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# Microsoft Power Platform Virtual Training Day: Fundamentals





# Introduction to Microsoft Power Platform

# Introduction

In this module, we will explore, understand and learn about:

- What is Microsoft Power Platform
  - Learn the components and features of Microsoft Power Platform
    - Power Apps
    - Power BI
    - Power Automate
    - Dataverse
- Data Connectors
- Pulling it all together
  - Identify when to use each Microsoft Power Platform component application to create business solutions
  - Learn the value of using Microsoft Power Platform to create business solutions



# Lesson 1: What is Microsoft Power Platform

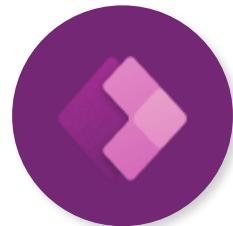
# Microsoft Power Platform

The low-code platform that spans Office 365, Azure, Dynamics 365, and standalone applications

**Innovation anywhere. Unlocks value everywhere.**



**Power BI**  
Business analytics



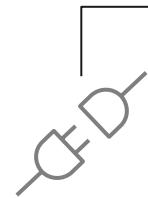
**Power Apps**  
Application development



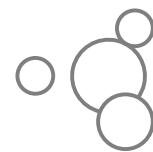
**Power Automate**  
Process automation



**Power Virtual Agents**  
Intelligent virtual agents



**Data connectors**



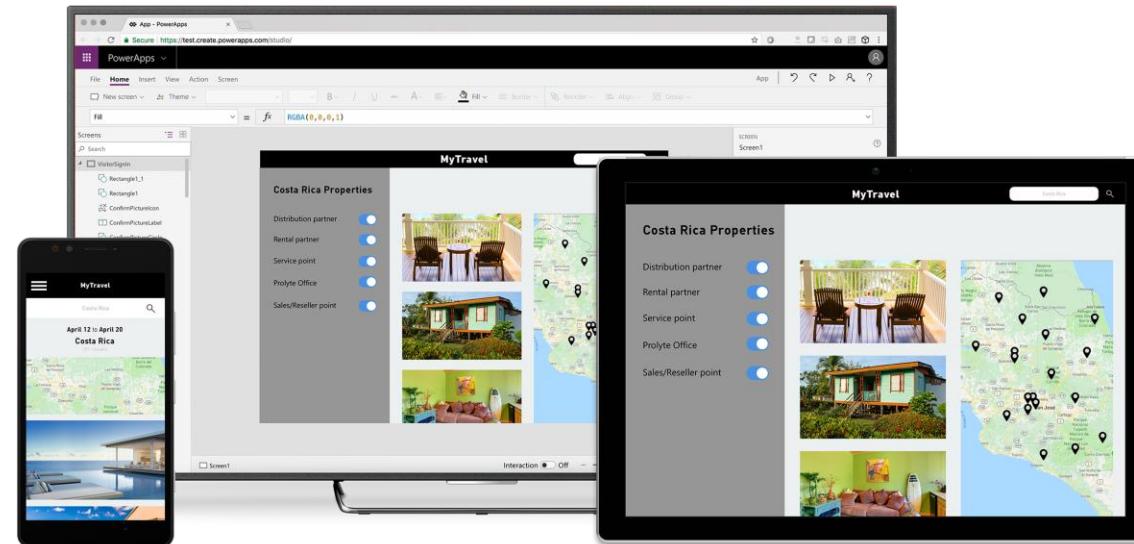
**AI Builder**



**Dataverse**

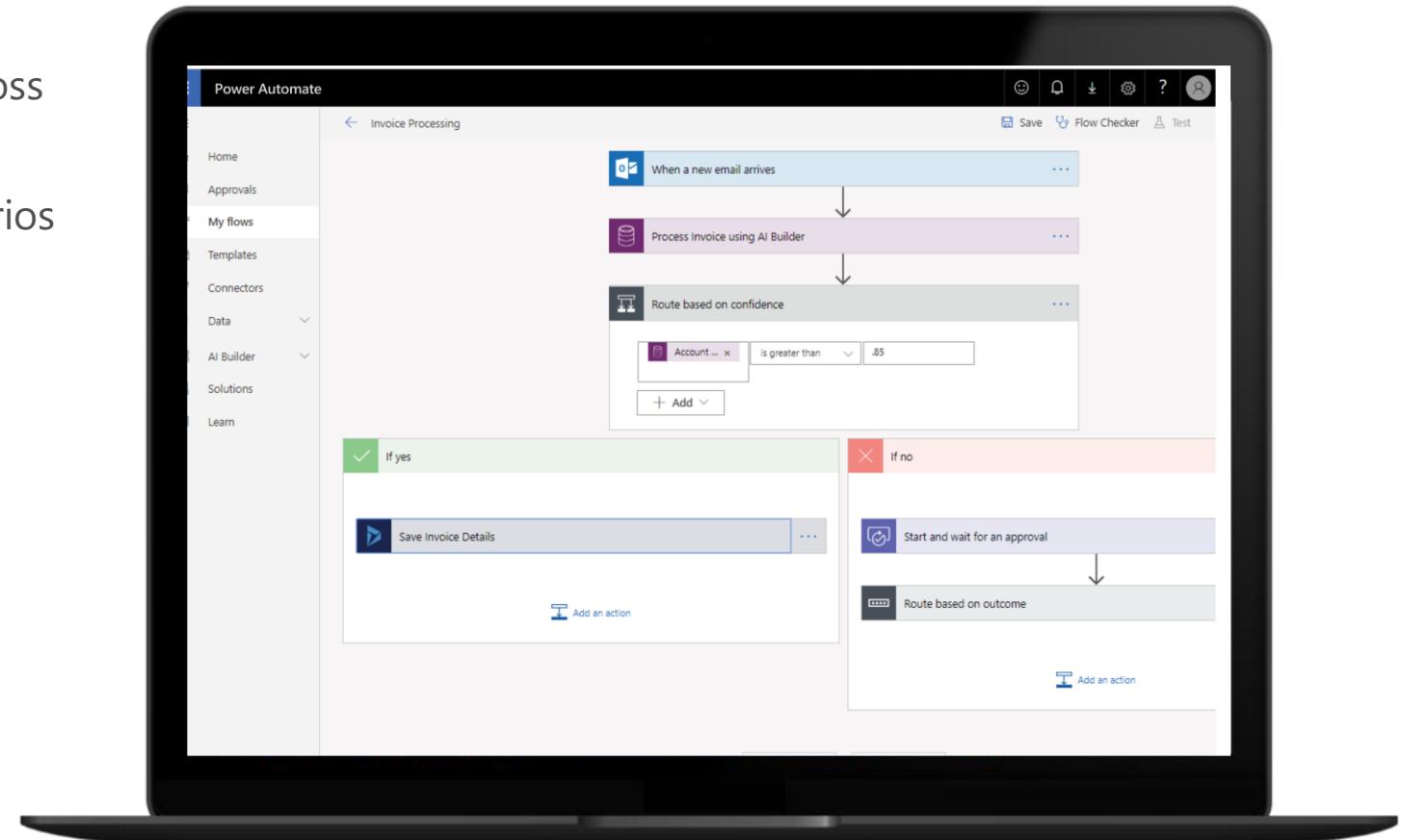
# Build and consume solutions for web and mobile with Power Apps

- Build highly customized task- and role-based canvas apps with data from one or multiple sources
- Generate immersive model-driven apps, starting from your data model and business processes
- Consume fully accessible apps across web and mobile, embedded or standalone, on any device



# Automate and integrate business processes with Power Automate

- Automate and model business processes across your apps and services
- From simple automations to advanced scenarios with branches, loops, and more
- Trigger actions, grant approvals, and get notifications right where you work
- Automate legacy, on-prem and cloud-based applications and services



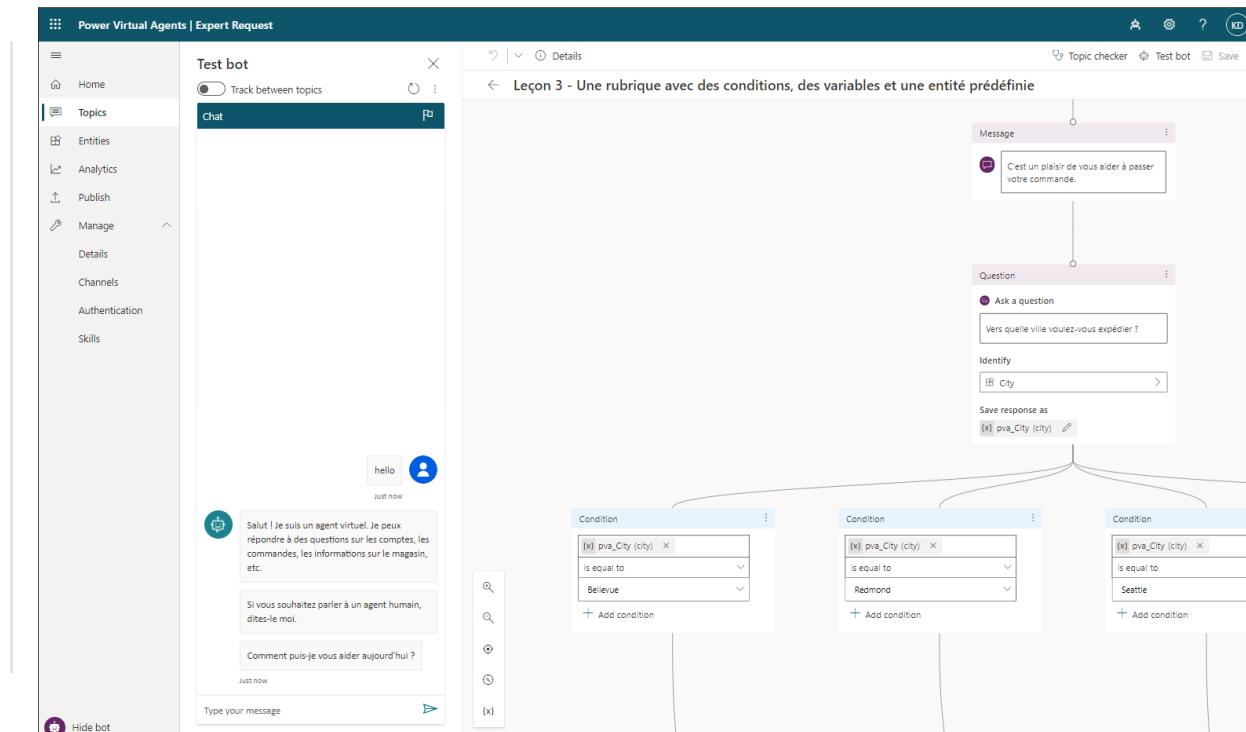
# Gain insights from your data regardless of where it lives with Power BI

- Connect to all your data and get a consolidated view across your business through a single pane of glass
- Create ad-hoc analysis, live dashboards and interactive reports that are easy to consume on the web and across mobile devices
- Build smart apps by infusing insights from your data and drive action with the power of Microsoft Power Platform



# Build powerful virtual agents with Power Virtual Agents

- Enable subject matter experts to easily create powerful virtual agents using a guided, no-code graphical interface—all without the need for data scientists or developers.
- Enable the virtual agent to take action on the customer's behalf. Easily integrate your virtual agent with hundreds of services and systems out of the box or create custom workflows.
- Keep an eye on how your virtual agent is performing by using conversational metrics and dashboards. Get in-depth AI-driven insights to improve bot performance.



# Put all your data to work with Dataverse

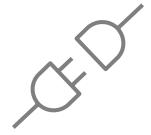
- Jumpstart apps using a standardized data model with business logic, security and integration built-in
- Extend to your own needs and integrate across your apps and services
- Seamless Dynamics 365, Office 365, and Azure integration, augmented with data from industry partners

The screenshot shows the Microsoft Power Apps interface, specifically the Data view for the 'Account' table. The left sidebar includes options like Home, Learn, Apps, Create, Data (selected), Tables, Choices, Dataflows, Azure Synapse Link, Connections, Custom Connectors, Gateways, Flows, Chatbots, AI Builder, and Solutions. The main area displays the 'Account' table schema with columns: accountid (Unique Identifier, Standard type, Required), name (Text, Managed type, Required), accountnumber (Text, Managed type, Optional), Account Rating (Choice, Managed type, Optional), Address 1 (Address Type, Choice, Managed type, Optional), address1\_address (Text, Managed type, Optional), address1\_city (Text, Managed type, Optional), address1\_country (Text, Managed type, Optional), address1\_county (Text, Managed type, Optional), address1\_fax (Text, Managed type, Optional), address1\_freight (Choice, Managed type, Optional), address1\_ID (Unique Identifier, Standard type, Optional), address1\_address (Text, Managed type, Optional), address1\_latitude (Floating-Point, Managed type, Optional), address1\_longitude (Floating-Point, Managed type, Optional), address1\_name (Text, Managed type, Optional), address1\_postof (Text, Managed type, Optional), address1\_primary (Text, Managed type, Optional), and address1\_shippingmethod (Choice, Managed type, Optional). The 'Data' tab is selected in the sidebar.





# Lesson 2: Data Connectors



# Data Connectors

- Connectors are available for use in multiple products:
  - Power Automate
  - Power Apps
  - Logic Apps
- Custom connectors
  - An advantage of building custom connectors is that they can be used in different platforms, such as Power Apps, Power Automate, and Azure Logic Apps.
  - It allows you to extend your app by calling a publicly available API, or a custom API you're hosting in a cloud provider, such as Azure.
  - You can create custom connectors using 3 different approaches:
    - Using a blank custom connector
    - From an OpenAPI definition
    - From a Postman collection

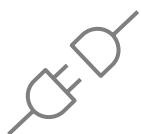
# Data Sources for Connectors

The two types of data sources are tabular and function-based:

- **Tabular data:** A tabular data source is one that returns data in a structured table format
- **Function-based data:** A function-based data source is one that uses functions to interact with the data source

The screenshot shows the Microsoft Power Apps portal interface. The top navigation bar is purple with the title "Power Apps". A search bar contains the text "sap". On the far right, there are environment and virtual training buttons. The left sidebar has a navigation menu with items: Home, Learn, Apps, Create, Data (Tables, Choices, Dataflows, Azure Synapse Link), and Connections (Custom Connectors, Gateways, Flows, Chatbots, AI Builder, Solutions). The main content area displays a list of connectors. A search result for "sap" is shown, with the first item being "Plumsail Forms Microsoft Standard". Other visible connectors include Plumsail HelpDesk (preview) Microsoft Standard, Plumsail SP Microsoft Standard, Poka Microsoft Premium Standard, PoliteMail (preview) Microsoft Premium Standard, PostgreSQL Microsoft Premium Standard, Powell Teams (preview) Microsoft Premium Standard, Power Apps for Admins Microsoft Standard, Power Apps for Makers Microsoft Standard, Power Apps Notification Microsoft Standard, and Power Apps Notification V2 Microsoft Standard.

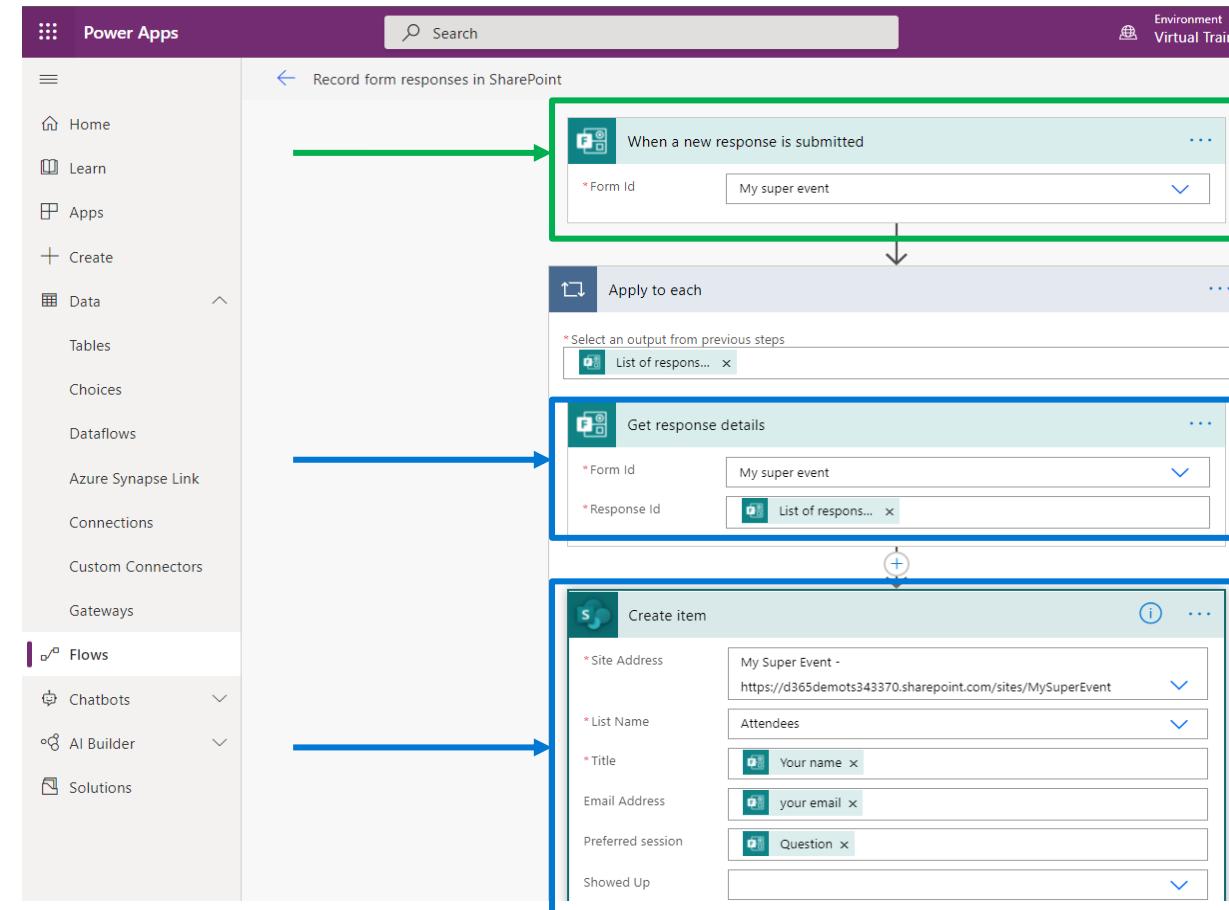
Connector	Provider	Level
Plumsail Forms	Microsoft	Standard
Plumsail HelpDesk (preview)	Microsoft	Standard
Plumsail SP	Microsoft	Standard
Poka	Microsoft	Premium
PoliteMail (preview)	Microsoft	Premium
PostgreSQL	Microsoft	Premium
Powell Teams (preview)	Microsoft	Premium
Power Apps for Admins	Microsoft	Standard
Power Apps for Makers	Microsoft	Standard
Power Apps Notification	Microsoft	Standard
Power Apps Notification V2	Microsoft	Standard



# Components of a Connector

Once you have established a data source and configured your connector, there are two types of operations you can use:

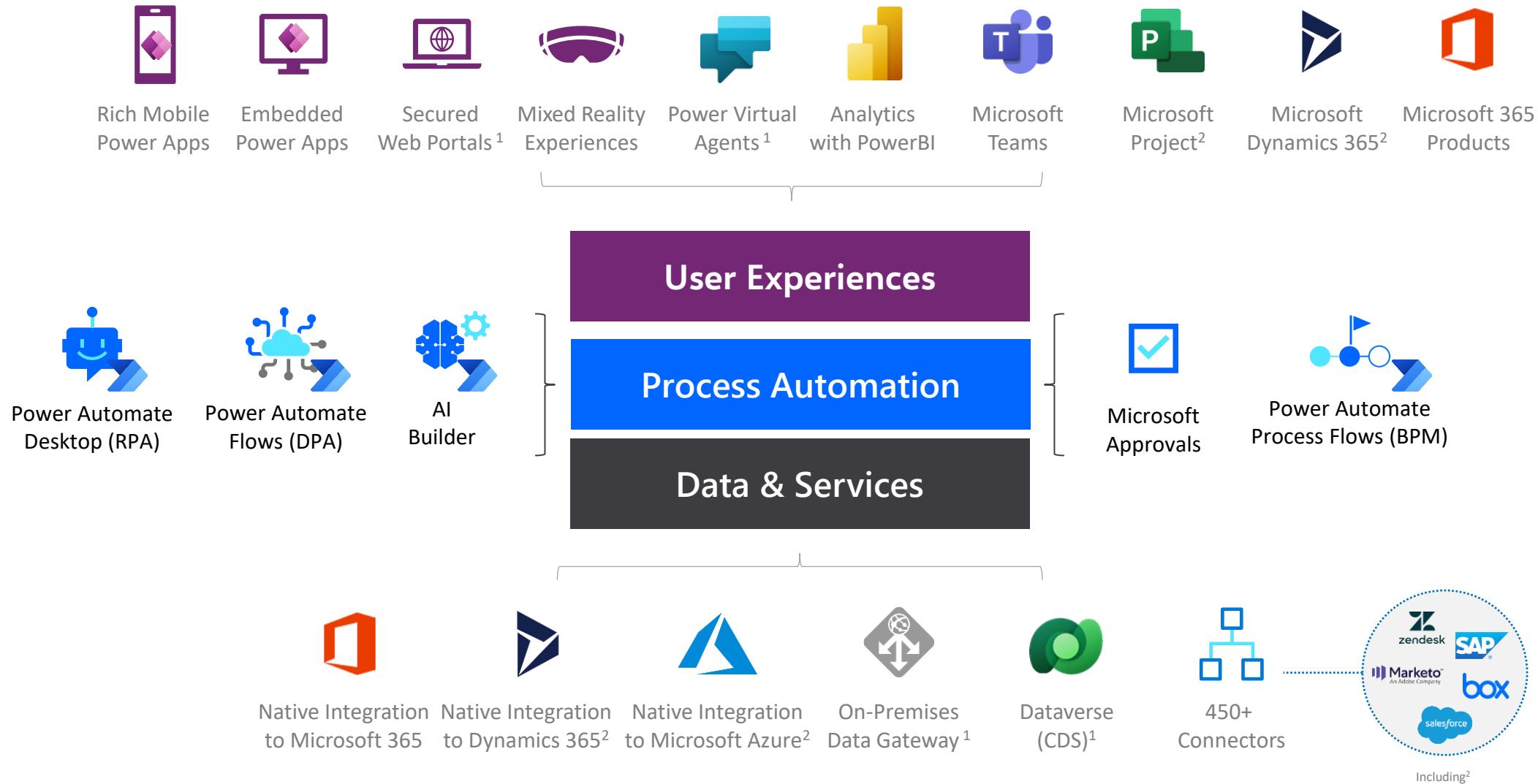
- **Triggers** prompt a flow to begin
- **Actions** are prompted by the user or a trigger and allow interaction with your data source by some function



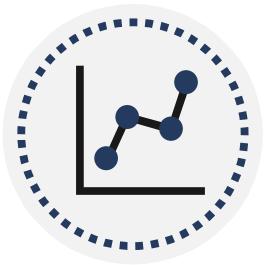


# Lesson 3: Pulling it all together

# The unmatched functional flexibility of the Power Platform



# Pulling it all together



**Microsoft Power Platform helps to add value to any business by analyzing, acting and automating**

Build custom apps in Power Apps

Automate processes with Power Automate

Analyze data with Power BI

Build powerful chatbots with Power Virtual Agents

# Summary

Microsoft Power Platform offers a point-and-click approach which makes it easy for anyone familiar with Microsoft Office to create custom business solutions, data visualizations, and automated workflows.

