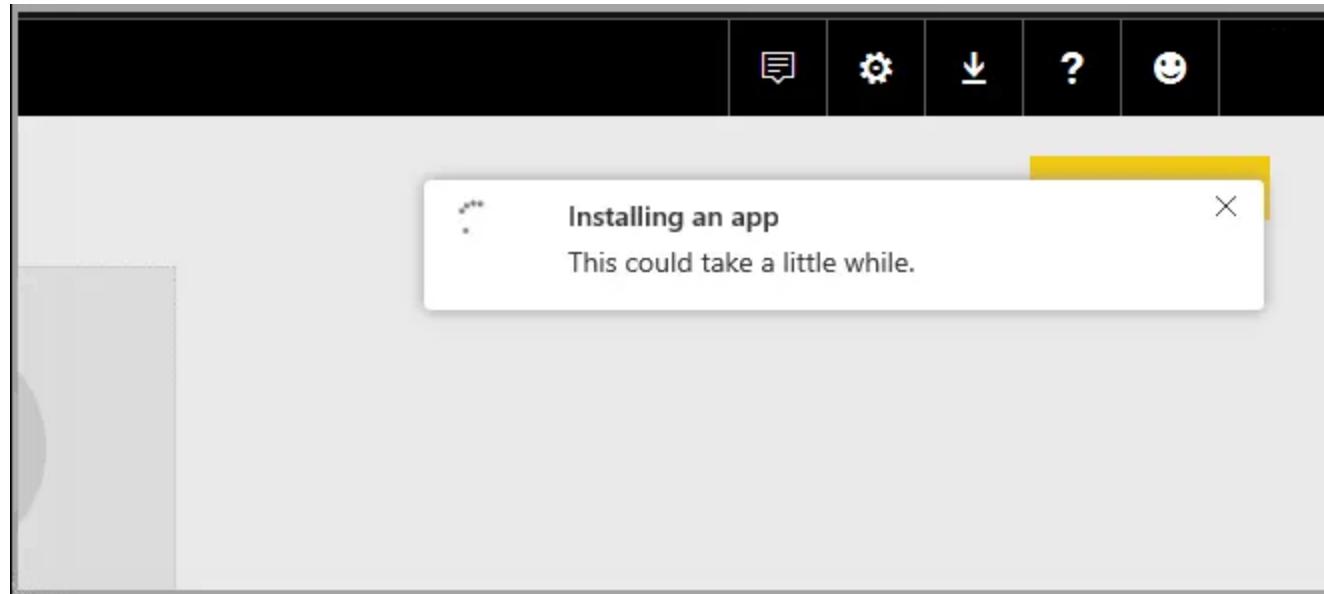
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Dynamics 365

