

WORKSHOP

**The Power Platform Fundamentals Workshop: Prep
for the PL-900 Certification!**

Elaiza Benitez and Nick Doelman

PPCC 2025

WIFI: MGMResorts

Lab environments: We can provide one if required.

Lab manuals:

<https://github.com/readyxrm/pl900ppcc>

Workshop Agenda

9:00 – 9:20 Kick-off & Icebreaker

9:20 – 10:10 Power Platform at 10,000 ft

10:10 – 11:00 Dataverse Foundations

11:00 – 11:10 Break

11:10 – 12:00 Power Apps: Canvas Apps

12:00 – 1:00 Lunch (Optional Lab Time)

1:00 – 1:45 Power Apps: Model-Driven Apps

1:45 – 2:25 Power Automate

2:25 – 2:35 Afternoon Break

2:35 – 3:05 Power Pages

3:05 – 3:30 Copilot Studio

3:30 – 4:00 Exam Prep & Wrap-Up

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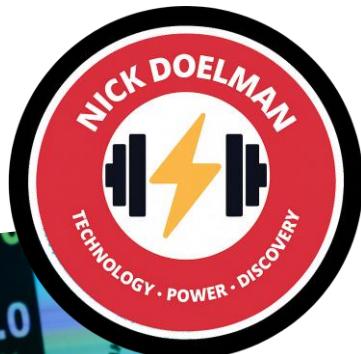
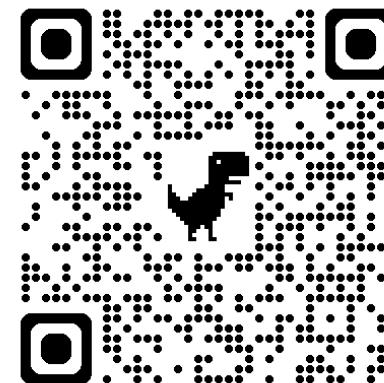
<https://www.youtube.com/@readyxrm>

MVP

MCT

Podcaster

Powerlifter



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<https://benitezhere.blogspot.com>



aka.ms/agent-academy →

aka.ms/agent-academy/videos





Workshop Goals: Explore, Build, and Achieve PL-900 Success

Explore Power Platform

Discover the features and capabilities of Microsoft's Power Platform to enhance business solutions.

Build Hands-on Apps

Engage in practical app creation and automation to develop real-world solutions effectively.

Achieve Certification Success

Prepare thoroughly to pass the PL-900 certification exam and validate your Power Platform skills.



Overview of the PL-900 Certification Exam

Key Topics Covered

The PL-900 exam covers key areas including Power Platform components, data modeling, and app building fundamentals.

Skills Measured

Skills measured include understanding of Dataverse, Power Apps, Power Automate, Power Pages, and Copilot capabilities.

Exam Format

The exam format includes multiple-choice questions designed to test practical knowledge and conceptual understanding.

<https://learn.microsoft.com/credentials/certifications/resources/study-guides/pl-900>





Today's Journey: Volunteer Shifts Scenario

Volunteer Shift Management

The scenario emphasizes effective management of volunteer shifts for streamlined operations.

Practical Hands-On Labs

Hands-on labs provide practical experience in applying volunteer management practices.

You will build:

Data model in Dataverse

Canvas Power App, a Model-driven Power App, a Power Automate flow, and a Power Pages website, and an interactive Copilot