It enables users to do three key actions on data that help them drive business:

- Gain insights from data (Analyze)
- Drive intelligent business processes via apps they build (Act)
- Automate business processes (Automate).

Power BI helps you analyze and visualize data on a unified platform with data from internal and external sources.

Power Apps helps you build and deploy customized apps that work across web and mobile, embedded or standalone, on any device.

Connectors are bridges that allow you to send information from your data source to your app or workflow and back.

Power Automate helps you create automation workflows, from simple to advanced scenarios.



# Introduction to Microsoft Dataverse and Power Apps

# Introduction

In this module, we will explore, understand and learn about:

- What is Power Apps and the business value it creates
  - Learn what is Power Apps and the business value it creates
  - Learn how one of the world's largest airports is digitizing its processes using Power Apps
- Discover Dataverse
  - Explain what environments, tables, columns, and relationships are in Dataverse
  - Describe the difference between Dataverse and Common Data Model
  - Explain use cases and limitations of business rules and process flows



# Lesson 1: What is Power Apps and the business value it creates



# A powerful tool for productivity

Streamline business processes with integrated apps and workflows in your hub for teamwork and productivity



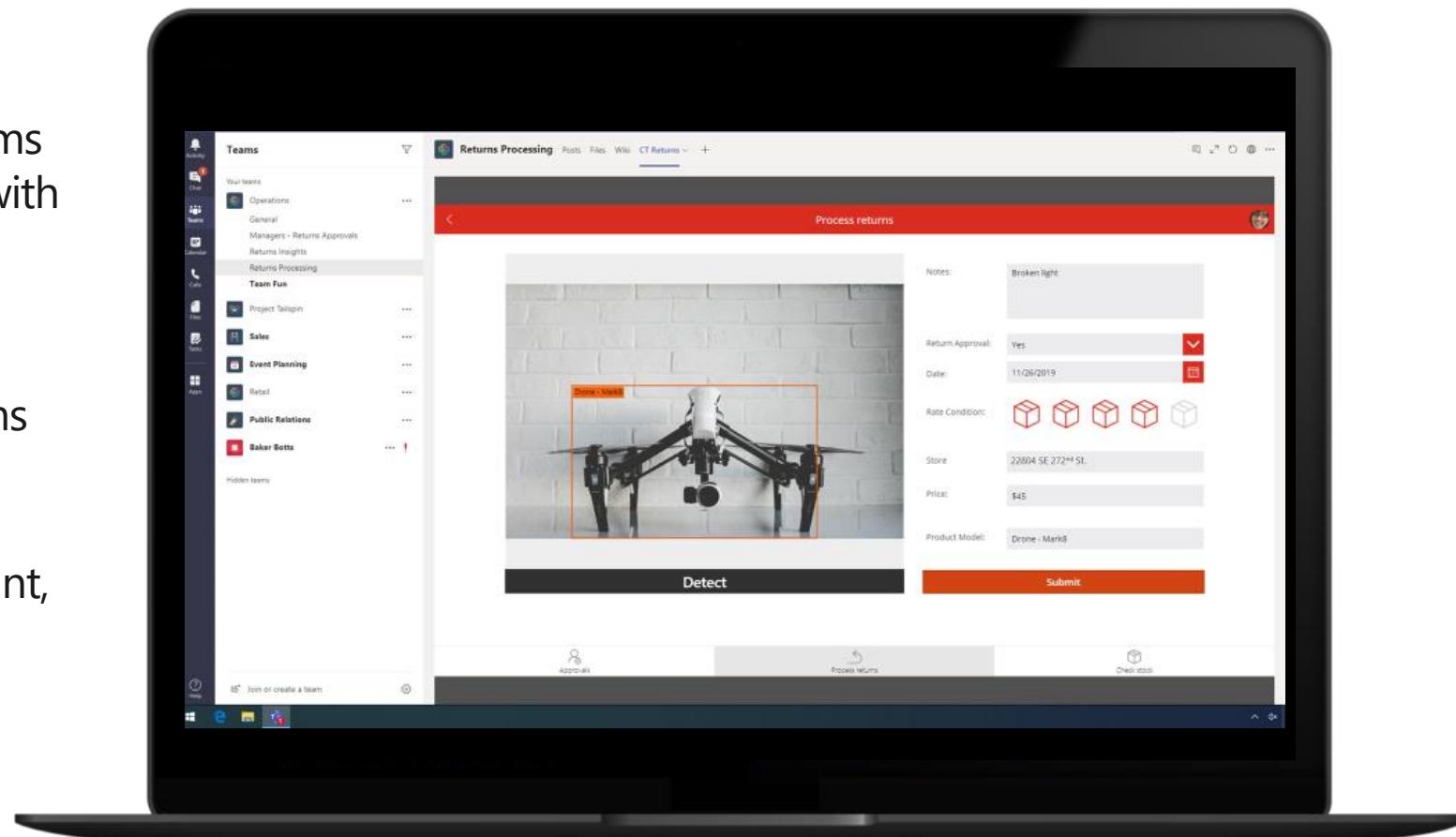
Develop low-code apps and forms that enhance your productivity with Power Apps



Integrate and share apps and workflows within Microsoft Teams



Collect, manage, and distribute content and data using SharePoint, Microsoft Forms, and Excel





# Low-code backend with Dataverse



- Jumpstart apps using an extensible data model with business logic, security and integration built in.



- Enable AI through built-in cognitive services powered by AI Builder and Azure.



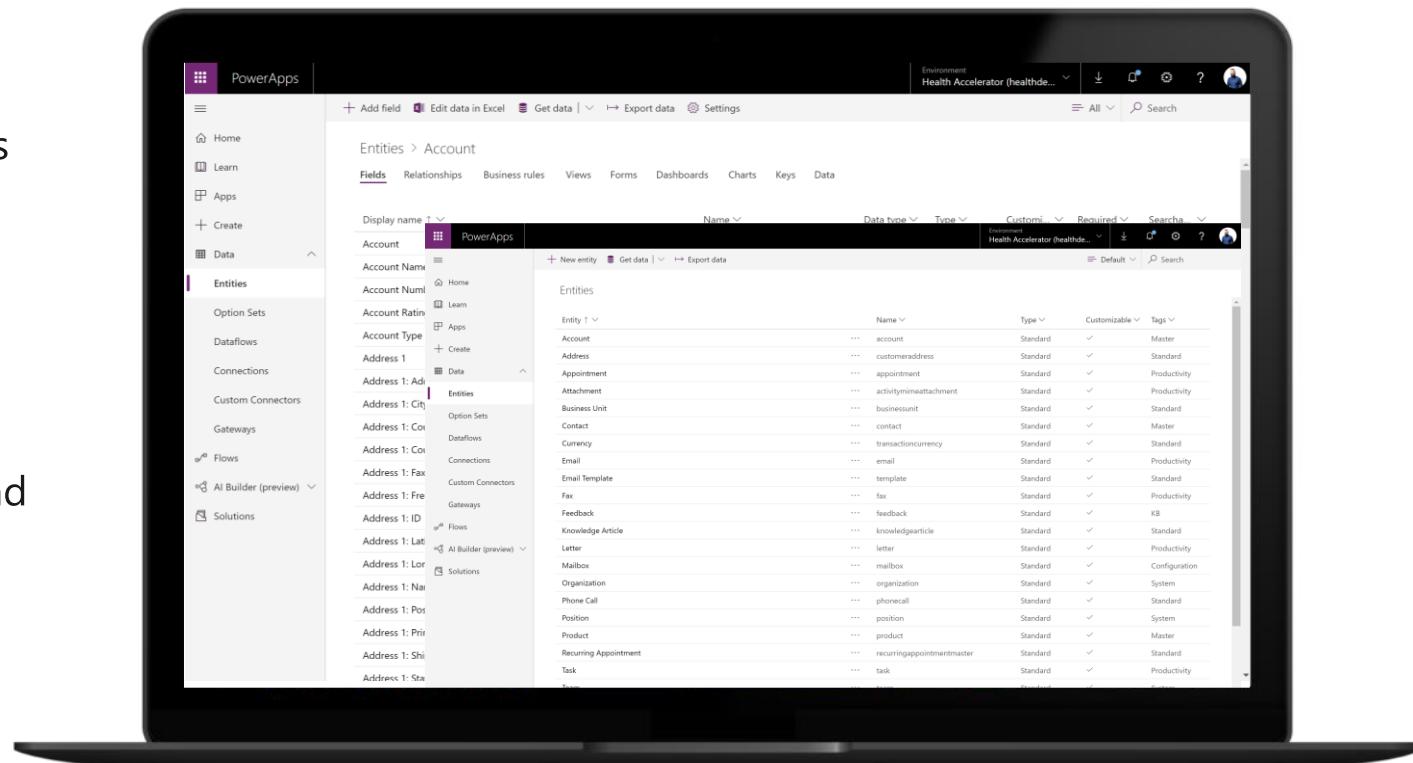
- Extend data and processes to external and anonymous users with Power Apps portals.



- Support all your data: relational data, file and blob storage, logs and search indexing.



- Effortless Dynamics 365, Office 365 and Azure integration as well as powerful integration capabilities.





# Different types of Power Apps for different scenarios

Power Apps can create three types of apps: canvas, model-driven, and portals. Each suited to different scenarios and end users.

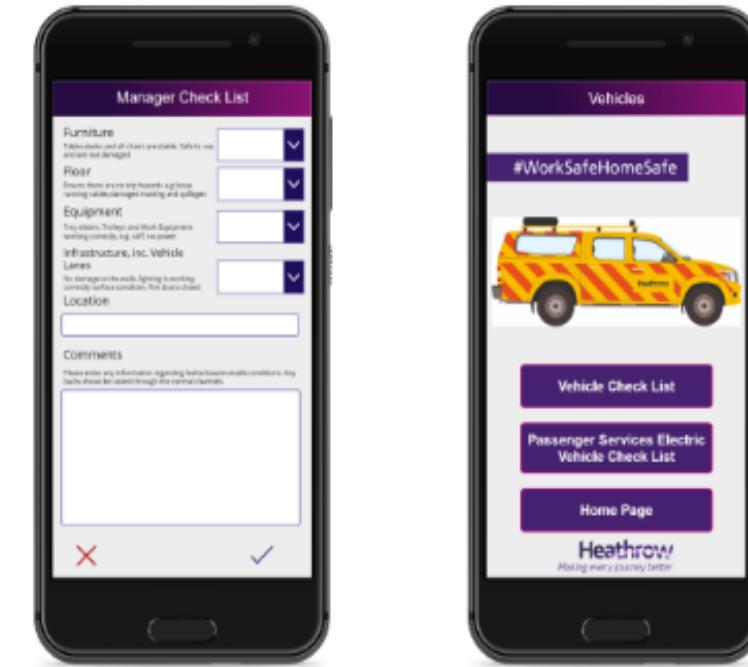
- Canvas apps
- Model-driven apps
- Portals



# Canvas apps

Canvas apps are a great option when you want to build an app from a blank canvas. You start by choosing the screen size: tablet or mobile, then you have a blank screen from which to build

You can interact with data in your app by adding data sources. Drag and drop various controls and add the desired functionality by writing Excel style formulas. Canvas apps provide you complete flexibility when building your apps

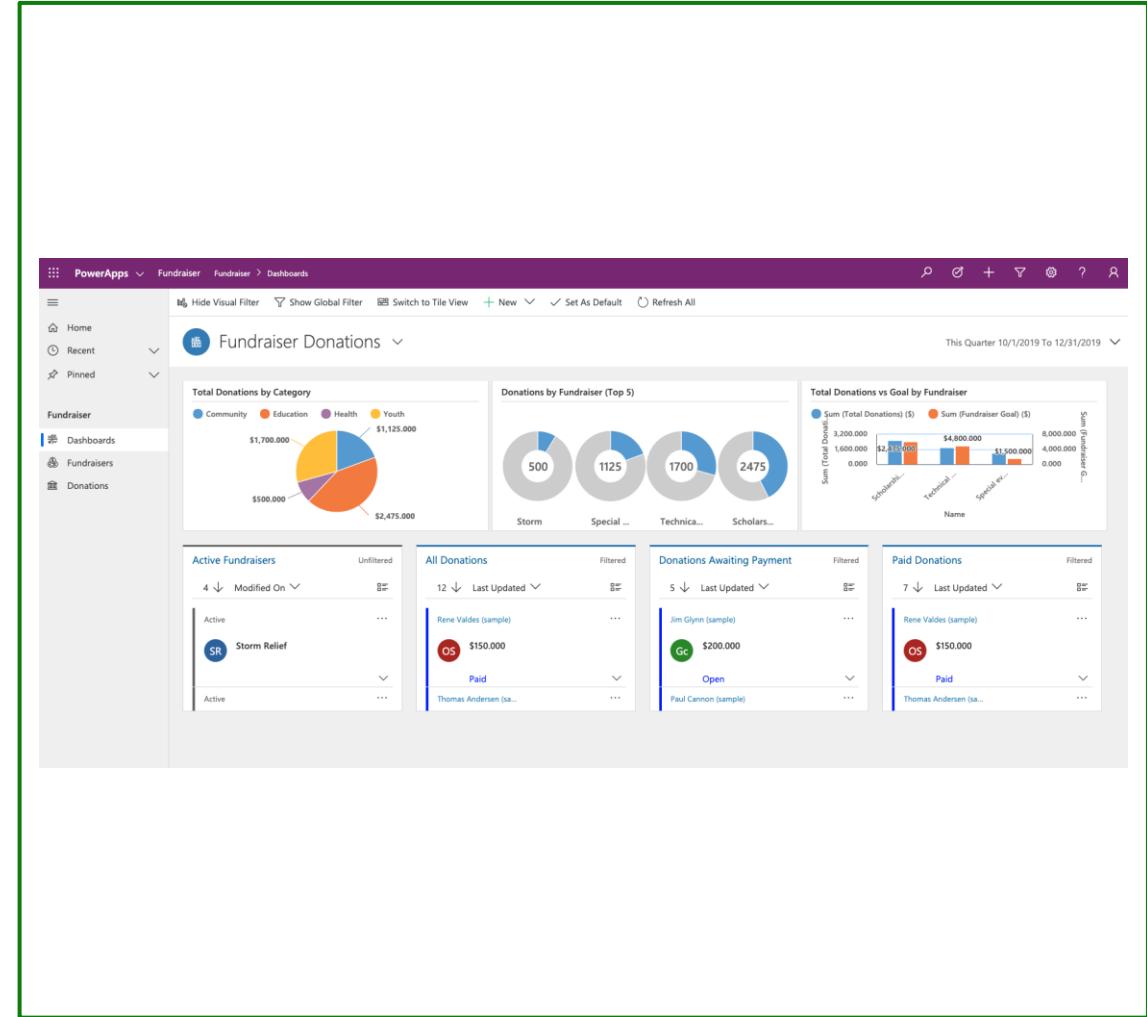


# Model-driven apps



Model-driven apps build from data in Microsoft Dataverse. Power Apps will build you a great looking, fully functional app to act upon and interact with this data. With model-driven apps, there is no need to worry about choosing the app size; it is responsive, meaning it works on mobile or tablet with no extra work by you

You define the relationships, forms, views, business rules, and more at the data layer, inside of Dataverse, giving you enough control to get your business result without writing all the formulas yourself

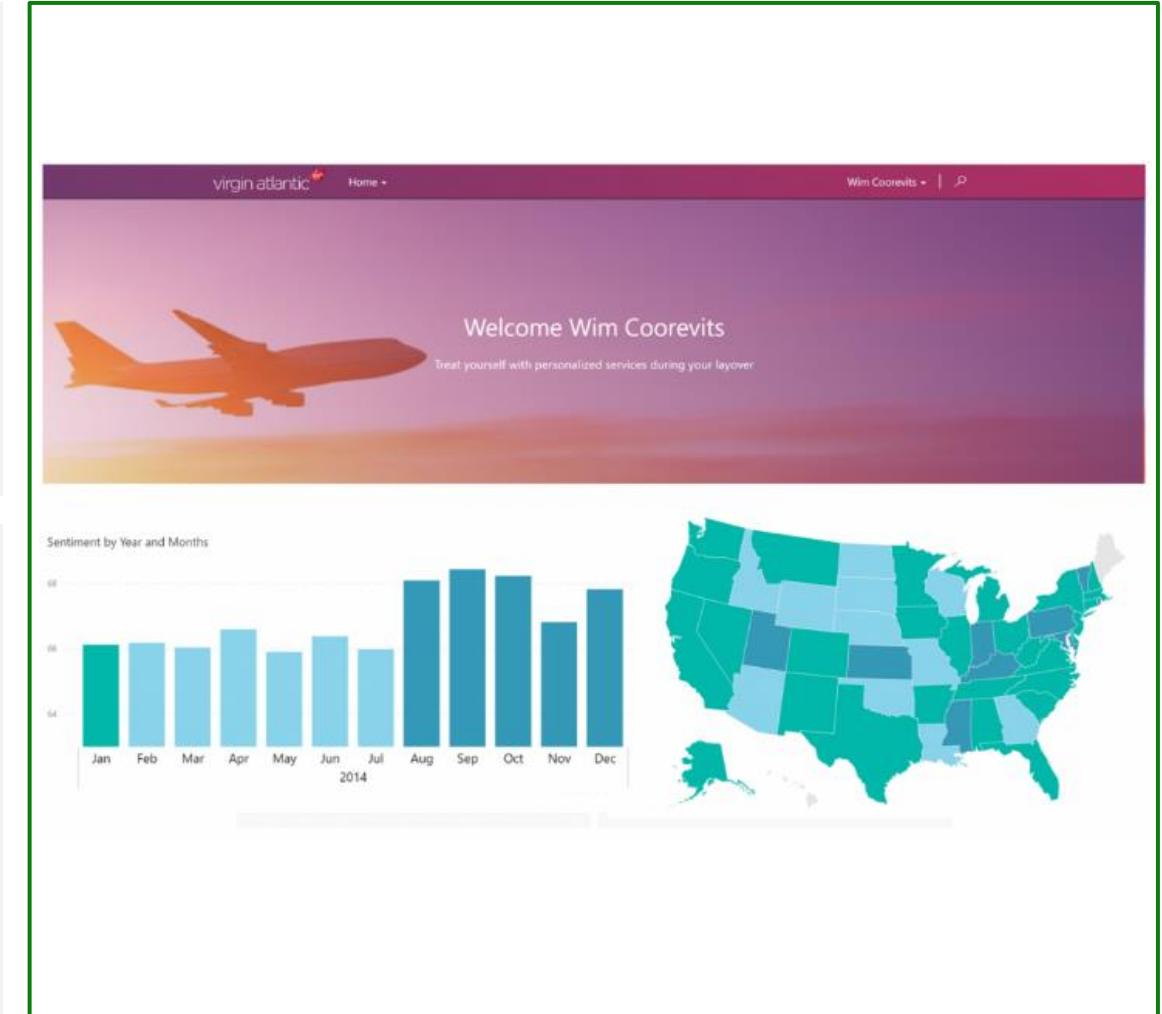




# Portals

Portals bring the power of no-code solutions to building externally facing websites. Through the Power Apps interface, you can build an anonymous or authenticated website that allows users to interact with data held in Dataverse.