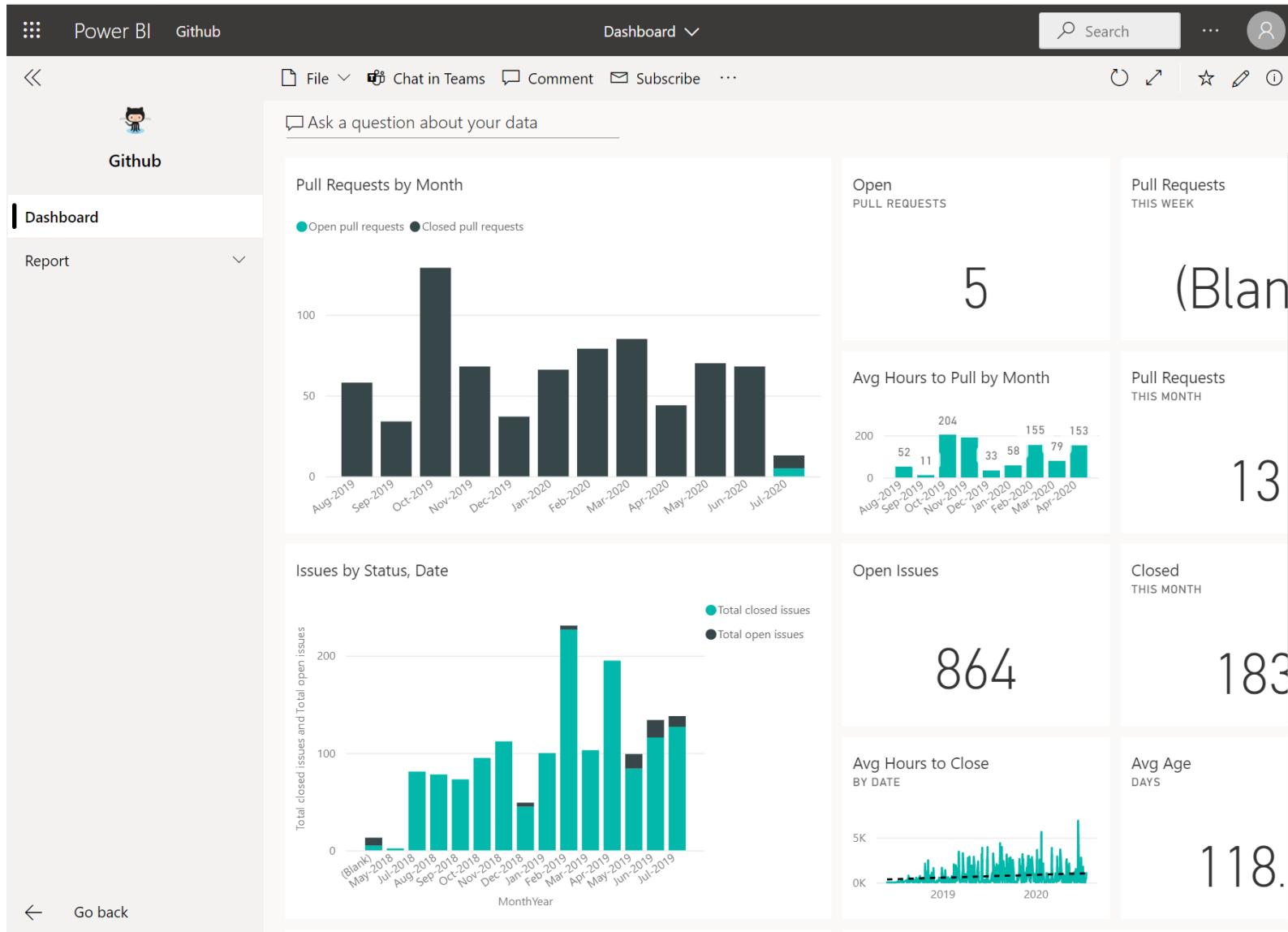
# Step 4 : Connect to Github



# Step 5 : Installation of app



# Step 6 : Predefined Github app dashboard appears.



# Step 7 : Report and dataset are created during the import.

Power BI | Github

Report | Data updated 2/17/21 ▾

File ▾ Export ▾ Share ▾ Chat in Teams Comment ...

Dashboard Report

**Top 100 Contributors**

Traffic

Contributor Commits

Pull Requests

Punch Card

Issues

Top 100 Contributors  
all time - Note: commits data excludes merges

user	Total commits	Total additions	Total deletions
maggiesMSFT	2,273	66,967	54,720
mihart	1,550	53,498	42,148
guyinacube	1,290	89,388	82,774
markingmyname	1,240	22,875	19,643
mgblythe	910	60,569	67,588
davidseminger	807	45,930	16,513
KesemSharabi	496	23,229	20,970
peter-myers	339	9,716	3,991
Minevskian	214	4,523	2,923
mshenhan	212	1,513	1,067
<b>Total</b>	<b>13,094</b>	<b>672,366</b>	<b>560,518</b>

Commits

Additions & Deletions

Users with > 2.5% of total commits

Report | Data updated 2/17/21 ▾

File ▾ Export ▾ Share ▾ Chat in Teams Comment ...