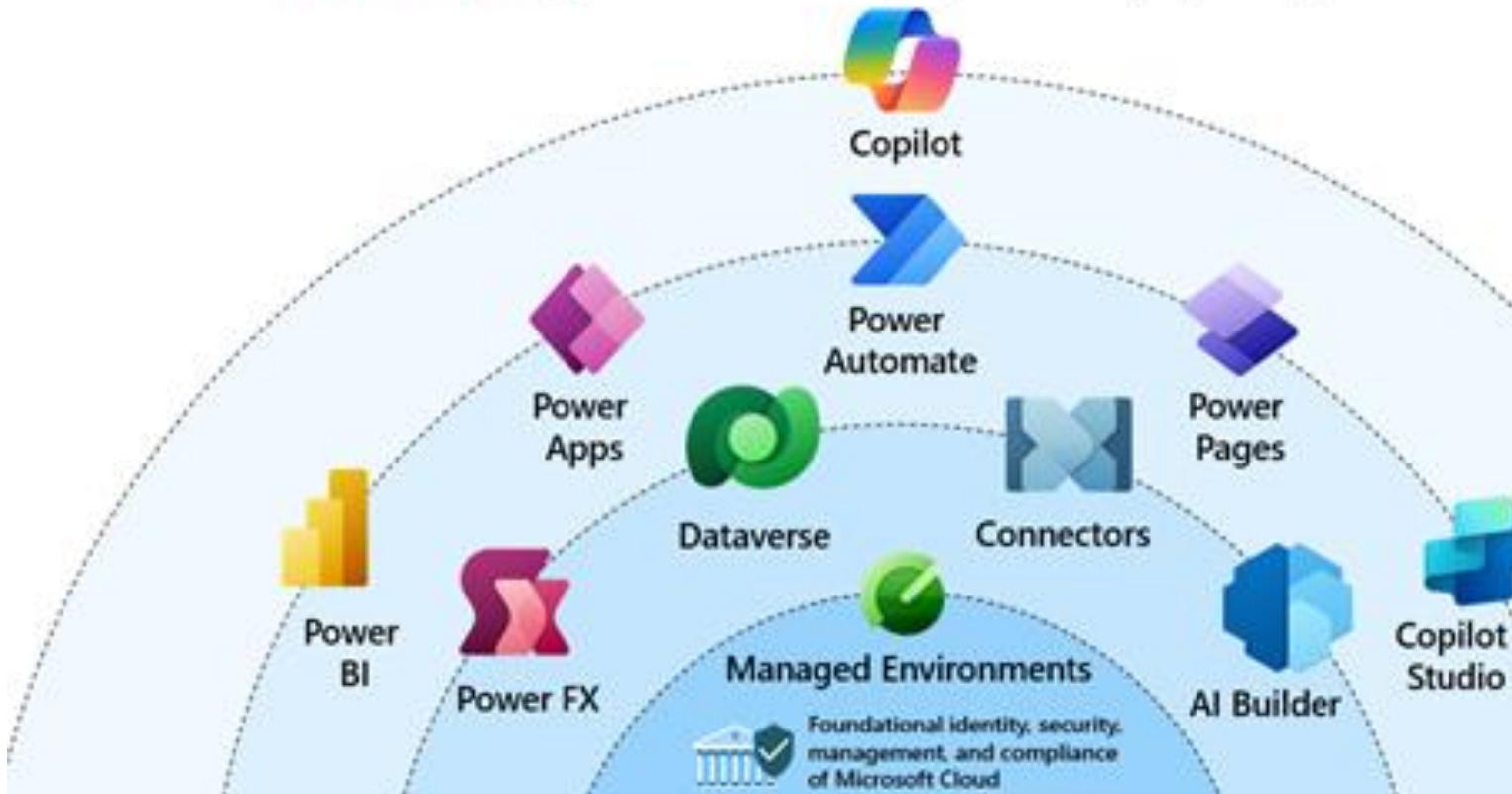
Power
Platform at
10,000 Ft



Products included in Microsoft Power Platform

Microsoft Power Platform

The world's **most complete** platform for developer productivity, spanning no-code to pro code



Introducing Power Apps, Power Automate, Power Pages, Dataverse, Copilot Studio



Power Apps - App Building

Power Apps enables users to build custom apps quickly with minimal coding, enhancing productivity and innovation.



Power Automate - Workflow Automation

Power Automate streamlines repetitive tasks by automating workflows across multiple applications and services.



Power Pages - Web Portals

Power Pages allows creation of secure, responsive web portals without extensive coding knowledge, enabling external user engagement.