The same drag and drop experience you enjoy when building apps is available to build these rich, interactive websites.



# Add artificial intelligence to your app with no code

- Power Apps has "democratized" artificial intelligence by providing a wizard-based interface for building and training your model. This unlocks the power of Azure Machine Learning and Cognitive services without writing a single line of code or creating complex machine learning models.
- Currently, there are four available AI models with AI Builder:
  - **Prediction** - This model predicts whether something will happen or not based on previous data history. More details in the following section.
  - **Form processor** - This model extracts text from an image like the business card reader.
  - **Object detector** - This model identifies objects from an uploaded image or taken photo and then provides a count of the number objects present.
  - **Text classification** - This model categorizes text by its meaning, making it easier to analyze.





# Security and Administration

- To manage security for Power Apps you can access <https://admin.powerplatform.microsoft.com/>
- Here you will find options for creating and managing environments, monitoring licenses, working with Data Loss Prevention policies and managing Dataverse Data Integration projects.
- This allows you to manage the Power Apps throughout your tenant from one single place.

The screenshot shows the 'Power Apps' interface under 'Security Role: Basic User'. It displays a grid of permissions (Create, Read, Write, Delete, Append, Append To, Assign, Share) for various entities like Account, ACViewMapper, Action Card, etc. A legend at the bottom indicates: None Selected (white), User (yellow), Business Unit (orange), Parent:Child Business Units (green), and Organization (dark green).

Role Based Access Control (RBAC)

The screenshot shows the 'Power Platform admin center' under 'DLP Policies > Edit Policy'. It lists 'Policy name: DEMO Environment', 'Connectors', 'Scope', and 'Review'. On the right, there's a 'Assign connectors' section with tabs for 'Business (116)', 'Non-business (80)', and 'Default'. Below it is a table of connectors:

Name	Blockable	Class	Publisher	About
Salesforce	Yes	Premium	Microsoft	<a href="#">Learn</a>
365 Training	Yes	Premium	We Speak You Learn	<a href="#">Learn</a>
Adobe PDF Services	Yes	Premium	Adobe Inc.	<a href="#">Learn</a>
Africa's Talking Airtime	Yes	Premium	Africa's Talking	<a href="#">Learn</a>
Africa's Talking Voice	Yes	Premium	Africa's Talking	<a href="#">Learn</a>
AgilePoint NX	Yes	Premium	AgilePoint Inc	<a href="#">Learn</a>
Alemba ITSM	Yes	Premium	Alemba Ltd	<a href="#">Learn</a>

Data Loss Prevention Policies (DLP)



# Customer case study - Heathrow Airport



"I don't just want to make a living. I want to make a difference."

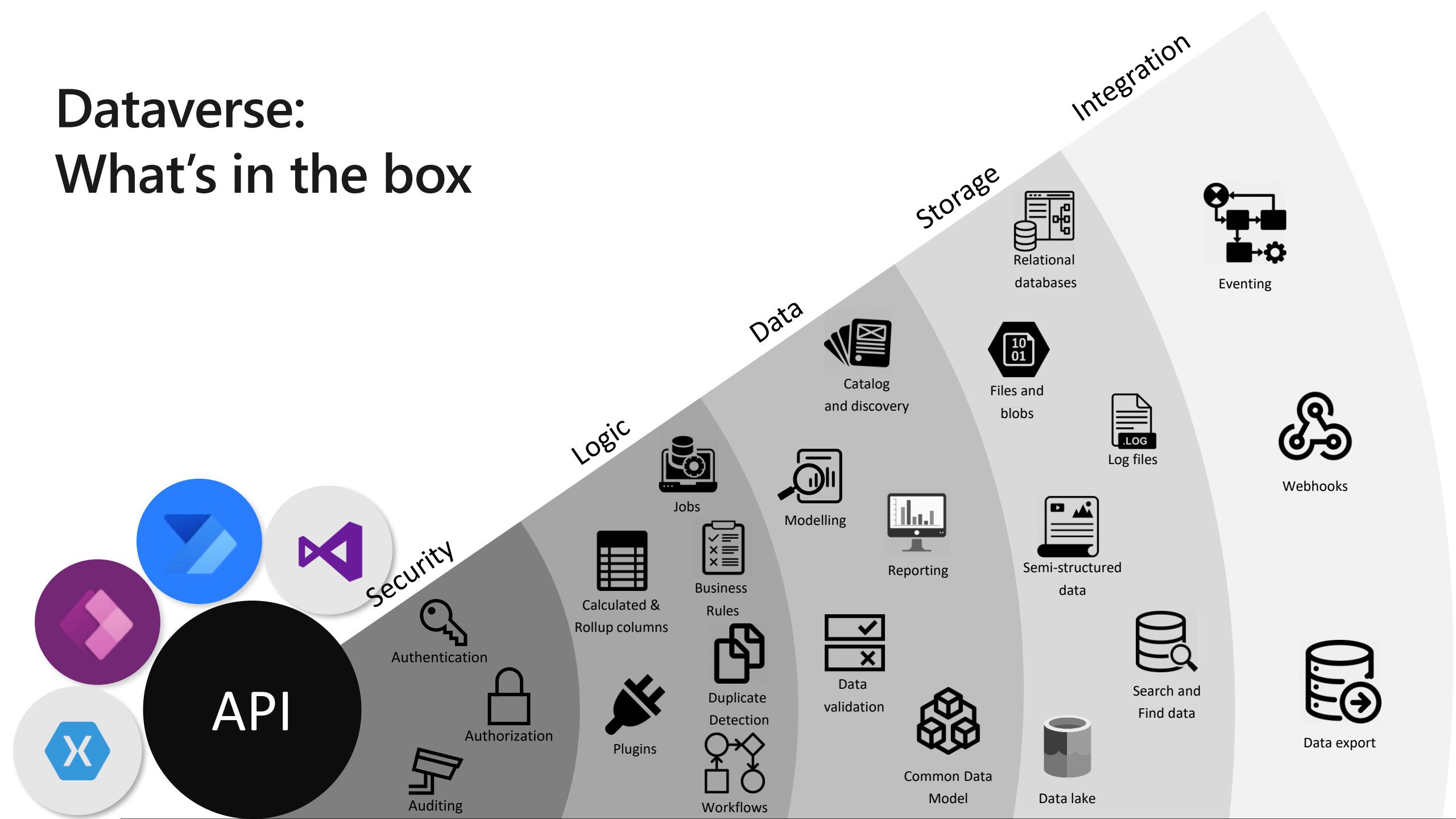
Samit Saini,  
IT User Adoption Specialist, Heathrow





## Lesson 2: Discover Dataverse

# Dataverse: What's in the box





# Overview of Microsoft Dataverse

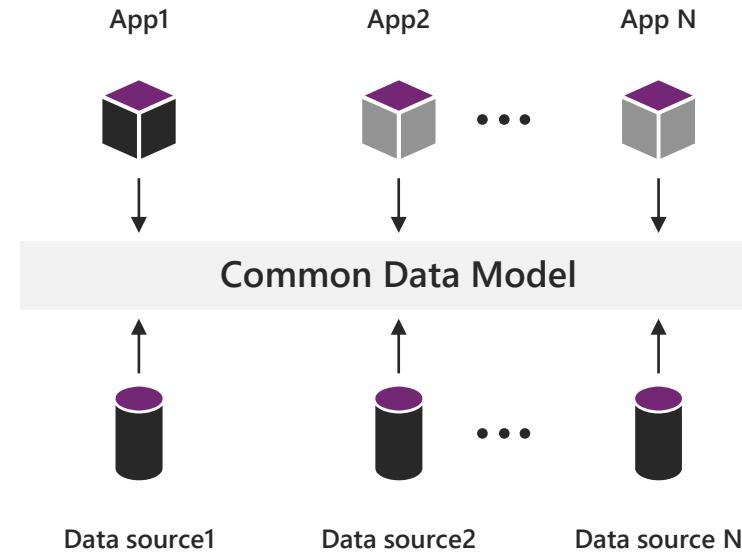
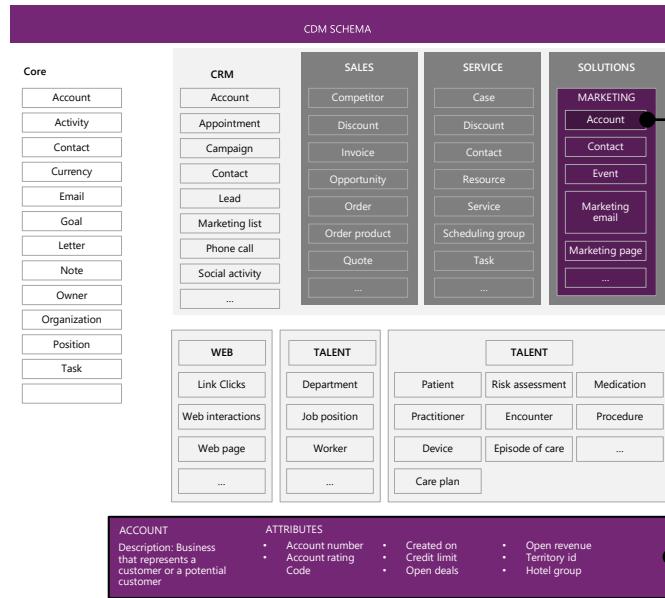
**Dataverse:** Database storing a set of standard and custom data structures called tables

**Common Data Model:** Set of open-sourced, standardized, extensible data tables and relationships

Part of the Open Data Initiative

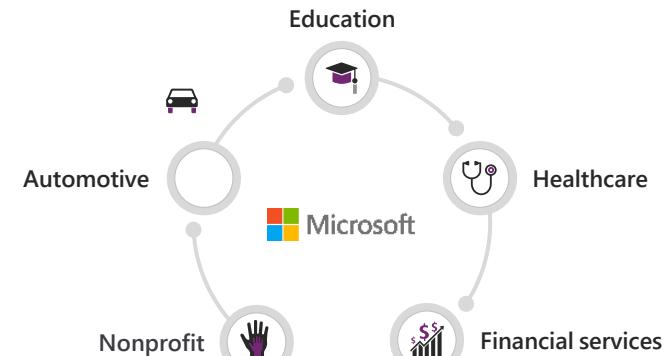


# Dataverse implements the Common Data Model



Open source and shared data model that provides semantic consistency for data.

Allows makers to more quickly develop applications and integrators to more easily interoperate across multiple systems.



A growing set of solutions and partners that contribute to the effort by implementing CDM or extending with industry-specific domains.



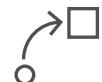
# Data integration capabilities built-in to Dataverse



Integrate directly with Dataverse using the Excel Power Query features relied on by millions of users each month.



Built-in management features like Common Data Model table mapping UX, environments and scheduled refresh.



300+ transformations to clean and reshape data.



Reuse data models across end-user experiences for Power Apps and other frontends

	name	accountnumber	address1_city	address1_country	address1_state/province	address1_line1	address1_postalcode
1	Microsoft	ACC-01001-BGFAJA	Redmond	(null)	(null)	1 Microsoft Way	WA 98007
2	Best o' Sales	ACC-01000-BGFAJA	Barcelona	Spain	(null)	45 Placa d'Europa	08907
3	Sounbridge Video	BAKXJYGF	Bothell	United States	WA	22833 Bothell Way SE	98021
4	Prosteware, Inc	BBASBGH7	Seattle	United States	WA	516 1st Ave W	98109
5	Litware	ABC09M33	Redmond	United States	WA	16500 N.E. 74th	98052
6	Blue Yonder Airlines	ACTBDC03	Sydney	Australia	(null)	111100 Eping Road	0200
7	Fourth Coffee	ABC09M32	Bellevue	United States	WA	44 Bellevue Way NE	98004
8	The Phone Company	BBASBGHS	Kansas City	United States	Missouri	15299 West Jackson	04983
9	Takipin Toys	BABCC080	Seattle	United States	WA	2500 SW Barton	98126
10	Northwind Traders	BTBS3G34	Renton	United States	WA	4300 NE 4th	98056
11	Wingtip Toys	BABC009H	Seattle	United States	WA	3205 Harrison St	98109
12	City Power & Light	ACSN2N54	Bothell	United States	WA	18921 Bothell Way N.E.	98011
13	Woodgrove Bank	BBASBGHT	Sammamish	United States	WA	340 228 Ave. NE	98074
14	Alpine Ski House	AFKSEBK	Renton	United States	WA	17901 108th Ave SE	98005
15	A. Datum	AFHN2N54	Redmond	United States	WA	17196 NE Redmond Wy	98052
16	Humongous Insurance	WTFT2148	Renton	United States	WA	439 Rainier Avenue South	98055
17	Wide World Importers	BAKXJYGF	Seattle	United States	WA	305 Harrison Street	98109
18	Trey Research	BOBC3JU	Seattle	United States	WA	2580 S 156th St	98138
19	Lucene Publishing	BOBC3JW	Bellevue	United States	WA	4851 Lakemont Blvd SE	98006
20	Consolidated Messenger	GHE3ZP4	Sammamish	United States	WA	604 228th Ave NE	98074
21	Fabrikam, Inc.	WTFT2145	Redmond	United States	WA	7625 - 170th Ave NE	98052
22	Coho Winery	ABC2BUJ7	Renton	United States	WA	200 S 3rd St	98055
23	Marge's Travel	BAKXJYGH	Seattle	United States	WA	4754 42nd Ave SW	98116
24	School of Fine Art	BOBC3JRL	Seattle	United States	WA	2100 Queen Anne Ave N	98109
25	Graphic Design Institute	GHE3ZP05	Seattle	United States	WA	400 Pine Street	98101



# Identify tables and columns in Dataverse

## Types of tables:

Standard: Base set of tables, created for every instance of a Dataverse database

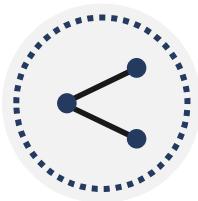
Custom: Created for a specific business application

## Columns:

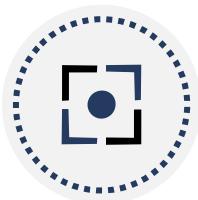
Store discrete pieces of information within a record in a table

Every column has a type, which defines the way you store the data (example: Date columns)

# Understand relationships



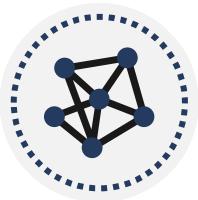
**Relationships:** Represent the way that tables are connected



## **One-to-many relationships:**

Can be “parent-child” relationships

Example: An invoice (parent table) can have many line items (child rows)



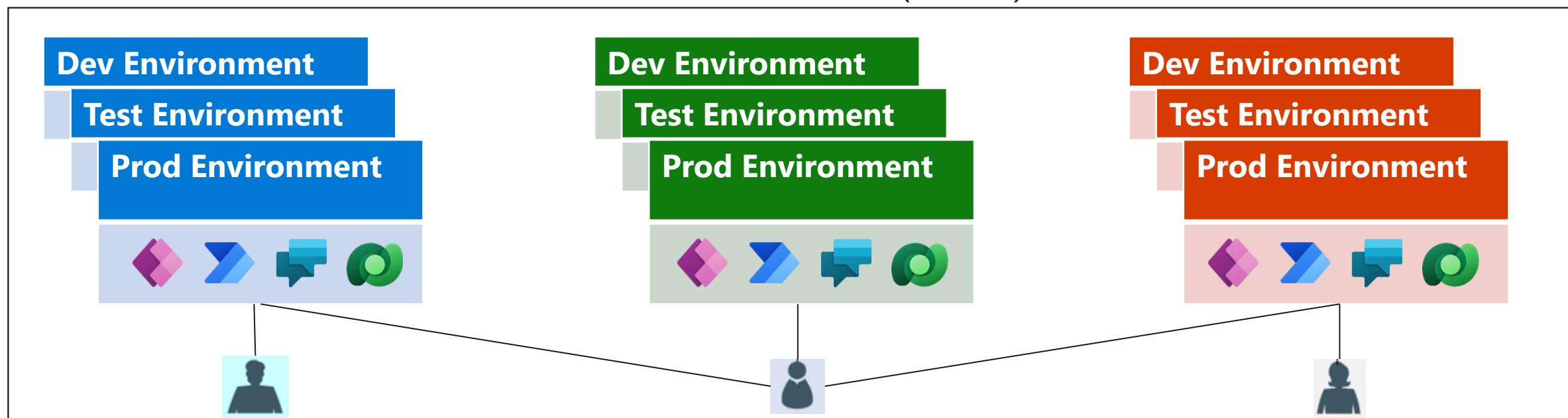
## **Many-to-many relationships:**

Example: A Contact can attend multiple Events, and an Event can have many Contacts attend

# Environments in Dataverse

- Environments are used to store, manage, and share your organization's business data, apps, and flows in Microsoft Power Platform.
- Each environment allows you to provision one Dataverse database for use within that environment. Dataverse environments allow you to manage user access, security settings, and the storage that is associated with that database.
- Each environment is created under a Microsoft Azure Active Directory (Azure AD) tenant, and its resources can only be accessed by users within that tenant.
- An environment is also bound to a geographic location, like the United States. When you create a Dataverse database in an environment, that database is created within datacenters in that geographic location.