Dashboard Report

**Top 100 Contributors**

all time - Note: commits data excludes merges

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Report | Data updated 2/17/21 ▾

File ▾ Export ▾ Share ▾ Chat in Teams Comment ...

Dashboard Report

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Commits

Additions & Deletions

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Report | Data updated 2/17/21 ▾

File ▾ Export ▾ Share ▾ Chat in Teams Comment ...

Dashboard Report

**Top 100 Contributors**

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<b>Total</b>	<b>13,094</b>	<b>672,366</b>	<b>560,518</b>

# Step 8 : Select pull request section and click any visuals.

Power BI GitHub Report | Data updated 2/17/21

You're viewing this app with sample data. [Connect your data](#)

**Pull Requests**

This week This month Prior 12 Months Open Closed this month

(Blank) 13 751 5 8

Repository powerbi-docs last run date (UTC) 7/21/2020

**Pull Requests by Month**

Open pull requests Closed pull requests

**Total Hours to Pull by Month**

**Avg Hours to Pull by Month**

**Total pull requests by user**

Filters

Search

Filters on this page

isPrior12Months is True

Label

- Select all
- aq-traged
- Change sent to author
- do-not-merge
- powerbi/svc
- powerbi-admin/subsvc
- powerbi-consume/s...
- powerbi-custom/vs...
- powerbi-desktop/sub...
- powerbi-developer/s...
- powerbi-eim/subvc
- powerbi-gateway/su...
- powerbi-report/serve...
- powerbi-service/subs...
- powerbi-template.ap...

Go back

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Dynamics 365

# Step 9 : Update date in Power BI service

Screenshot of the Power BI service interface showing the "Github" app.

The left sidebar shows navigation links: Home, Favorites, Recent, Create, Datasets, Apps, Shared with me, Deployment pipelines, Learn, Workspaces, and Github (selected).

The main area displays the "Github" app with the following details:

- Name:** Github
- Type:** Dashboard
- Owner:** Github
- Refreshed:** —
- Next refresh:** —
- Endorsements:** —

The main area also shows a report and a dataset:

- Name:** GitHub
- Type:** Report
- Owner:** Github
- Refreshed:** 2/17/21, 12:08:55 PM
- Next refresh:** —
- Endorsements:** —

- Name:** GitHub
- Type:** Dataset
- Owner:** Github
- Refreshed:** 2/17/21, 12:08:55 PM
- Next refresh:** N/A
- Endorsements:** —

A red box highlights the refresh icon (a circular arrow with a hand cursor) for the GitHub dataset row.

# Step 10 : Select scheduled refresh.

The screenshot shows the Power BI dataset settings page for a dataset named "GitHub". The "Datasets" tab is selected in the top navigation bar. The main content area displays "Settings for GitHub" with the following configuration:

- Refresh history**: A link to view refresh history.
- Gateway connection**: A section for managing the gateway connection.
- Data source credentials**: A section for managing GitHub credentials, with a link to "Edit credentials" and "Show in lineage view".
- Parameters**: A section for managing parameters.
- Scheduled refresh**: A section with the heading "Keep your data up to date" and a toggle switch set to "On". This section is highlighted with a red box.
- Refresh frequency**: Set to "Daily".
- Time zone**: Set to "(UTC-06:00) Central Time (US and Ca)".
- Time**: A link to "Add another time".
- Send refresh failure notifications to**:
  - Dataset owner
  - These contacts:  
Enter email addresses

# Exploration

- You will have 40 mins to explore with Power BI
- Build a report and publish to Power BI
- Download the dataset from <https://go.microsoft.com/fwlink/?LinkId=521962>

CHEAT SHEET HERE : [Tutorial: From Excel workbook to stunning report in Power BI Desktop - Power BI | Microsoft Docs](#)