Dataverse - Data service

Dataverse provides a scalable and secure data platform for securely storing and managing business data seamlessly.

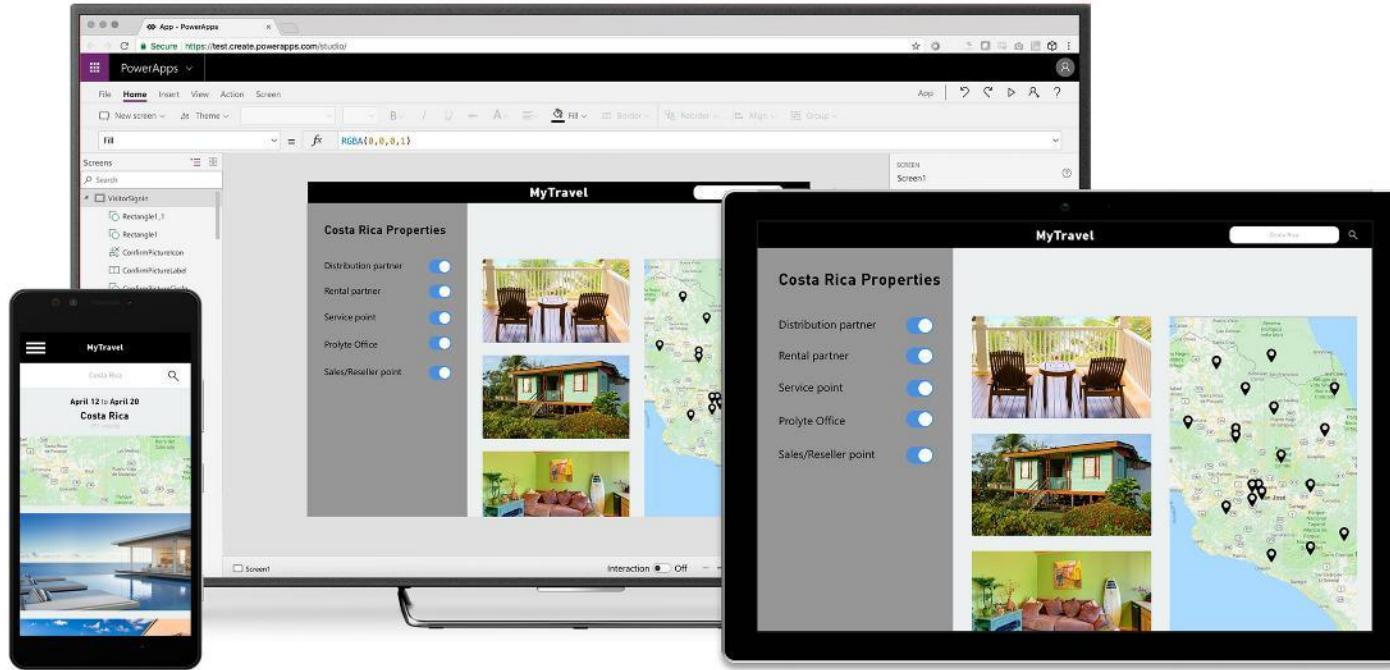


Copilot Studio - No-Code Agents

Copilot Studio empowers users to create intelligent agents without coding, enhancing customer interactions efficiently.



Use Power Apps to build and consume solutions for web and mobile



- 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.