Seahorse International (Tenant)



# Business rules

## Business rules:

Allow for the application of business logic at the data layer instead of the app layer

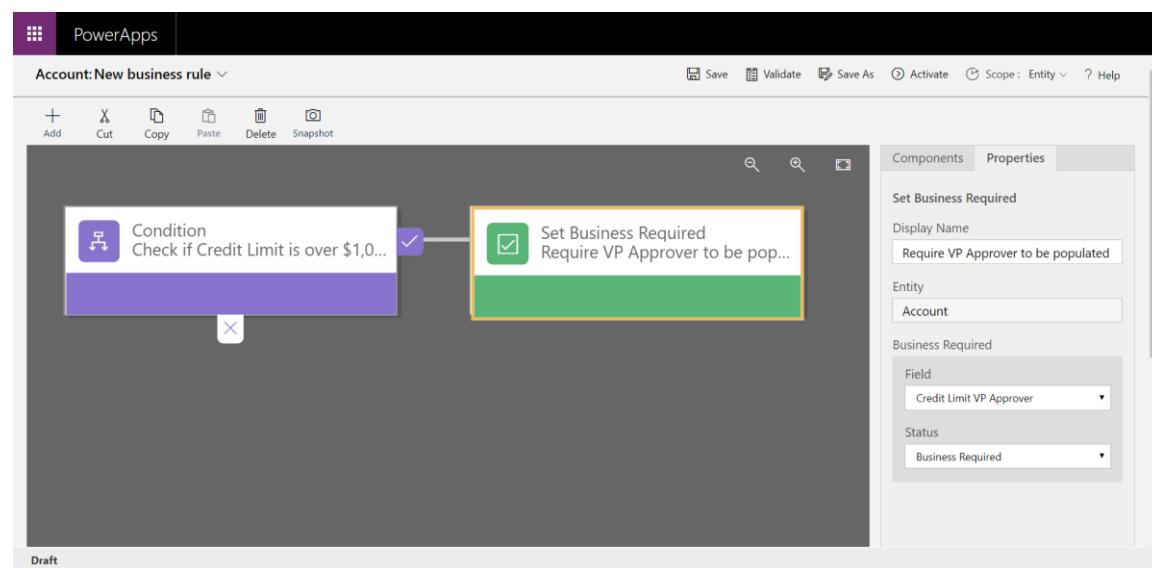
Usually defined for a table and apply to all forms, but can also be defined for a specific model-driven form

## Examples of business rule uses:

Set column values

Clear column values

Validate data and show error messages

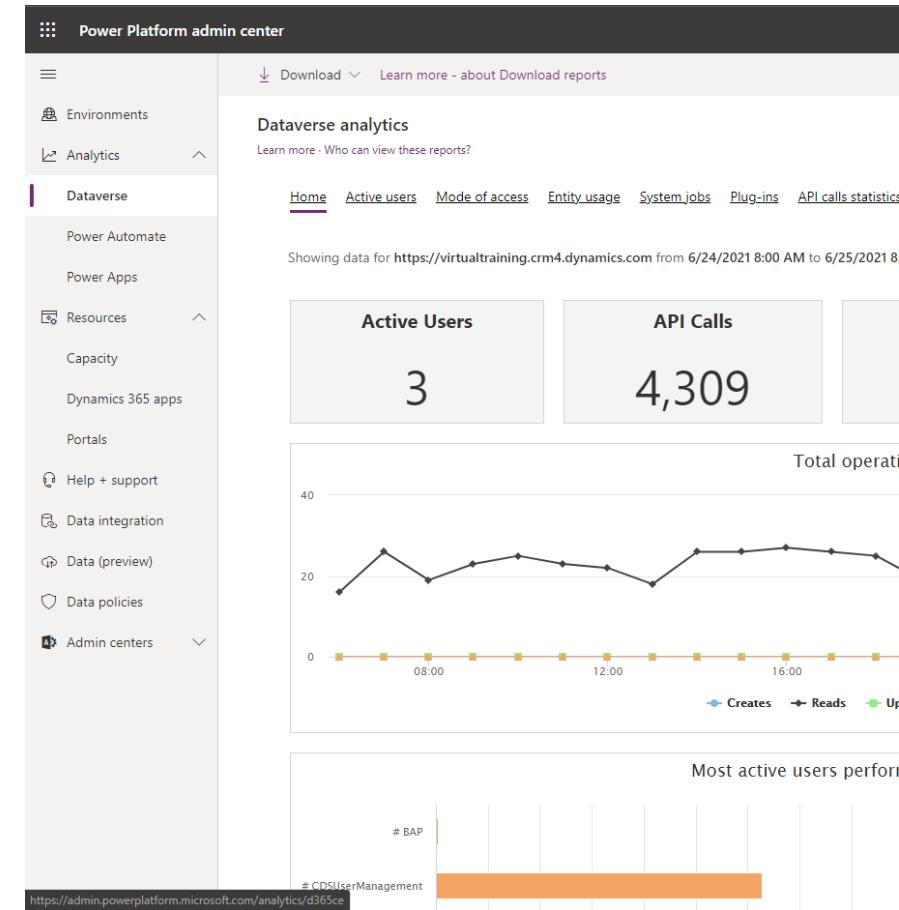


# Power Platform Admin center

Most of the administration settings that you will need are available in the Power Apps Admin center. You should always check for administration settings as your first step when looking to administer Dataverse.

Settings are grouped into the following broad categories and are accessible by selecting the link on the left-hand side of the portal, as shown in the following figure.

- **Environments** - This section lists all instances of Dataverse.
- **Analytics** – See how your resources are being used in your environment.
- **Resources** – View and assign capacity to your environment
- **Data integration** - This section lets you create or add pre-defined connections and monitor these connections between Dataverse and other data stores like Salesforce or SQL Server.
- **Data policies** - This section lets you set up policies to restrict which data connectors can be used with Dataverse to limit what data can flow into or out of Dataverse tables.



# Summary

- Microsoft Power Apps allows users of any technical level to improve business processes. These apps are built using your existing skills and knowledge and without writing traditional managed code. These apps offer the ability to create highly flexible solutions built for different devices and to consume data from a multitude of sources.
  - Power Apps is a no-code/low-code platform that allows you to build apps with your business knowledge and existing skills.
  - Power Apps has different offerings to meet your needs. Canvas apps, Model-driven apps, and Portals each have their own unique properties.
  - Power Apps helps you build and deploy customized apps that work across web and mobile, embedded or standalone, on any device.
  - You can build apps that follow your business processes instead of making your business process follow the software.
- Dataverse is a cloud-based data storage which allows you to leverage the security and connectivity of Microsoft programs. Dataverse connects easily to all aspects of Microsoft Power Platform so that you can fully control, automate, and strengthen your business. With standard tables and columns, as well as the ability to easily define relationships between your data, Dataverse was built for those who need powerful, scalable solutions.
  - Dataverse uses standard tables, columns, and relationships to help you build powerful, scalable data solutions
  - Make your data work for you so that you can get the most of it by splitting it up into logical chunks.
  - Using Dataverse, you can break your data into various environments to better manage and secure important information.



# Build simple Power Apps

# Introduction

In this module, we will explore, understand and learn about:

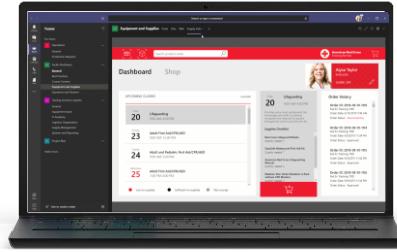
- How to build an app solution
- Learn basic elements of Power Apps
- Build a Power Apps app
- Get started with functions in Power Apps
- Share an app



# Lesson 1: How to build an app solution



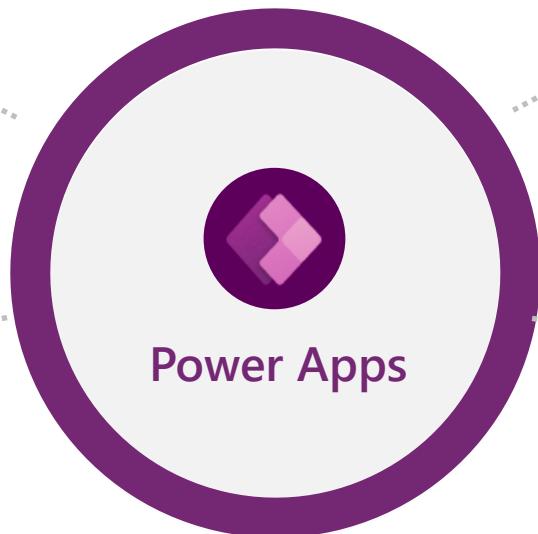
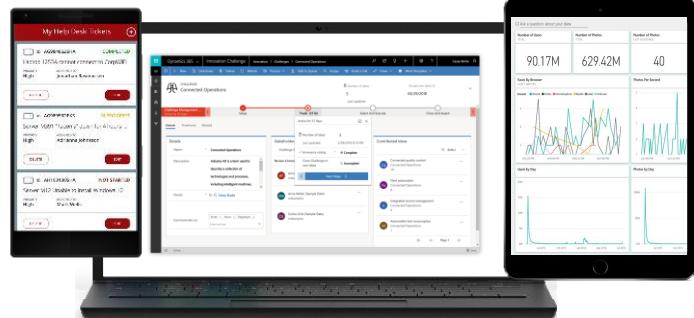
# Enabling digital transformation across the organization



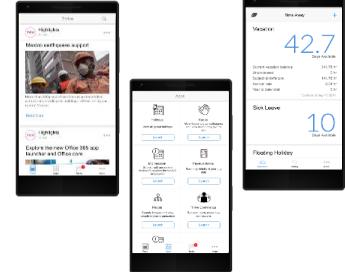
Extending Office 365  
and Dynamics 365



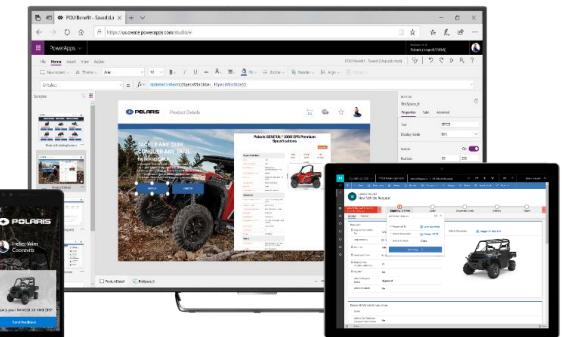
Building mission-critical  
end-to-end solutions



Extending legacy  
applications



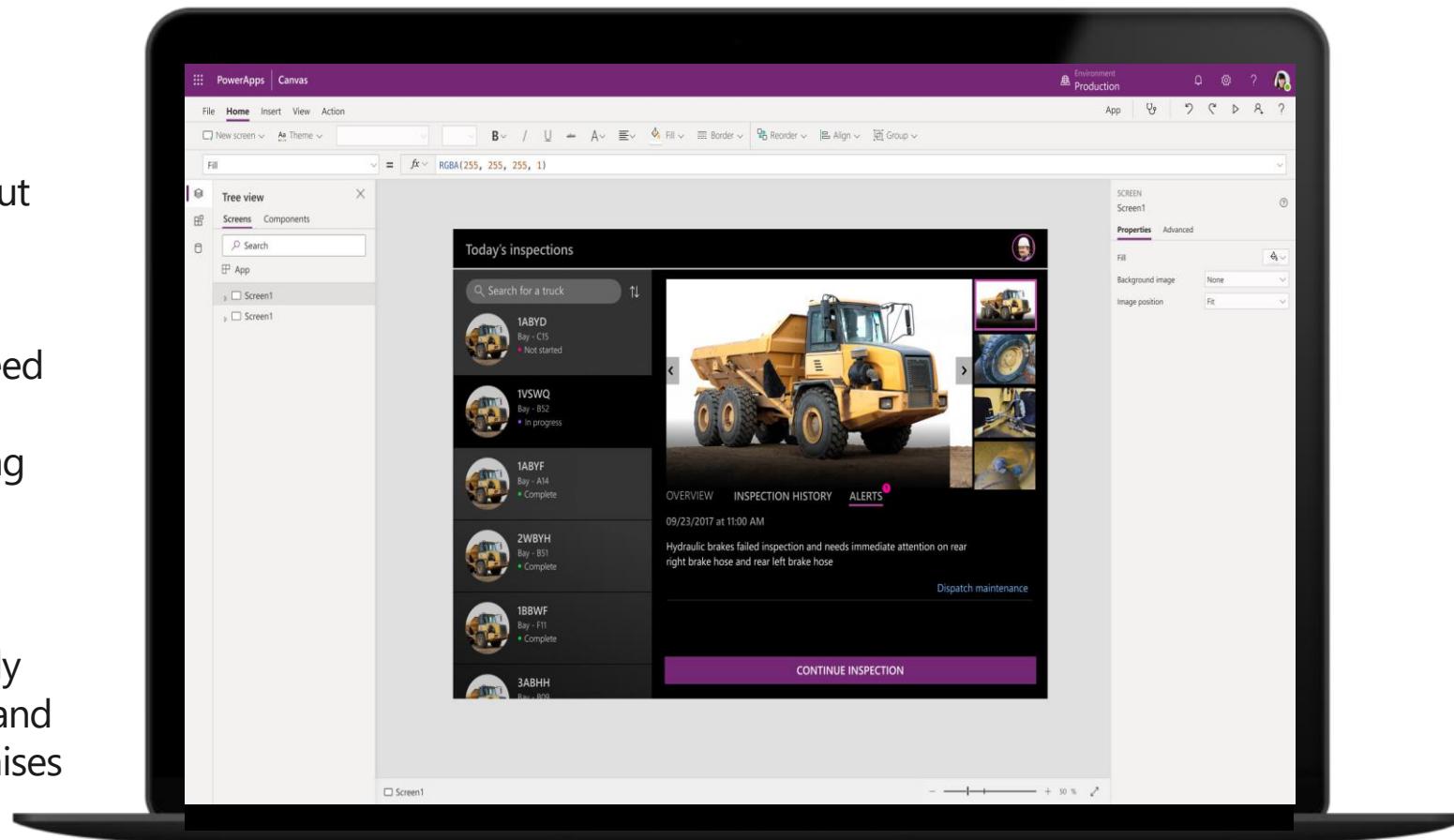
Building departmental  
solutions



# Give everyone the tools to be an app builder



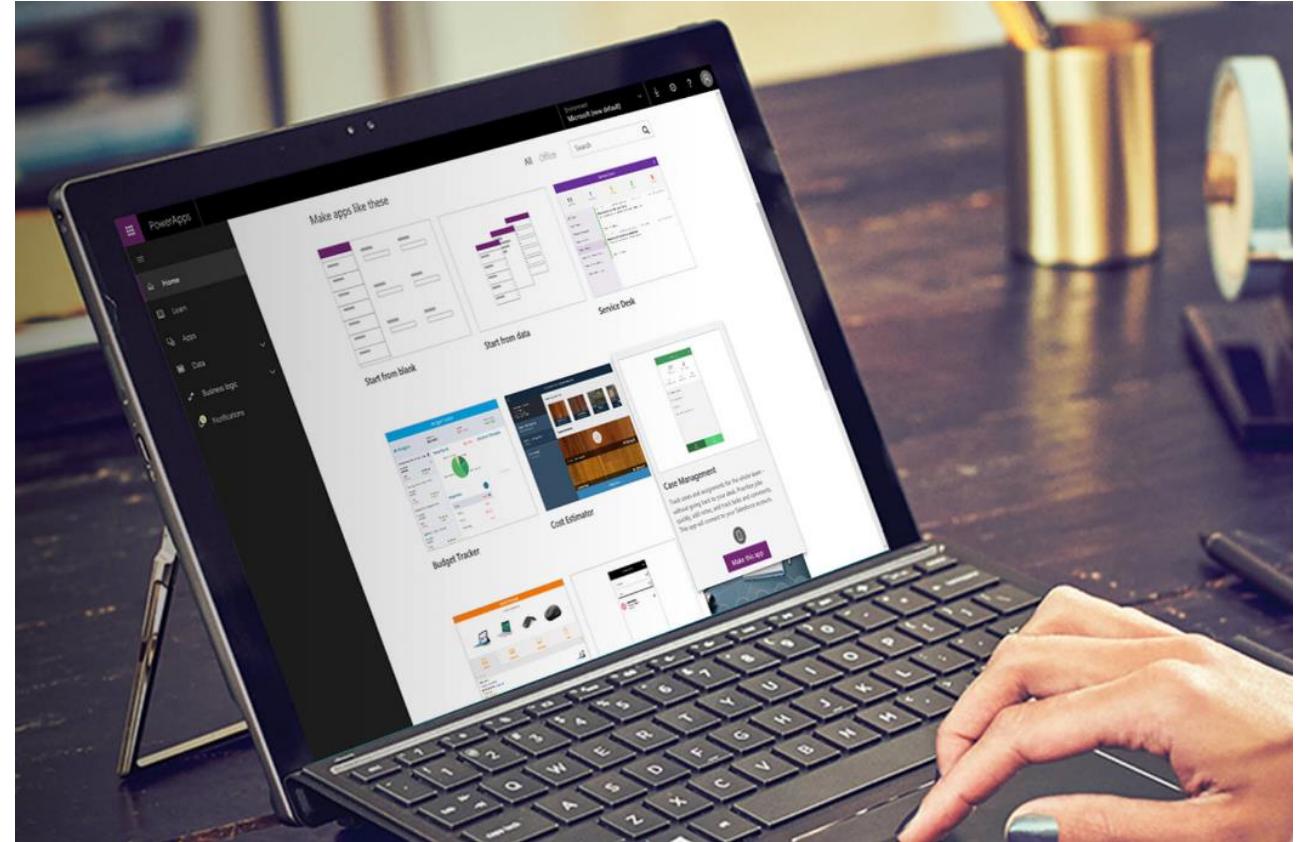
- **Get started quickly:** Empower your team to start building and launching apps right away using pre-built templates, drag-and-drop simplicity, and quick deployment—then roll out continuous improvements as needed.
- **Build apps without compromises:** Give everyone the power to build the apps they need with advanced functionality previously only available to professional developers—including pre-built AI components.
- **Enable extensibility for developers:** Provide professional developers the tools to seamlessly extend app capabilities with Azure Functions and custom connectors to proprietary or on-premises systems.





# Build the right app for the job

- **Empower everyone to build apps:** Building apps with Power Apps helps everyone from business analysts to professional developers work more efficiently together. Solve business problems with intuitive visual tools that don't require code, work faster with a platform that enables data integration and distribution, and extend the platform with building blocks for professional developers. Easily build and share apps on any device.
- **Enable your business to innovate:** Power Apps enables a broad range of app scenarios to be created that infuse digital transformation into manual and outdated processes. Use both canvas and model-driven apps to build Power Apps that solve business problems for task and role-specific scenarios like inspections, field sales enablement, prospect to cash, and integrated marketing views.
- **Build highly tailored applications:** Start by designing your user experience on the Power Apps canvas. Customize every detail of your app to optimize for specific tasks and roles. Create apps for any device that uses a wide variety of controls including cameras and location, or start from a sample app showcasing common business scenarios, like expense reporting or site inspections.





# Lesson 2: Learn basic elements of Power Apps



# Learn basic elements

**Power Apps** has many different components to build solutions including screens, inputs, galleries, forms and more. Let's review some of the most common elements you will need to get started.

- **Power Apps Studio**
- **App format**
- **Galleries**
- **Forms**
- **Input Controls**
- **Intelligent Controls**
- **Functions**

# Power Apps Studio



The screenshot displays the Microsoft Power Apps Studio interface, featuring the following components:

- Left Sidebar:** A navigation bar with icons for Home, Learn, Apps, Create, Data, Flows, AI Builder, and Solutions.
- Middle Left Area:** A "Build business apps, fast" section with a "New to Power Apps?" message, a "Generate app" button, and sections for "Make your own app" (Canvas app from blank, Model-driven app from blank, Portal from blank), "Start from data" (SharePoint, Excel Online, SQL Server, Common Data Service, Other data sources), "Learning for every level" (Getting started with canvas apps, Get started with canvas app formulas, Show a list of items in Power Apps), and "Your apps" (a progress bar).
- Middle Right Area:** A "PowerApps" ribbon with tabs for Home, Insert, View, Action, and Gallery. The Home tab is selected.
- Bottom Center:** A "DrawerScreen" view showing a "Restock tools" screen with a gallery of tool items (e.g., 7 Drawer Tool Trolley, 3 Drawer Tool Caddy) and a "Gallery2\_2" item.
- Right Side:** A detailed "Properties" panel for "Gallery2\_2" containing settings for Data source (Product Items), Layout (3 columns, wrap count 8, template size 72, padding 0), Position (X: 0, Y: 230), Size (Width: 640, Height: 290), Color (Border width 0), and Display mode (Edit).



# App format

The screenshot shows the Microsoft Power Apps interface. On the left is a navigation sidebar with options like Home, Learn, Apps, Create, Data (Tables, Choices, Dataflows, Azure Synapse Link, Connections, Custom Connectors, Gateways), Flows, Chatbots, AI Builder, and Solutions. A search bar at the top has the text "sap". The main area displays a modal dialog titled "Canvas app from blank". Inside the dialog, there's a preview window showing a white canvas with a purple brush icon. Below the preview, the text reads "Design the app you want, and connect it to hundreds of data sources." There's also a "Canvas app" button. To the right of the preview, there are fields for "App name \*" (with an empty input field) and "Format" (with "Tablet" selected). At the bottom right of the dialog are "Create" and "Cancel" buttons. The background of the main Power Apps interface shows a dark theme with a header bar containing "Environment", "Virtual Training Days", and other user icons.



# Templates

Power Apps

Start from template ⓘ

All Office

Search all templates

Environment Guide To Learn, Inc. (de...)

Home Learn Apps Create Data Flows AI Builder Solutions

Power Apps Training for Office (Canvas app)

Meeting Capture (Canvas app)

Power Apps Training (Canvas app)

Onboarding Tasks (Canvas app)

Help Desk (Canvas app)

Budget Tracker (Canvas app)

Site Inspection (Canvas app)

Service Desk (Canvas app)

Leave Request (Canvas app)

Fundraiser (Model-driven app)

Innovation Challenge (Model-driven app)

Asset Checkout (Model-driven app)

Case Management (Canvas app)

My Expenses (Canvas app)

Customer Success (Canvas app)

The screenshot shows the Microsoft Power Apps interface for selecting templates. On the left is a navigation bar with links for Home, Learn, Apps, Create, Data, Flows, AI Builder, and Solutions. The main area is titled 'Start from template ⓘ' and shows a grid of 15 different app templates. Each template card includes a preview image, the template name, and the type (e.g., Canvas app or Model-driven app). The templates are categorized into three rows: the first row contains 'Power Apps Training for Office', 'Meeting Capture', 'Power Apps Training', 'Onboarding Tasks', and 'Help Desk'; the second row contains 'Budget Tracker', 'Site Inspection', 'Service Desk', 'Leave Request', and 'Fundraiser'; the third row contains 'Innovation Challenge', 'Asset Checkout', 'Case Management', 'My Expenses', and 'Customer Success'. A search bar at the top right allows users to search for specific templates.