# Example

## Executive Summary – Finance Report

- Year, Month
- ^  2013
    - January
    - February
    - March
    - April
    - May
    - June
    - July
    - August
    - September
    - October
    - November
    - December
  - ^  2014
    - January
    - February
    - March
    - April
    - May
    - June
    - July
    - August
    - September
    - October
    - November
    - December

Profit by Month and Year

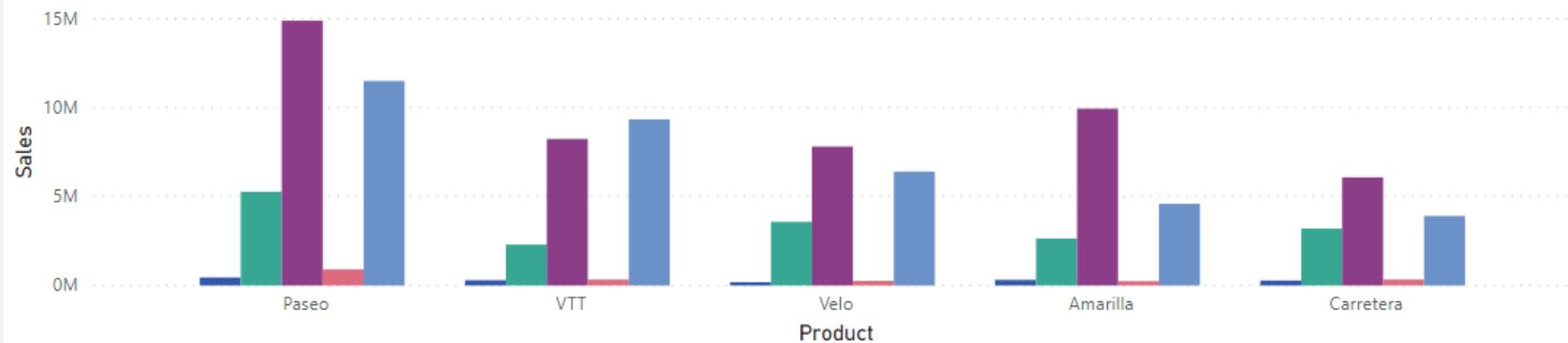


Profit by Country



Sales by Product and Segment

Segment ● CHANNEL PARTNERS ● ENTERPRISE ● GOVERNMENT ● MIDMARKET ● SMALL BUSINESS



# Executive Summary – Finance Report

## Transform data

- Units sold change to whole number
- Segment change to uppercase
- Shorten Month Name to Month
- Filter out product Montana
- Add a new measure total units sold <Total Units Sold = SUM(financials[Units Sold])>
- Create a new calendar table using <Calendar = CALENDAR(DATE(2013,01,01),Date(2014,12,31))>
- Create a relationship between date in both tables.

## Visuals

- Title text
- Profit by date line chart
- Profit by country map
- Sales by product & segment bar chart
- Year month slicer

# Resources

[Get started with Microsoft data analytics - Learn | Microsoft Docs](#)

[Get samples for Power BI - Power BI | Microsoft Docs](#)

[Tutorial: From Excel workbook to stunning report in Power BI Desktop - Power BI | Microsoft Docs](#)

[Tutorial: From dimensional model to stunning report in Power BI Desktop - Power BI | Microsoft Docs](#)

[Tutorial: From Excel workbook to the Power BI service to Teams - Power BI | Microsoft Docs](#)

[Power BI Paginated Reports in a Day course - Power BI | Microsoft Docs](#)

[Advanced Power BI lab – Dashboard in a Day](#)

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[aka.ms/AIFundJuly](http://aka.ms/AIFundJuly)



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# Get The Presentation Materials

Power BI Workshop



[aka.ms/DSI-MelekSeries](https://aka.ms/DSI-MelekSeries)

# Thank you