# Forms

The screenshot shows the PowerApps Studio interface with the following components:

- Top Bar:** Text = Parent.DisplayName
- Screens List:** Shows four screens: Screens, BrowseScreen1, DetailScreen1, and EditScreen1.
- DetailScreen1 (Selected):** Displays a card with AssetID (4545444), ApproverEmail (Ben.Change@contoso.com), AssetType (Tablet), AssignedTo (Jack), DeviceName (iPad Air 4), ImageThumbnailURL (<https://www.apple.com/pr/products/ipad-air>), and ImageURL ([http://store.storeimages.cdn-apple.com/8544/assets.apple.com/is/image/AppleInc/aos/published/images/i/pa/ipad/air/ipad-air-select-fold\\_201410\\_GEO\\_ALL](http://store.storeimages.cdn-apple.com/8544/assets.apple.com/is/image/AppleInc/aos/published/images/i/pa/ipad/air/ipad-air-select-fold_201410_GEO_ALL)).
- DataCardKey20 (Form Customization):** Shows the DataCardKey20 properties:
  - Options:** Assets, SharePoint
  - Form customization:** Refresh
  - Layout:** Vertical
  - Fields:** AssetID, ApproverEmail, AssetType, AssignedTo, DeviceName, ImageThumbnailURL, ImageURL, SecurityCode, ID



# Input Controls

The screenshot shows the Microsoft Power Platform interface with the 'Insert' ribbon tab highlighted by a red box. Below the ribbon, there are four main categories: 'Text box', 'Button', 'Text', and 'Controls'. The 'Controls' category is also highlighted with a red box. A dropdown menu is open under 'Controls', listing various input control types, each with a small icon and a label. The items listed are: 'Button', 'Drop down', 'Date picker', 'List box', 'Check box', 'Radio' (which is highlighted with a red box), and 'Toggle'.

- Button
- Drop down
- Date picker
- List box
- Check box
- Radio**
- Toggle



# Intelligent Controls

**PowerApps | AI Builder**

Contoso late payments | Saved 2 min ago | Save

Select fields that influence what you want to predict

**Invoice**

Display name	Name	Data type
Created On	createdOn	Date and Time
Created By	createdBy	Lookup
Customer	customerId	Lookup
Date Delivered	dateDelivered	Date and Time
Due Date	dueDate	Date and Time
Ship To City	shipToCity	Text
Ship To Country	shipToCountry	Text
Status	stateCode	Option Set
Status Reason	statusReason	Option Set
Total Amount	totalAmount	Decimal Number

Back Next 41 fields selected

**PowerApps**

Models > Text Classification

Published version

**Performance**

32% Live  
743 text snippets • 37 tags  
Input: Feedback > User generated feedback  
Trained 1 day ago

How should I interpret this score?

**Run** **Quick test** ...

Tips

- Run in Common Data Service

Last trained version

**Performance**

78% Not published  
922 text snippets • 37 tags  
Input: Feedback > User generated feedback  
Trained 2 mins ago

How should I interpret this score?

Tips

- Improve model performance
- Publish your model

**PowerApps | AI Builder**

My Object Detection | Save and close

Tag the objects in your images

You will need at least 15 images per object to continue.

Tag images

3 object names selected

46 images added

Train model

All

Tagging requirements

You must tag at least 15 images for each object. Tagging more than 50 images for each object could yield better results. You can have multiple tags per image.

- Green Tea Cinnamon
- Green Tea Rose
- Green Tea Mint

Want to add more images?

Adding more images may increase model performance.

Add images

Need help?

Check out the documentation in the help menu at the top of the page. If you have further questions, send us an email.

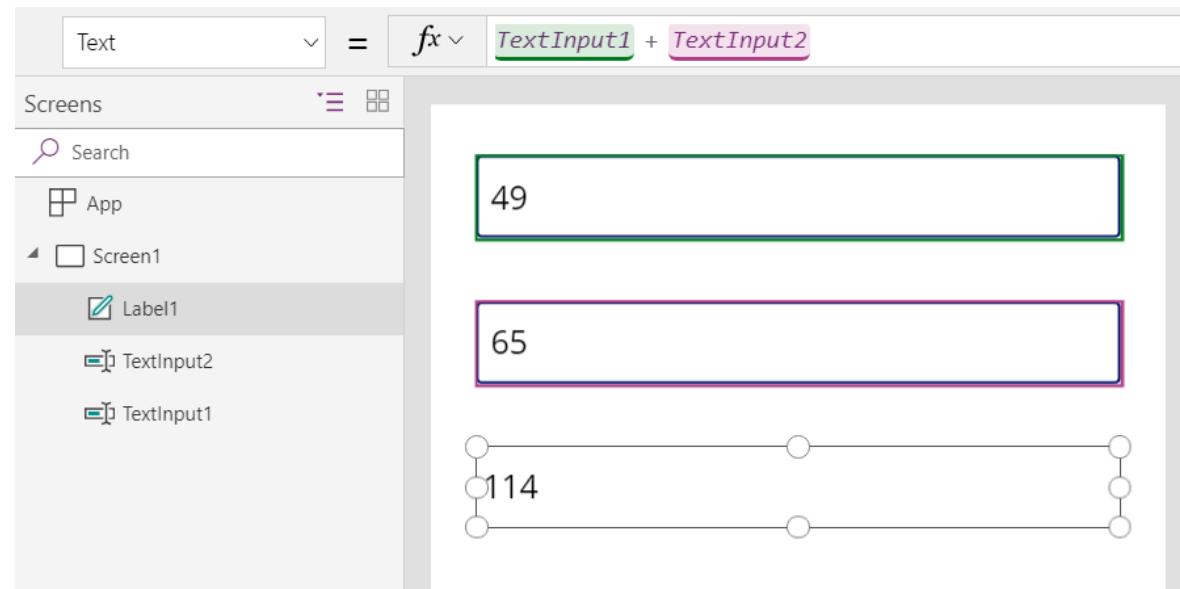
Contact us



# Functions

Formulas combine many elements. Listed below are:

- **Functions** take parameters, perform an operation, and return a value. For example, **Sqrt(25)** returns **5**. Functions are modeled after Microsoft Excel functions. Some functions have side effects, such as **SubmitForm**, which are appropriate only in a behavior formula such as **Button.OnSelect**.
- **Signals** return information about the environment. For example, **Location** returns the device's current GPS coordinates. Signals don't take parameters or have side effects.
- **Enumerations** return a pre-defined constant value. For example, **Color** is an enumeration that has pre-defined values for **Color.Red**, **Color.Blue**, and so forth. Common enumerations are included here; function-specific enumerations are described with the function.
- **Named operators**, such as **ThisItem** and **Parent**, provide access to information from within a container.





# Demo: Build a Power Apps app



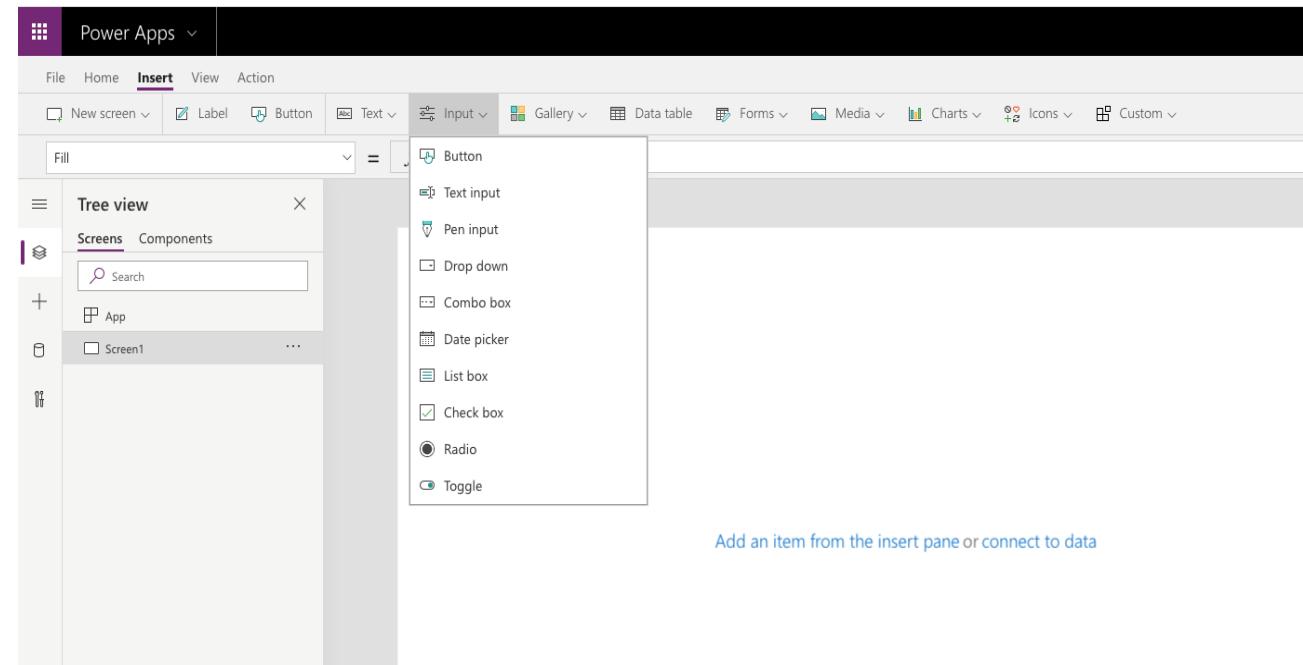
# Lesson 4: Get started with functions in Power Apps



# Formulas overview

Here are some common functions and an explanation of what they do:

- **Filter** - This function is often used with galleries or tables of data to narrow down the records returned from your data source. You do this by specifying one or more columns in your data set to perform a logic test on, which will allow you to return data that falls in a certain date range, has a set value, or was created by the user for example.
- **Match** - This function allows you to check a value to see if it follows a given pattern. You can use this to check if the user entered a properly formatted email address in the input field and if they did not show them a warning that a valid email is required. This function serves well for conditional formatting.
- **Distinct** - This function allows you to return the unique values from a list of data, making it easier to build dynamic dropdowns that show users only the valid values for the given field.
- **Math functions** - Power Apps includes a range of math formulas for working with your data from the simple such as Sum or Average to the complex such as Atan and Sin to work with radians.





# Demo: Share an app

# Summary

- **Power Apps** allows you to build custom business apps to make powerful new solutions. The potential to increase process efficiency in the areas of communication and data. Now that you have built your first app, consider areas that could benefit from custom solutions at your business. Start by thinking of processes that frustrate you and consider how you can leverage Power Apps to improve them for everyone.
- **Power Apps** can reference elements within the app to create dynamic solutions and a friendly interface.
- With endless customization options, **Power Apps** can be used to enhance any business process.
- Creating and managing apps are simple and easy to learn, even for those without a computer programming background.



# Leverage Microsoft Power Automate

# Introduction

In this module, we will explore, understand and learn about:

- Introduction to Power Automate
  - How two business are using Power Automate to provide better customer experiences
  - Learn how to describe the business value and features in Power Automate
  - See how Power Automate works and looks from the user's perspective
  - Power Automate allows businesses to do just that by leveraging hundreds of connectors, templates, triggers and actions to allow beginners and advanced developers alike to craft powerful workflows and increase business efficiency.
- Create a flow from a template
- Create a flow triggered by Dataverse
- Automate an approval request
- Utilize the approval center



# Lesson 1: Introduction to Power Automate



# What is Power Automate and the value it brings to you

Common scenarios and capabilities of Power Automate:

- Automating of repetitive tasks like moving data from one system to another
- Guiding a user through a process so they can complete the different stages
- Connecting to external data sources via one of the hundreds of connectors or directly via an API
- Automating desktop-based processes with robotic process automation (RPA) capabilities



# What Power Automate offers

## Intelligent automation for all



### Automation at scale

#### Efficiently scale automation across your organization

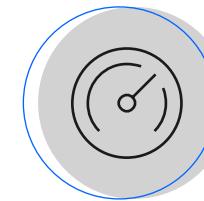
Allow everybody in your organization to automate workflows using their favorite on-premises and cloud-based apps and services. From end users, professional developers, to IT.



### Seamless, secure integration

#### Securely integrate automation at every level

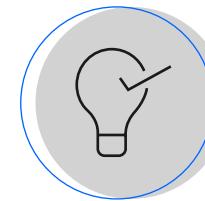
Confidently enable end users to build automated workflows in a secure, compliant manner, and focus your skilled IT resources on more complex, strategic work.



### Accelerated productivity

#### Accelerate productivity and focus on more strategic work

Minimize repetitive, manual, time-consuming tasks and create more time for your teams to focus on strategic work with easy to use low/no-code tools, templates, and connectors.



### Intelligent automation

#### Increase efficiency through automated workflows with the power of AI.

Streamline how you work by combining the power of AI with automated workflows and business process.



# Scale automation efficiently



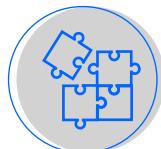
## Pre-built templates

Build automated workflows using prebuilt templates and tailored automations.



## Automate across your favorite apps and services (450+ connectors)

Scale to automate across your favorite apps and services.



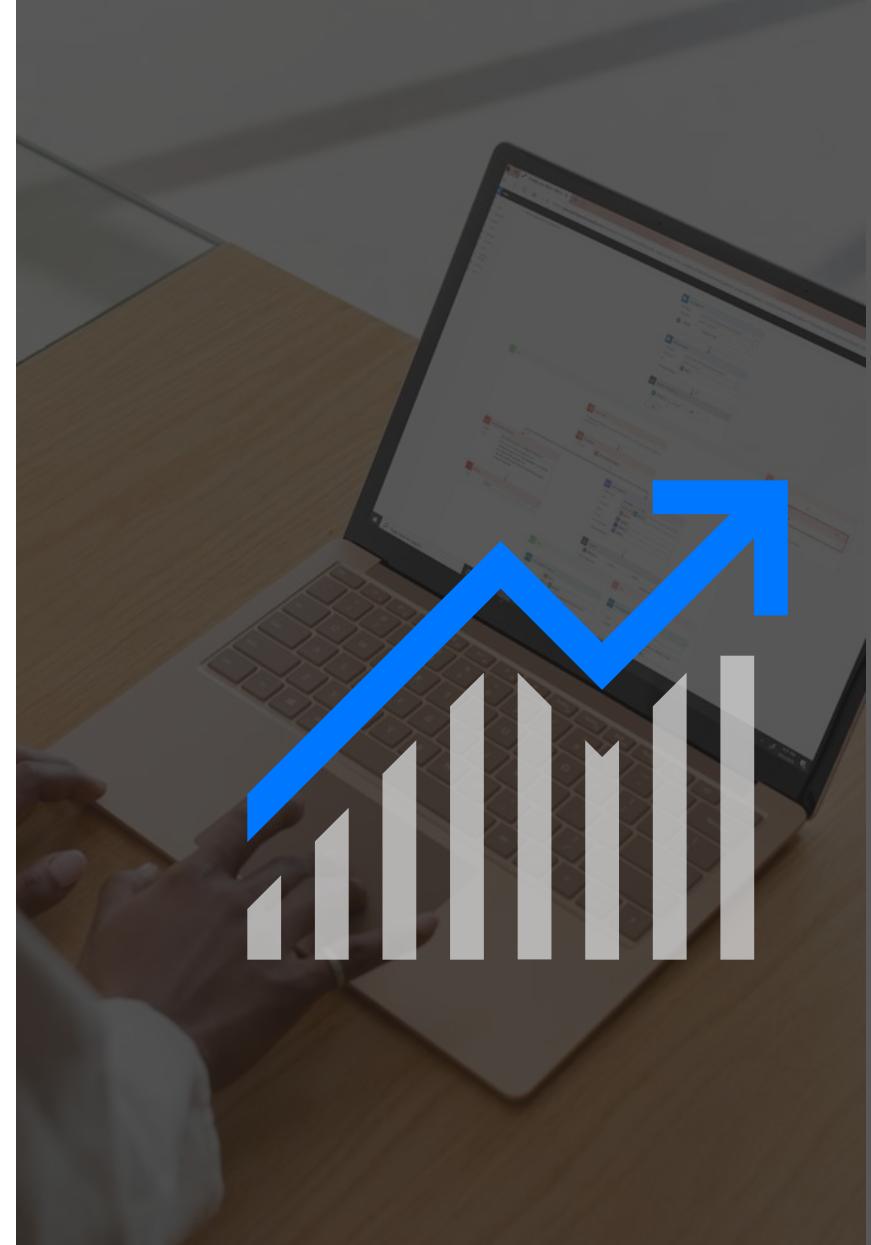
## Integrates with the Microsoft ecosystem

Integrate with Azure, Microsoft 365, and Dynamics 365.



## On-premises and in the cloud

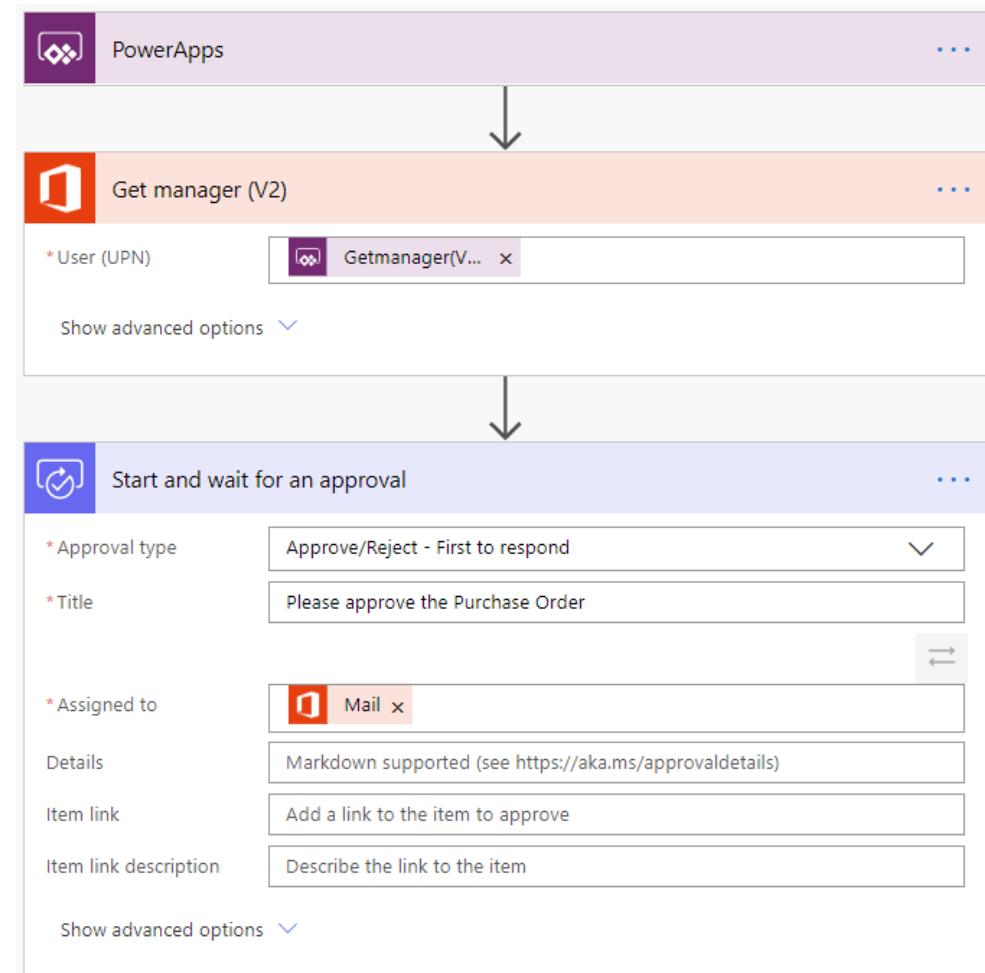
Access and integrate data across on-premises software and cloud services.





# Example: a purchase order approval

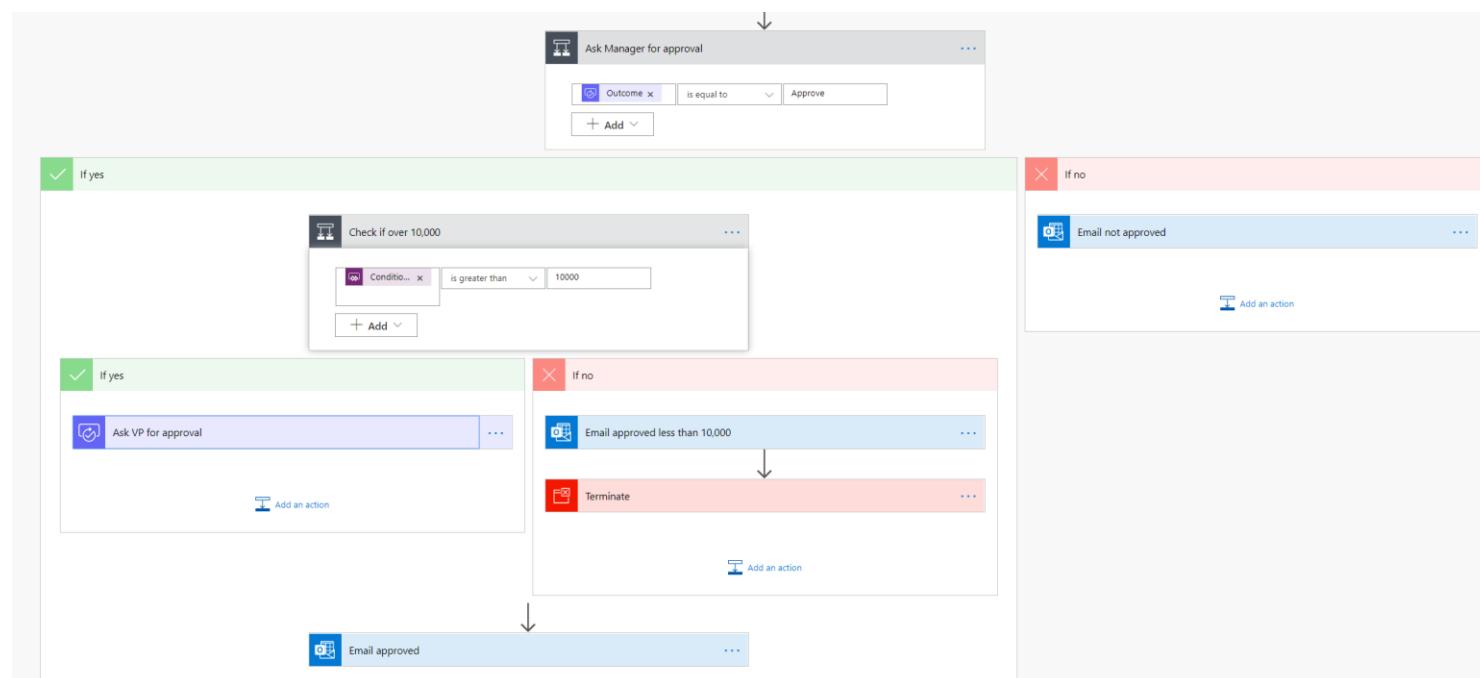
- Approvals are a great process to build in Power Automate. They are often - defined yet manual. Check out the following scenario for an example:
- A user starts the process by going into a Power Apps app and creating a purchase order request. Once they submit the request the information is sent to a Power Automate flow.
- The flow can be built to evaluate the request and then route the request based on criteria such as submitting user and request amount. The first action could be to send the request to the user's manager. The manager could be automatically retrieved from Azure AD avoiding prompting for duplicate information.





# Example: a purchase order approval - continued

- After the manager receives the approval and approves, the flow can then provide conditional logic. Typically this might be something like if the purchase order request is greater than \$10,000 send it to VP if not then automatically approve the purchase order.
- Here is an example of what this flow may look like.



# The three types of flows you can create with Power Automate



Power Automate works by creating flows, of which there are three types:

- Cloud flows (API)
  - Instant
  - Automated
  - Scheduled
- Business process flows (BPM)
- Desktop flows (RPA)

The screenshot shows the Microsoft Power Automate web interface. On the left, a sidebar menu includes Home, Action items, My flows, Create (which is selected), Templates, Connectors, Data, Monitor, AI Builder, Build, Models, Document automation (preview), Process advisor, Create, Processes, Solutions, and Learn. The main content area has a header "Three ways to make a flow". Under "Start from blank", four options are shown: "Automated cloud flow" (triggered by a designated event), "Instant cloud flow" (triggered manually as needed), "Scheduled cloud flow" (you choose when and how often it runs), and "Desktop flow" (automates processes on your desktop environment). Below this, under "Start from a template", there are several cards for "Top picks": "Notify a team when a new Forms response is submitted" (By Microsoft, Automated, 34903), "Notify a team when a new item is created in a SharePoint List" (By Microsoft, Automated, 18476), "Follow up on a message" (By Microsoft, Instant, 18032), "When the status of a task in Planner changes to complete, notify a channel" (By Microsoft, Automated, 14640), "Save a message to OneNote" (By Microsoft, Instant, 12718), "Schedule a meeting with a message sender" (By Microsoft, Instant, 11688), and others partially visible.



# Add artificial intelligence to your flow without writing code

To take advantage of these AI capabilities you must first build a model with AI Builder. From <https://flow.microsoft.com> a wizard guides you through building and training the model. Currently, there are four available AI models available to build:

- **Form processor** - This model extracts text from an uploaded image or taken photo.
- **Object detector** - This model identifies objects from an uploaded image or taken photo and then provides a count of the number objects present.
- **Prediction** - This model predicts whether something will happen or not based on previous data history. More details in the following section.
- **Text classification** - This model categorizes text by its meaning, making it easier to analyze.

The screenshot shows the Microsoft Power Automate interface with the 'AI Builder' tab selected in the sidebar. The main area displays several AI model cards:

- Enhance your business with AI**: A general heading for AI integration.
- Refine a model for your business needs**:
  - Category Classification: Categorize text by its meaning so it's easier to analyze.
  - Entity Extraction: Recognize specific information about your business from data.
  - Form Processing: Read and save information from standard documents.
  - Object Detection: Recognize and count things in images.
  - Prediction: Predict whether something will happen or not based on previous data history.
- Get straight to productivity**:
  - Business Card Reader: Automatically process business card information.
  - Category Classification (preview): Categorize text by its meaning so it's easier to analyze.
  - Entity Extraction: Extract entities and their types from text.
  - Identity Document Reader: Read and save information from identity documents.
  - Key Phrase Extraction: Extract the key talking points from text.
  - Language Detection: Identify the language being used in text.
  - Receipt Processing: Read and save information from receipts.
  - Sentiment Analysis: Analyze positive/negative sentiment in text.
  - Text Translation: Translate text into a new language automatically.
  - Invoice P...: Read and save information from invoices.
  - Text Reco...: Automatical... from images.
- Learning for every level**:
  - Get started with AI Builder: Beginner, 30 mins
  - Manage models in AI Builder: Beginner, 25 mins
  - Get started with form processing in AI Builder: Beginner, 37 mins



# Customer case study - TruGreen

## Converting the strategy into action

Each of the 5 enablers is a catalyst to one or more strategic initiative, along with capabilities, and will be executed through an iterative roadmap



### Self-Serve



#### DIGITAL TOUCHPOINTS

Allow our customers to transact with us on their own terms, when and how they want

### Innovation



#### EMERGING TECHNOLOGY

Explore and pilot emerging technologies – IoT, Bots, Intelligent IVR & Cloud

### Data



#### DATA DRIVEN BUSINESS

Better insights into customer sentiment and fact-based decision making

### Digitize Internally



#### PRODUCTIVITY & EFFICIENCY

Digitize the business internally to create productivity and efficiency

### Digital Marketing



#### OUTREACH

Connect with customers in innovative ways

Digital Transformation Strategy  
actioned on through strategic initiatives

Digital eCosystem Platform  
(Web/Mobile & Internal sales Channels)

IoT

Enterprise Data Hub

Customer Journey Hub

Marketing Mix Modeling

Digital Customer engagement  
Chatbot, TrudyCall/Reverse Trudy

ML/AI Platform

Analytics Enabled Retention

Budget Planning

Lead Engine

Optical Recognition

BI & Advanced/Predictive Analytics

Paperless Printing

Rewards Program

Network Transformation

Digital Customer Onboarding



## Lesson 2: Create a flow from a template



# Power Automate Templates

With the hundreds of triggers, actions and connectors sometimes the hardest part about Power Automate can be figuring out where to get started. To help you get started, there are countless flow templates available to help you build a solution. To see all of the available templates you can sign into Power Automate, and select Templates from the left-hand menu.

The screenshot shows the Microsoft Power Automate interface. On the left, a sidebar menu includes Home, Action items, My flows, Create, **Templates** (which is selected), Connectors, Data, AI Builder, Solutions, and Learn. The main area displays a grid of 16 template cards, each with a title, description, creator, status, and popularity count. The templates are categorized by type: Instant, Automated, and By Microsoft. The cards include:

- Save Office 365 email attachments to OneDrive for Business (By Microsoft, Instant, 437915)
- Send myself a reminder in 10 minutes (By Microsoft, Instant, 339936)
- Get today's weather forecast for my current location (By Microsoft, Instant, 240584)
- Get a push notification when you receive an email from your boss (By Microsoft, Automated, 231752)
- PowerApps button (By Microsoft, Instant, 226049)
- Start approval when a new item is added (By Microsoft, Automated, 209996)
- Send a customized email when a new SharePoint list item is added (By Microsoft, Automated, 177577)
- Send a customized email when a new file is added (By Microsoft, Automated, 162747)
- Record form responses in SharePoint (By Microsoft, Automated, 134300)
- Save Outlook.com email attachments to your OneDrive (By Microsoft Flow Community, Automated, 121334)
- Get a push notification with updates from the Flow blog (By Microsoft, Automated, 109717)
- Click a button to email a note (By Microsoft, Instant, 94880)
- Request manager approval for a selected file (By Microsoft, Automated, 87500)
- Send approval and follow up via email (By Microsoft, Automated, 86200)
- Send form responses for approval (By Microsoft, Automated, 85000)
- Send me a push notification with my current location (By Microsoft, Instant, 84000)



# Trigger or run the flow

With Power Automate, you don't think of running a flow the same way as you do with Power Apps. Instead, you perform the activity that triggers the flow to run.

## When defining triggers, there are a few different types:

### When something changes:

These are triggers that run when data is changed. It could be a new item created in SharePoint, a lead is updated in Dynamics, or when an event has been deleted from Outlook for example

### On a schedule:

You can set up a flow to be triggered at a certain time of a day and with a recurrence. This allows for workflows such as checking every day at 8 AM if there are account renewals pending and if so, sending an email to the necessary people

### On a button press:

This trigger takes shape in many different ways. This can be when a flow virtual button is run through the mobile app, or a physical button is clicked with 3<sup>rd</sup> party options, or even when a button is pressed inside of Power Apps. This gives you that control to "run" a flow on-demand



# Demo: Build an approval request



# Approval flows

**Example approval flow:  
Approve or reject social  
media tweets:**

Create a SharePoint list  
for tweets

Create an approval request flow

Use the approval center

Export the flow

← → ⏪ ⏹ https://preview.flow.microsoft.com/manage/environments/839eace6-59ab-  
Flow My flows Approvals Templates Connectors Learn Search templates ...

Received Sent History

You don't have any pending requests at this time.

**Create an approval flow**

Add a ready-to-use approval flow or create your own from blank.

[Learn more about creating an approval flow](#)

[Create approval flow](#) [See how approvals work](#)



# Demo: Build an approval request



# Demo: Build a Business Process Flow

# Understand business process flows



Used to guide a user through the steps of your business process when working with model-driven apps and Dataverse

The screenshot shows the Microsoft PowerApps studio interface. At the top, there's a navigation bar with the 'PowerApps' logo, a dropdown for 'Contoso', and various icons for file operations like Add, Cut, Copy, Paste, Delete, Snapshot, and Connector. Below the navigation bar is a toolbar with standard icons for creating, cutting, copying, pasting, deleting, taking snapshots, and connecting components. The main workspace is dark grey and displays a 'Flow' component. This component has a title 'Account New Stage' with a blue arrow icon, a status bar showing '1' record and '0' global workflows, and a 'Details' dropdown menu. To the right of the workspace is a 'Components' pane. It has tabs for 'Components' (which is selected) and 'Properties'. Under the 'Components' tab, there's a search bar labeled 'Search components...' with a magnifying glass icon. Below the search bar, there are two sections: 'Flow' and 'Composition'. The 'Flow' section contains a 'Stage' component (blue arrow icon). The 'Composition' section contains a 'Condition' component (purple plus icon) and a 'Data Step' component (green grid icon). A small 'Global Workflow (0)' message is visible at the bottom of the workspace.



# Demo: Build a Process Flow

# Summary

- **Microsoft Power Automate** allows you to bring automation to your business processes. With a different type of flow to cover different business processes plus the ability to connect to data from hundreds of data source with a few clicks, Power Automate affords great flexibility. All it takes to get started is knowledge of your business process.
  - Power Automate is a web-based service for automating your business processes.
  - Power Automate has different offerings to meet your needs. Event-driven flows, business process flows, and desktop flows each have their own unique properties.
  - Power Automate has hundreds of templates that combine actions and triggers from connectors to create workflows useful for any business scenario.
  - Automation can save your business time and energy spent on repetitive tasks and make your business run more smoothly.
  - Power Automate's approval center allows users to easily see and manage approvals from a variety of flows to ensure ease of use and efficiency.



# Leverage Microsoft Power BI

# Introduction

In this module, we will explore, understand and learn about:

- Introduction to Power BI
  - Describe the business value and features of Power BI
  - See how Power BI works and looks from the user's perspective
- How to build a simple dashboard
  - Learn to connect to data in Power BI desktop
  - Transform and model the data you import
  - Build basic visualizations
  - Create and share a dashboard
  - Discover how to collaborate in Power BI



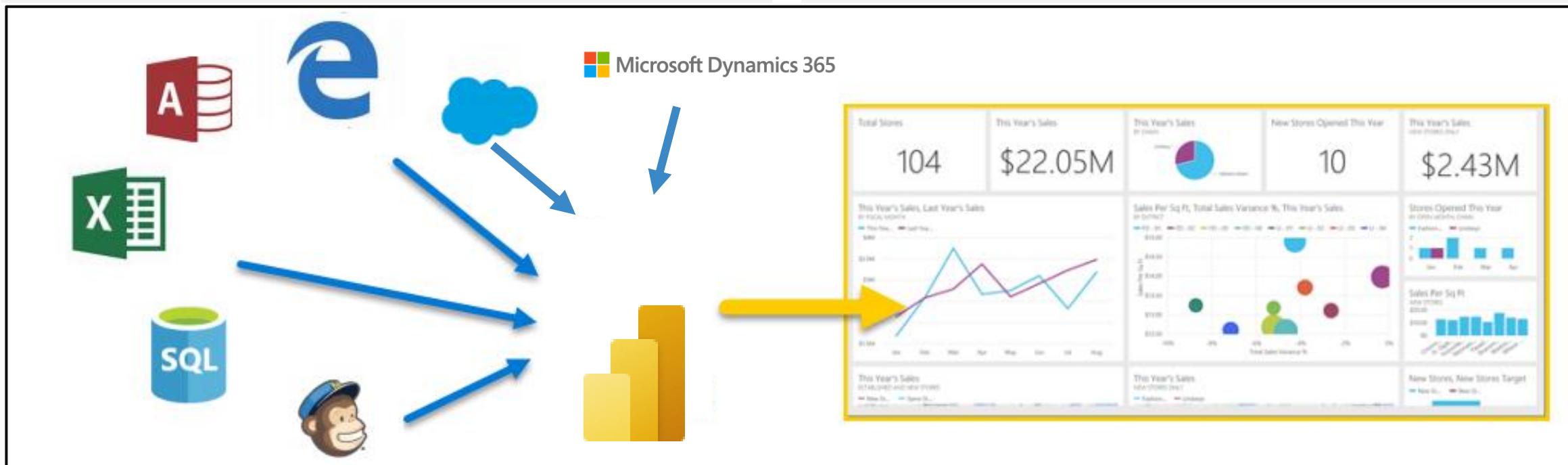
# Lesson 1: Introduction to Power BI



# What is Power BI?

Self-service platform that helps you discover, analyze and visualize data in order to share and collaborate insights with your colleagues

Visualizations are interactive and scalable reports, based on collections of different data sources





# Getting Data

- Excel files
- databases
- Azure data
- AppSource
- Dynamics 365
- SaaS providers
  - Salesforce
  - Facebook
  - Google Analytics
  - other SaaS services

The screenshot shows the Microsoft Power BI interface. On the left, a sidebar menu includes 'Home', 'Favorites', 'Recent', 'Apps', 'Shared with me', 'Workspaces', and 'My workspace'. At the bottom of this sidebar is a red-bordered 'Get data' button. To the right, the main area displays the 'AppSource' window titled 'Apps for Power BI'. The search bar at the top has 'microsoft' typed into it and is also red-bordered. Below the search bar, there are tabs for 'Apps (37)', 'My organization (0)', and 'Other apps'. A red box highlights the 'Other apps' tab. Under this tab, several app cards are listed:

- Web apps
- Dynamics 365
- Microsoft 365
- Power Apps
- All apps

Each card includes a thumbnail, the app name, a brief description, and a 'Get it now' button. Some cards also show star ratings.



# Power BI Editor

The screenshot displays the Microsoft Power BI Desktop interface. The main workspace shows an "Executive Report - Power BI Desktop" for Chemonics, titled "Digital transformation with Microsoft Dynamics 365". The report is divided into three main sections: "PRACTICE PLANNING", "PRACTICE EXECUTION", and "PRACTICE WORKFORCE PLANNING".

- PRACTICE PLANNING:** Contains summary statistics like 14 PROJECT AREA, 16 FUNDING SOURCES, 31 CUSTOMER, 102 CONTRACTS, and visualizations such as a world map of customer locations and a pie chart of contract types.
- PRACTICE EXECUTION:** Contains summary statistics like 540 RESOURCES and 797 TASKS, and visualizations like a resource profile pie chart and a bar chart of committed cost by customer.
- PRACTICE WORKFORCE PLANNING:** Contains summary statistics like 25 APPLICANTS and 572 EMPLOYEES, and various charts and tables showing demographic data (Education Level, Gender, Job Types, Job Functions), application status (Interviewed, Received, Rejected, Confirmed), and diversity plans.

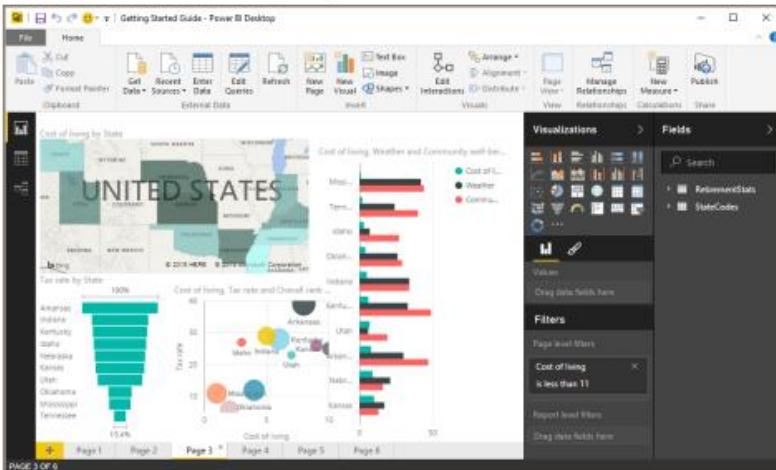
The Power BI desktop interface includes a ribbon menu at the top with options like File, Home, View, Modeling, and Help. To the right of the workspace are two panes: "VISUALIZATIONS" and "FIELDS". The "FIELDS" pane lists fields categorized under "Values" (Geography, Period, Plan, PricingLevel, Product, SubSegment) and "Filters" (Page level filters, Drag data fields here, Drillthrough filters, Drag drillthrough fields here, Report level filters, Drag data fields here).



# Power BI Tools

- Desktop
- Mobile
- Service

Power BI Desktop



Power BI service



Power BI Mobile





# Security and Administration

- **Security:** Similar to many Microsoft services, Power BI is built on Azure, which is Microsoft's cloud computing infrastructure and platform, ensuring the same level of security. Users log in with their credentials held in Azure Active Directory (AAD) and control the level of sharing for every report, data or dashboard, determining whether recipients can edit or only view items.
- **Administration:** Power BI administration is the management of a Power BI tenant, including the configuration of governance policies, usage monitoring, and provisioning of licenses, capacities, and organizational resources.

The screenshot shows the Power BI Admin portal interface. On the left is a navigation sidebar with links like Home, Favorites, Recent, Apps, Workspaces (My workspace, Financial Performance, Google Analytics), Reports, Business Central T..., Cost Management, Datasets, Workbooks, and Get data. The main content area is titled 'Admin portal' and contains several sections:

- Help and support settings:** Includes 'Publish "Get Help" information' (disabled) and 'Receive email notifications for service outages or incidents' (disabled).
- Workspace settings:** Includes 'Create workspaces (new workspace experience)' (unapplied changes). A note states: 'The permission to create workspaces in the new workspace experience preview is currently controlled by the permission to create groups in Office 365. By clicking "Apply", the values below will control which users can create workspaces in the new workspace experience preview.' A yellow callout box highlights this note.
  - Apply to:** Radio buttons for 'The entire organization' (selected), 'Specific security groups', and 'Except specific security groups'. Buttons for 'Apply' and 'Cancel' are at the bottom.
- Information protection (preview):** Includes 'Use datasets across workspaces' (enabled for the entire organization).



# Transform data to insights



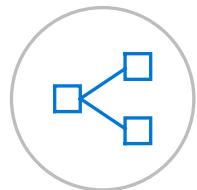
Get your data



Analyze



Visualize



Publish

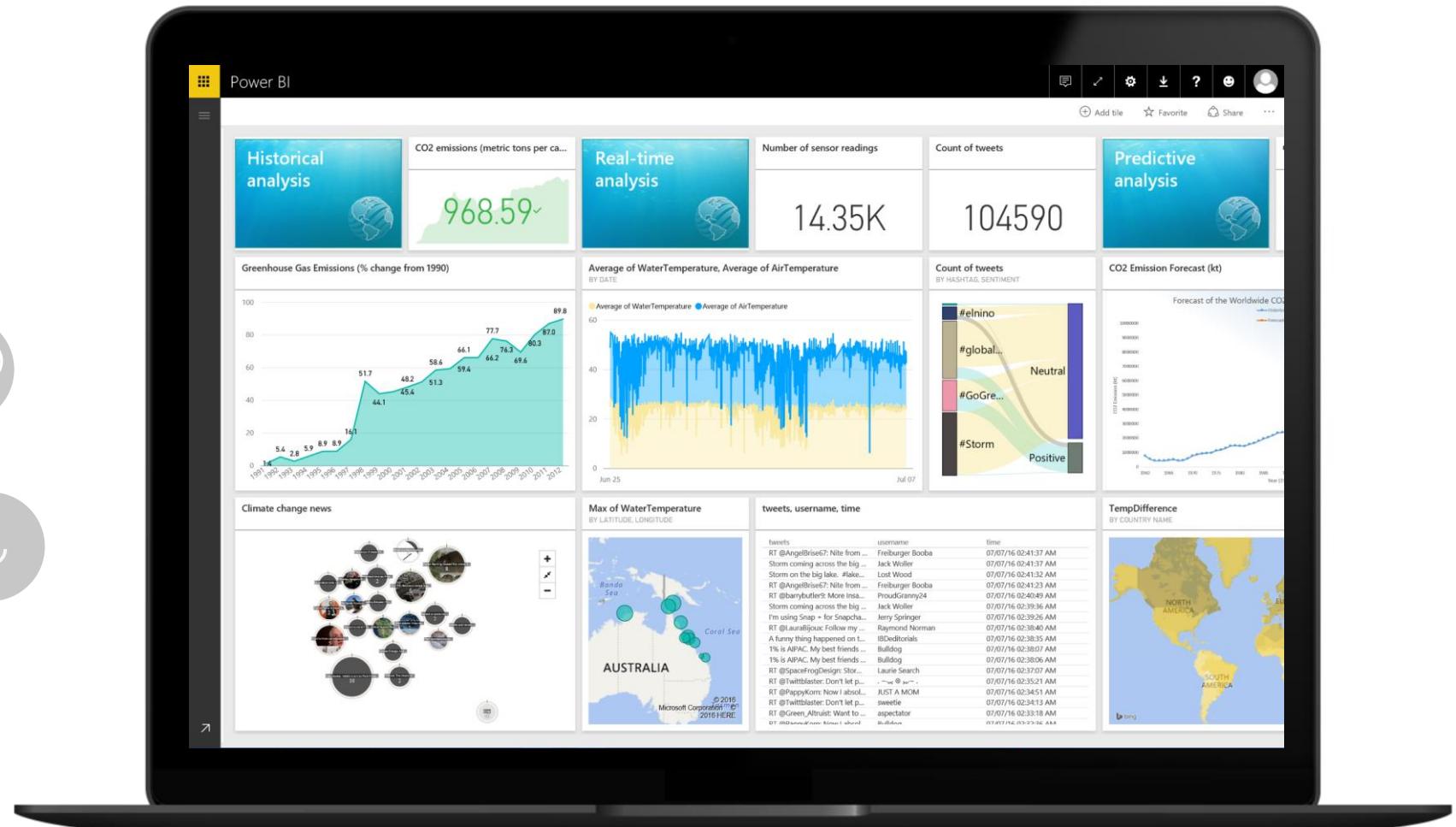


Collaborate



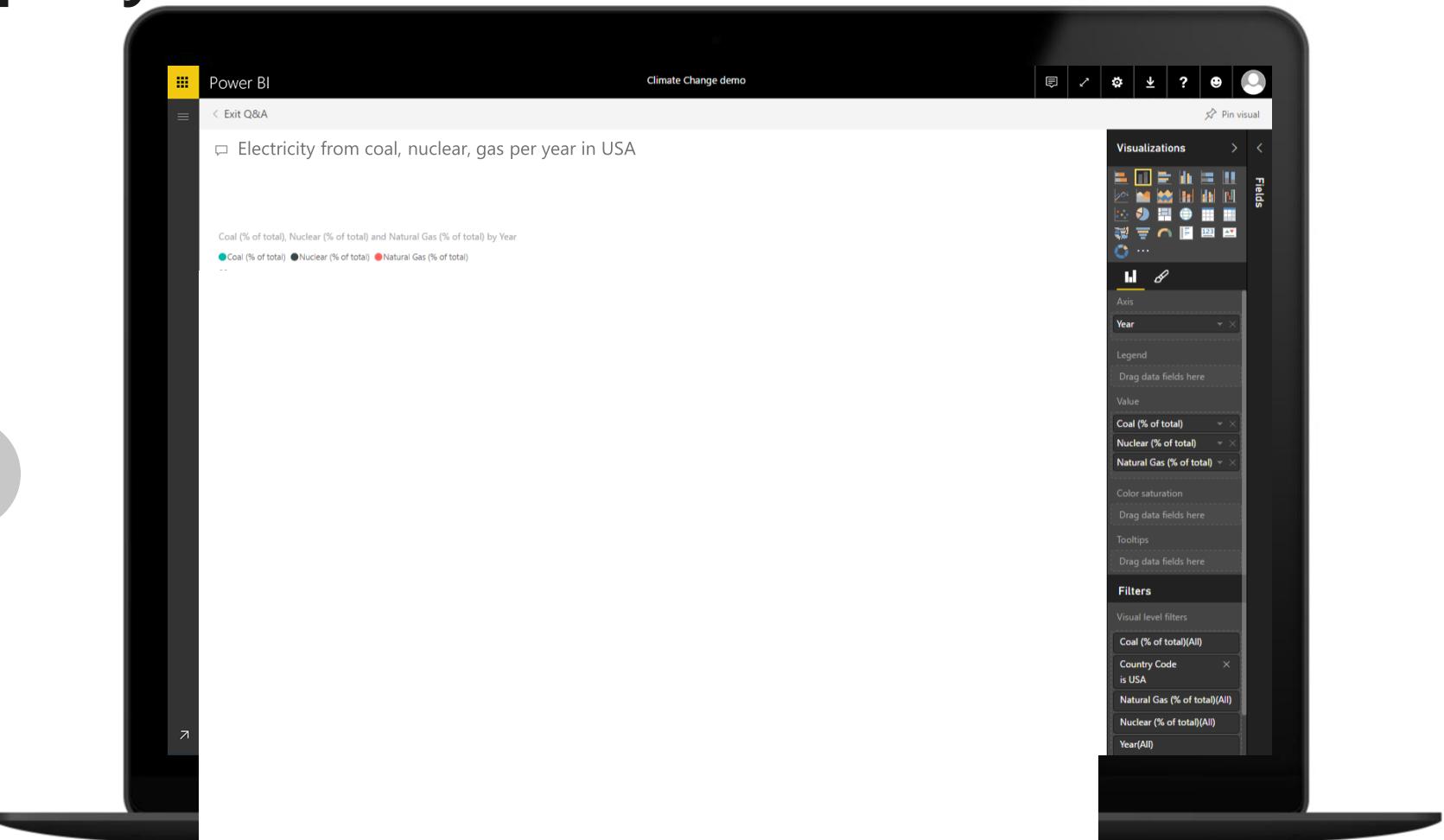


# Get dashboards in minutes



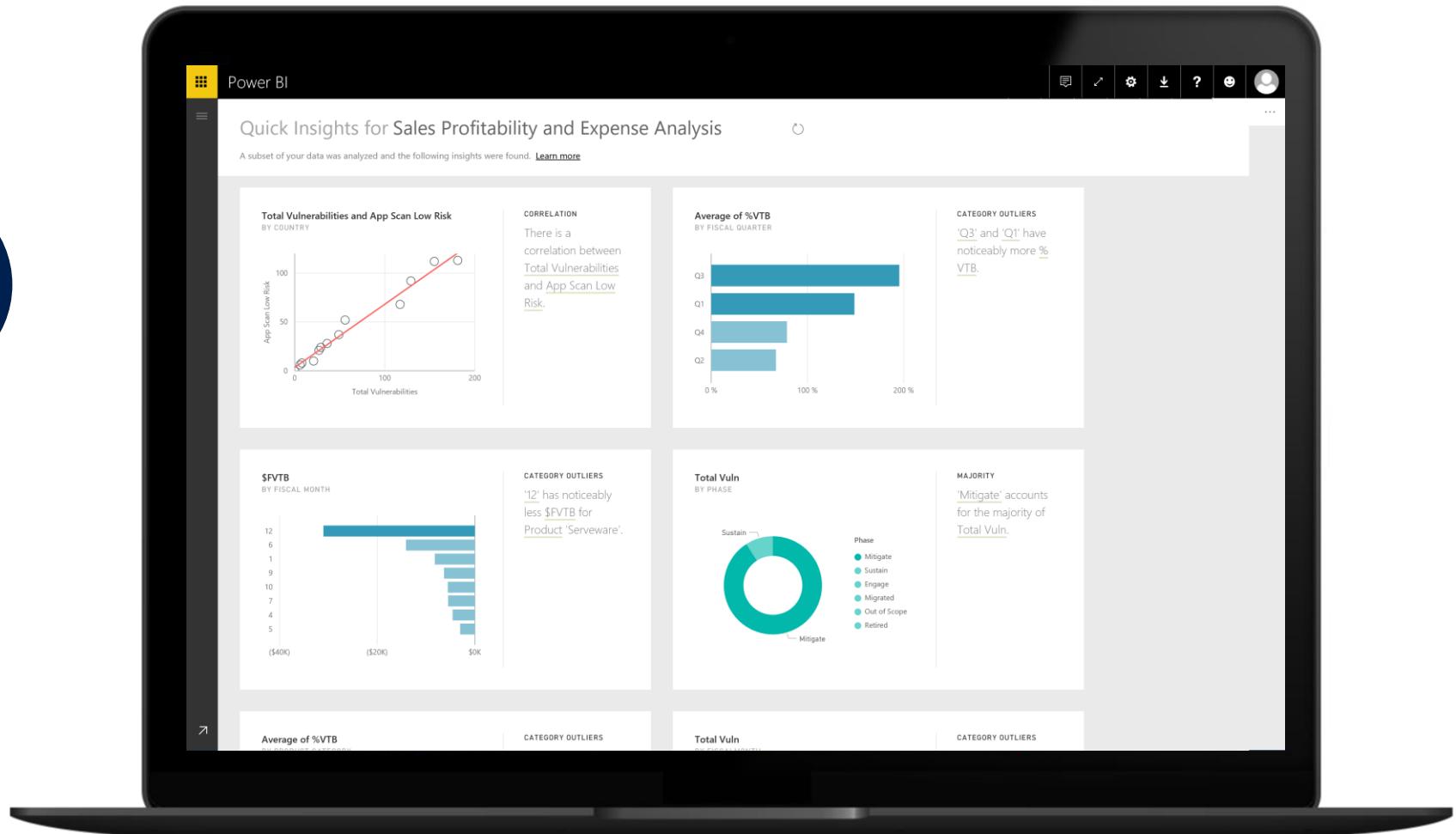


# Natural language query



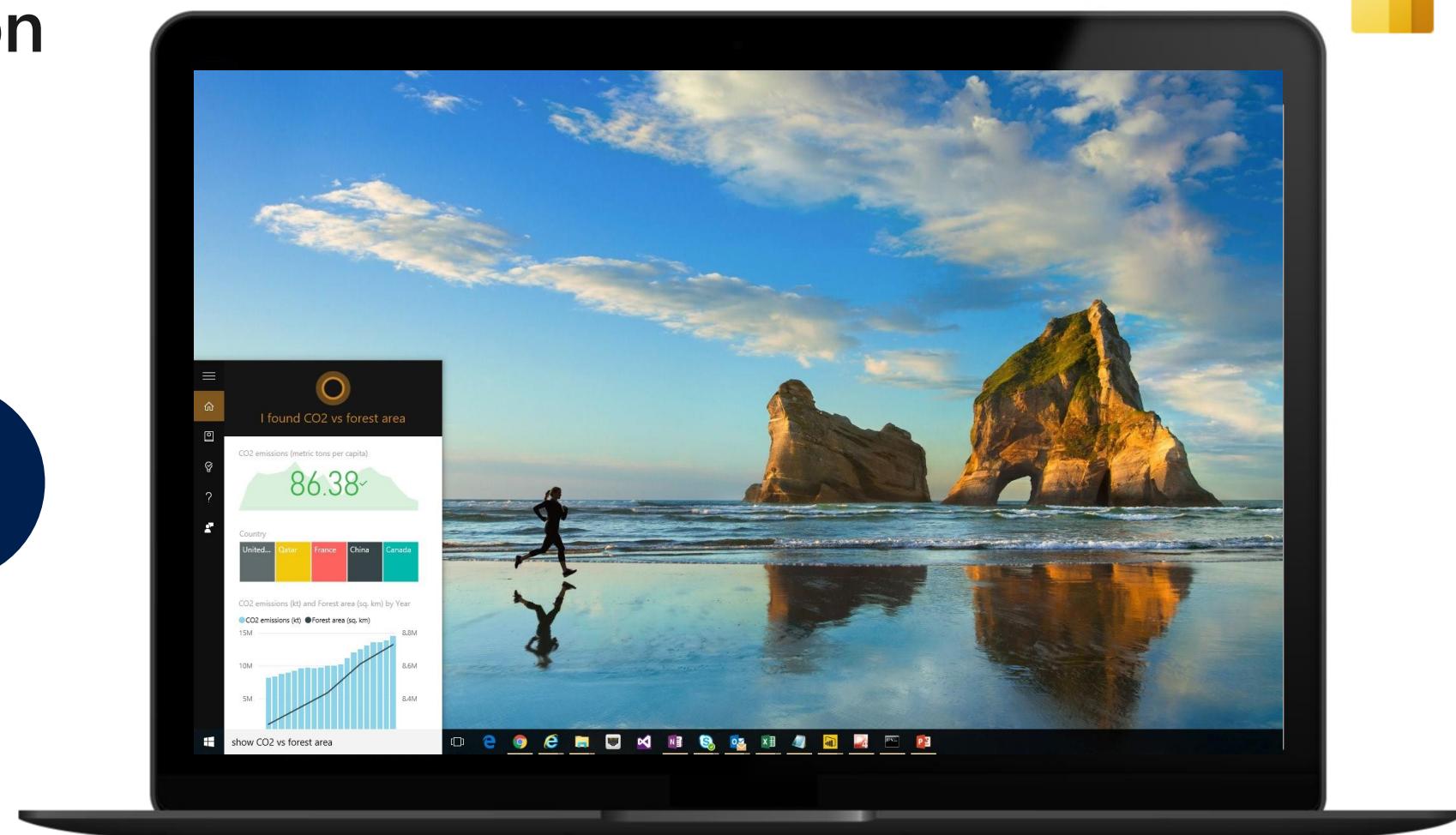


# Quick Insights



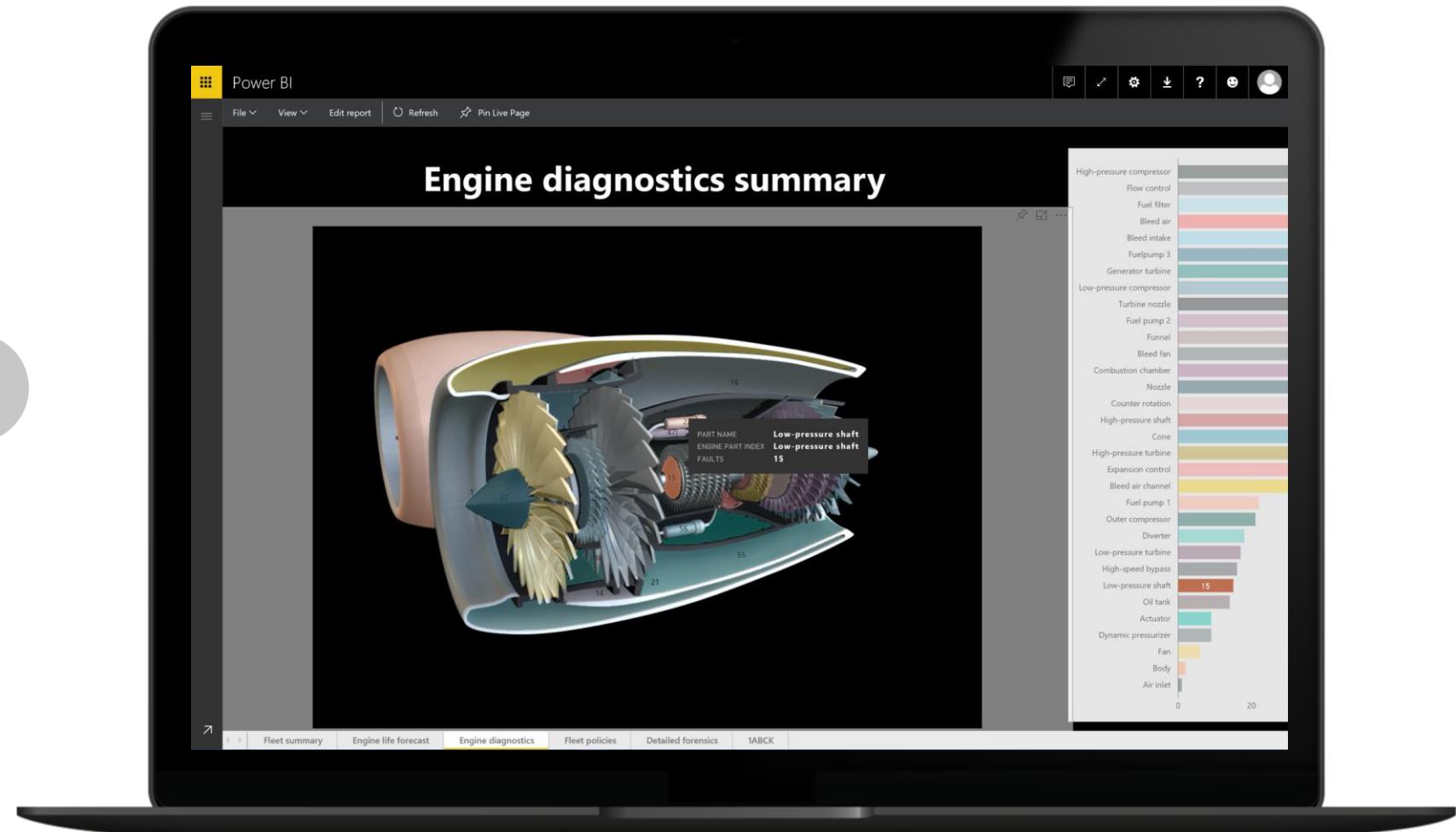
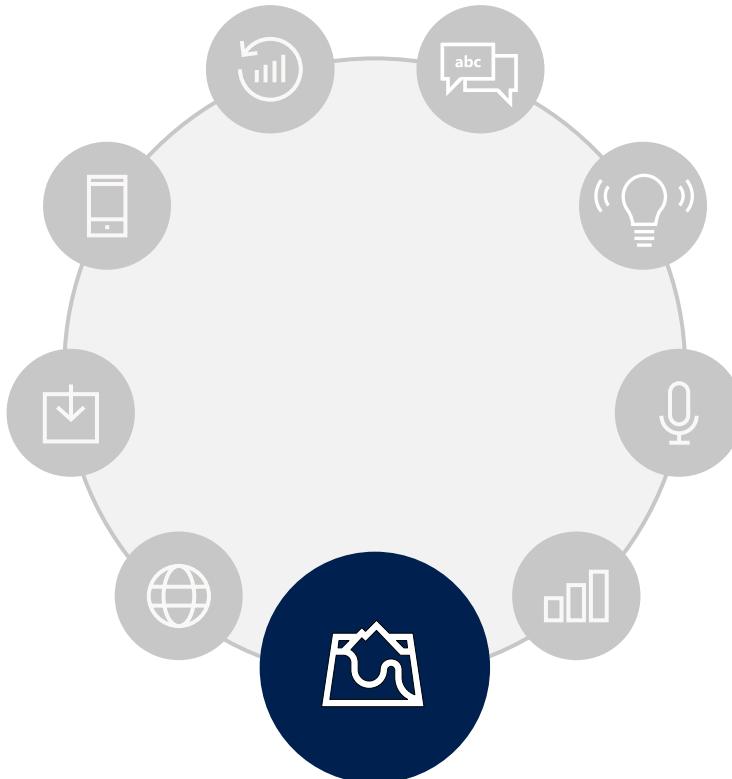


# Cortana integration



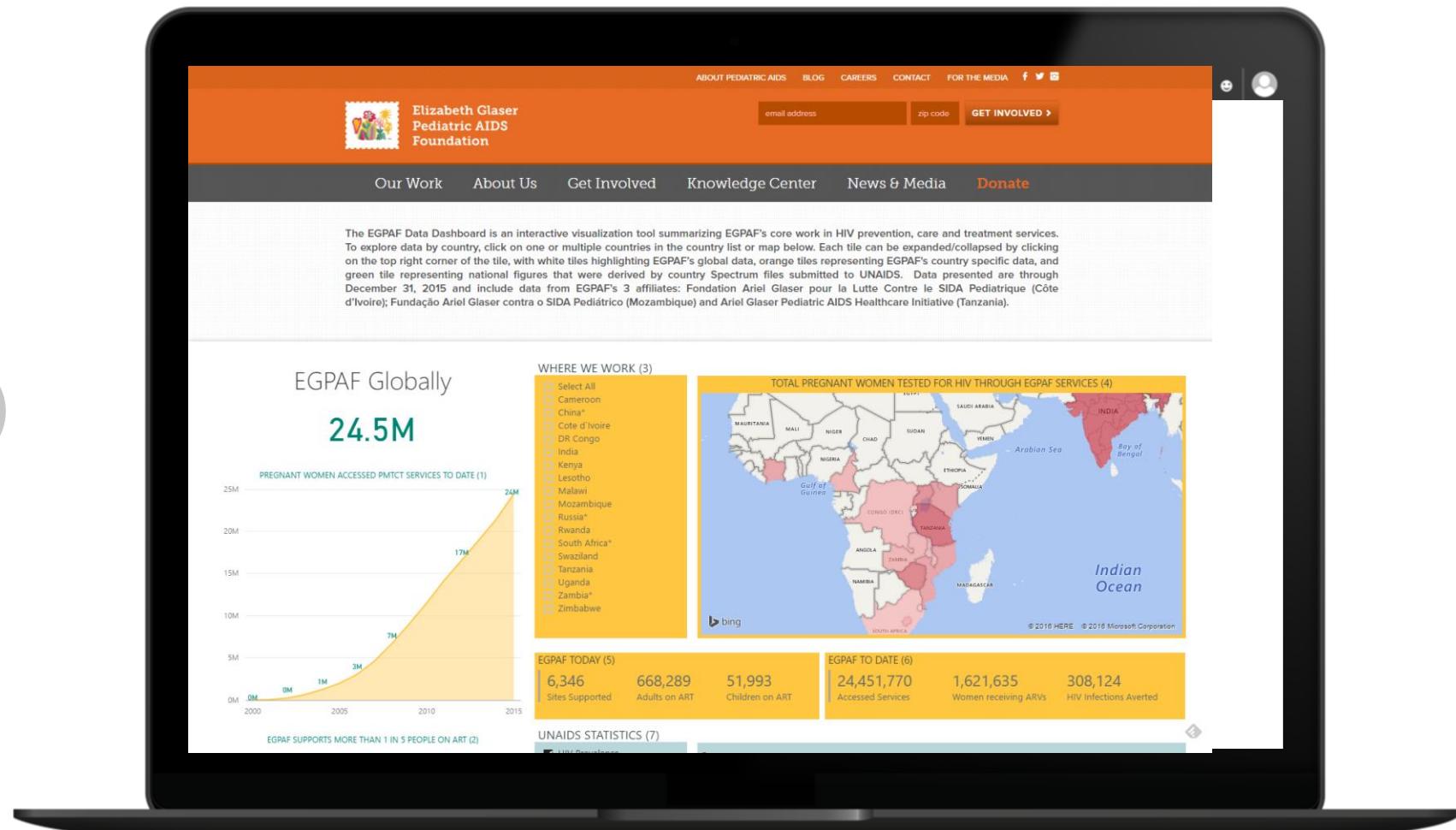


# Custom visualizations





# Publish to the web





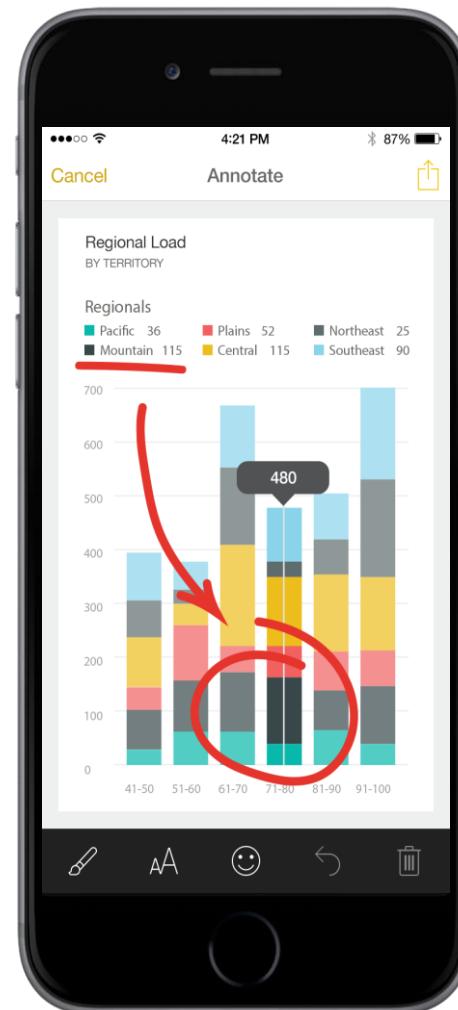
# Integration with Microsoft apps & services



A screenshot of Microsoft Excel showing the 'File' menu open. The 'Publish' option is highlighted. The main content area displays the 'Publish to Power BI' section, which includes:

- A 'Publish to Power BI' button.
- A description: "Use Power BI to create, share, and organize rich visual reports and dashboards of data insights. Power BI will automatically refresh with updates to your workbook."
- A link: "Go to Power BI".
- A link: "Learn more".
- A list: "Step 1: Save your document to OneDrive for Business.  
Step 2: Publish your document to Power BI.".
- A 'Save to Cloud' button.

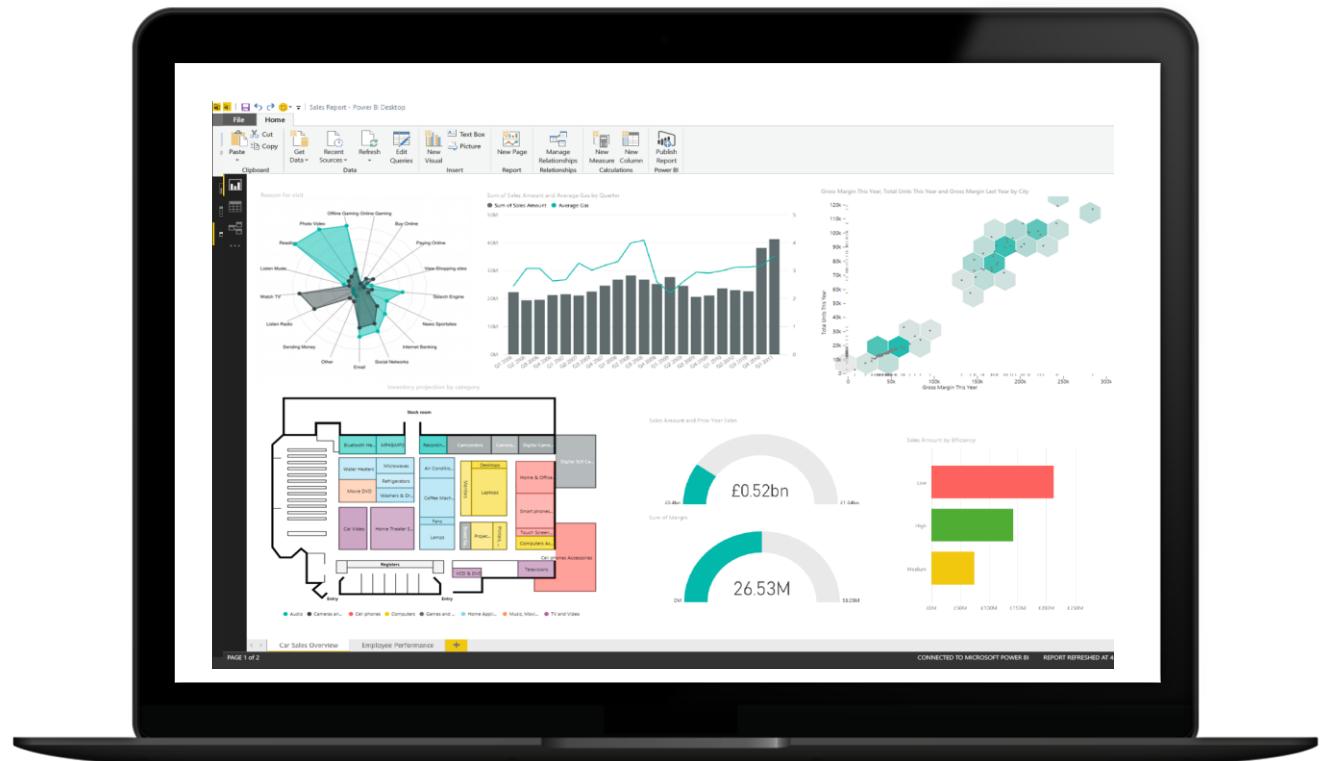
# Power BI Mobile





# Create powerful reports with Power BI Desktop

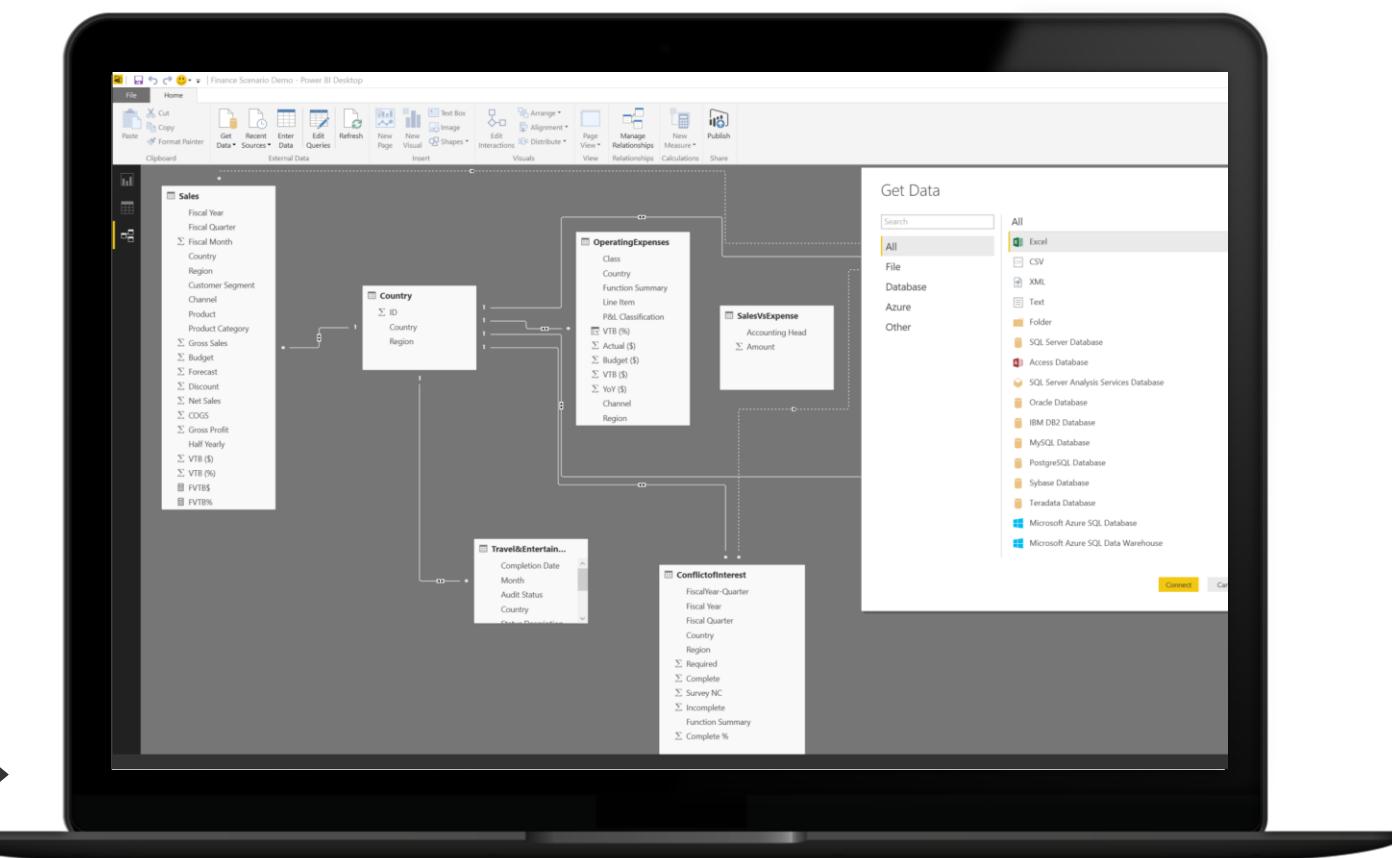
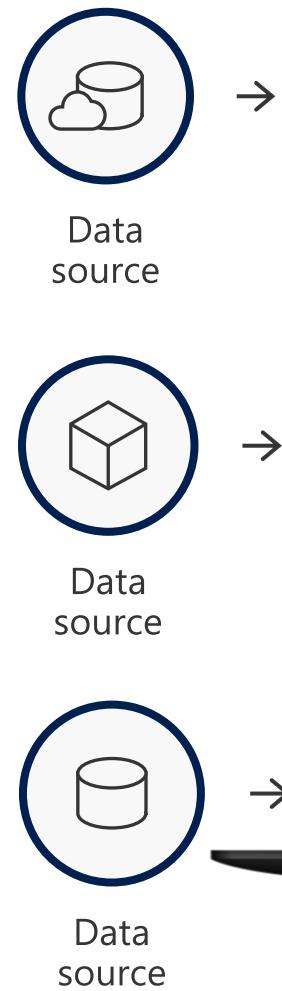
- Discovery & exploration
- Easy report authoring
- Custom visualizations
- R integration





# Connect to all the data around you

- Connect to data in the cloud and on-premises
- Shape, transform, and clean data for analysis
- Join and model data from multiple sources/types
- Extend with advanced analytics technologies like R





# One-click publish to Power BI

- Power BI Desktop  
Publish button on the ribbon
- Excel  
Publish to Power BI button

The image shows a laptop and a desktop monitor side-by-side. The laptop screen displays the 'Publish' dialog box from Microsoft Excel. The 'Publish to Power BI' button is highlighted with a red box. The desktop monitor displays the 'Finance Scenario Demo - Power BI Desktop' interface, showing various charts and data visualizations. The 'Publish' button on the ribbon is also highlighted with a red box.

**Laptop Screen (Excel Publish Dialog):**

- Info
- New
- Open
- Save
- Save As
- Print
- Share
- Export
- Publish** (highlighted with a red box)
- Close
- Account
- Options
- Feedback

**Published Report (Power BI Desktop):**

- File
- Home
- Cut
- Copy
- Format Painter
- Get Data
- Recent Sources
- Enter Data
- Edit Queries
- Refresh
- New Page
- New Visual
- Text Box
- Image
- Shapes
- Insert
- External Data
- Clipboard
- Arrange
- Alignment
- Distribute
- Edit Interactions
- Visuals
- Page View
- View
- Manage Relationships
- New Measure
- Calculation

Report Title: Revenue & Profitability

Key Metrics:

- \$20.43M Gross Sales
- \$1.66M VTB (\$)

Region:

- Asia Pacific
- Europe
- North & Central America
- South America

Visuals:

- Gross profit and net sales (Donut Chart)
- Gross sales by country (Treemap)
- Variance to budget (\$) by country (Bar Chart)
- Variance to budget (\$) by channel (Bar Chart)
- Budget and gross sales by fiscal month (Bar Chart)
- Gross sales, budget, gross profit (Stacked Bar Chart)



# Powerful self-service analysis

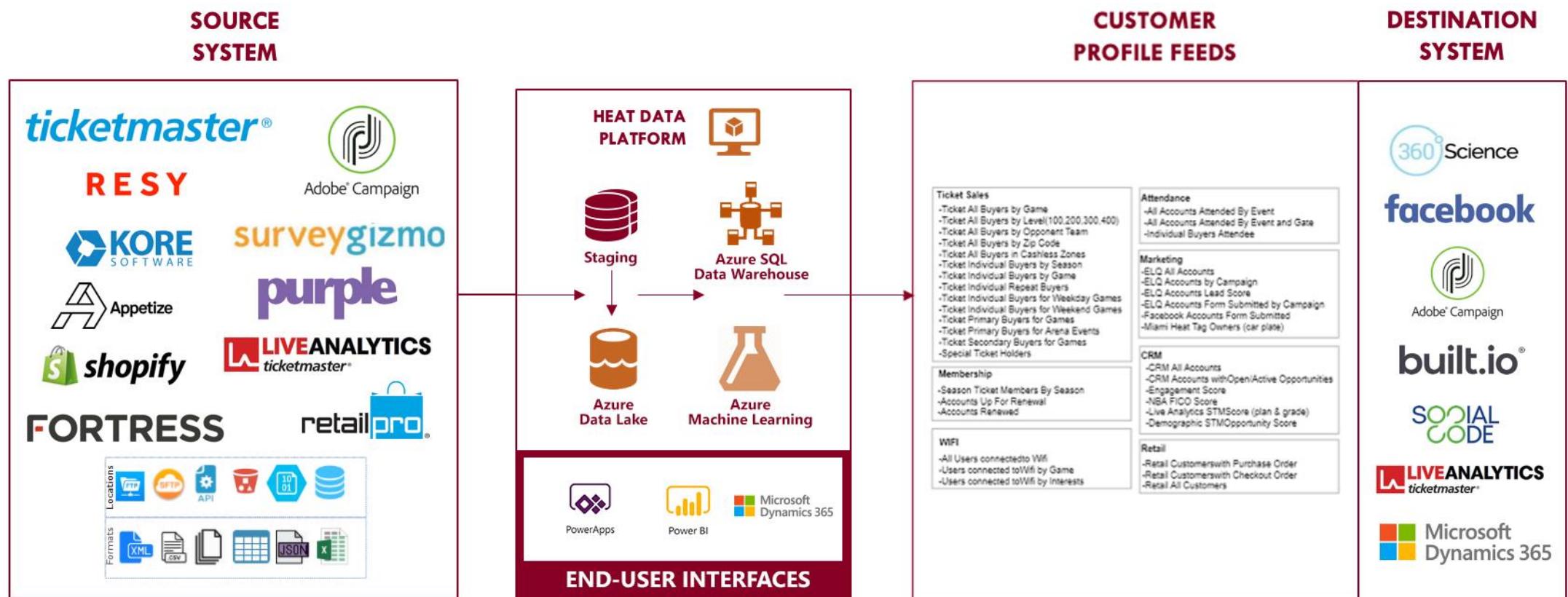
- **Power BI Desktop**  
Visual drag-and-drop data exploration and interactive reporting
- **Excel**  
Ad-hoc analysis for blending structured and unstructured data

The image displays two side-by-side screenshots of Microsoft Power Platform tools. The left screenshot shows Microsoft Excel with a 'Global Sales Analysis' dashboard. It includes a bar chart titled 'Revenue Contribution by Company' showing sales for various companies like QUICK-Stop, Hungry Owl All-Night Grocers, and BARTON'S. Below it is a line chart showing 'Sales Amount Prior Year' over time. The ribbon menu is visible at the top. The right screenshot shows Microsoft Power BI Desktop with a more advanced dashboard. It features a treemap visualization of product categories, a bar chart for 'Sales Amount by Category', a circular gauge indicating a value of £0.52bn, and a scatter plot showing 'Gross Margin This Year' versus 'Total Units This Year'. The Power BI ribbon menu is also visible at the top.



# Customer case study – Miami Heat

- Miami HEAT boosts season ticket sales by 30% and saves approximately \$1 million on operations





# Demo: How to build a simple dashboard

# Summary

- **Power BI** allows you to easily analyze, visualize, and collaborate on data. Now you can get started leveraging these capabilities to make better business decisions.
  - Power BI Desktop is a free application for PCs that lets you gather, transform, and visualize your data.
  - Power BI Desktop connects to many types of data sources, including local databases, worksheets, and data on cloud services.
  - Power BI simplifies collaboration and improves the outcome by allowing you and your colleagues to work simultaneously on the same dashboards and reports
  - Power BI service is built on Azure, Microsoft's cloud computing infrastructure and platform, ensuring your data is secure and only accessible by authenticated users.