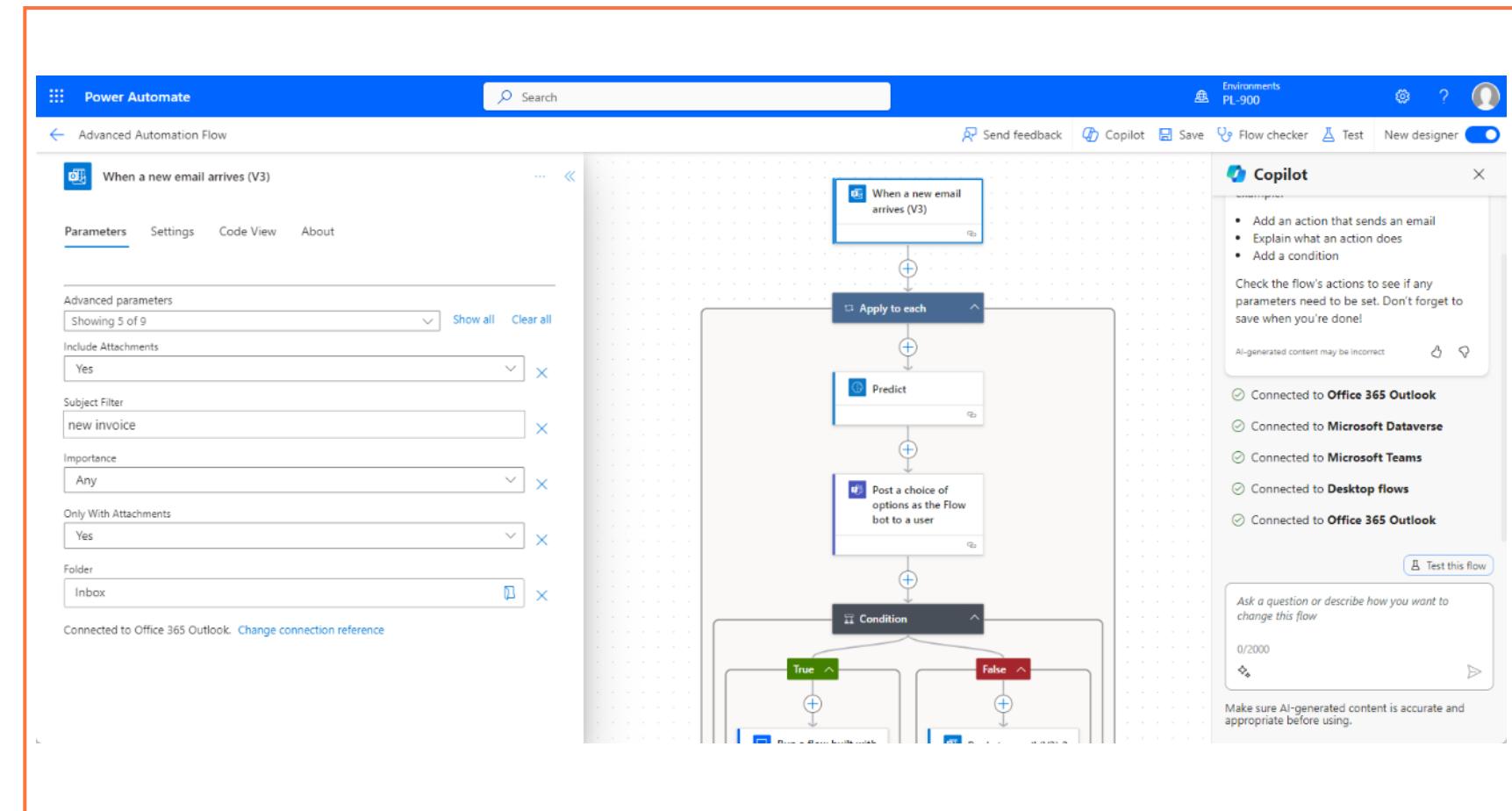
Automate and integrate business processes with Power Automate

Automate and model business processes across your apps and services.

Create simple automations to advanced scenarios with branches, loops, and more.

Trigger actions, grant approvals, and get notifications right where you work.

Automate legacy, on-premises, and cloud-based applications and services.





Use Power Pages to quickly create secure, low-code business websites

Easily build websites with ready-to-use templates or create customizable experiences. Design your pages with text, video, imagery, business data, forms, and lists.

Give developers the ability to add deeper functionality and capabilities to websites with tools like Visual Studio Code, GitHub, and Azure DevOps.

Mitigate security concerns around website content through role-based access controls, Microsoft Azure compliance and governance capabilities.

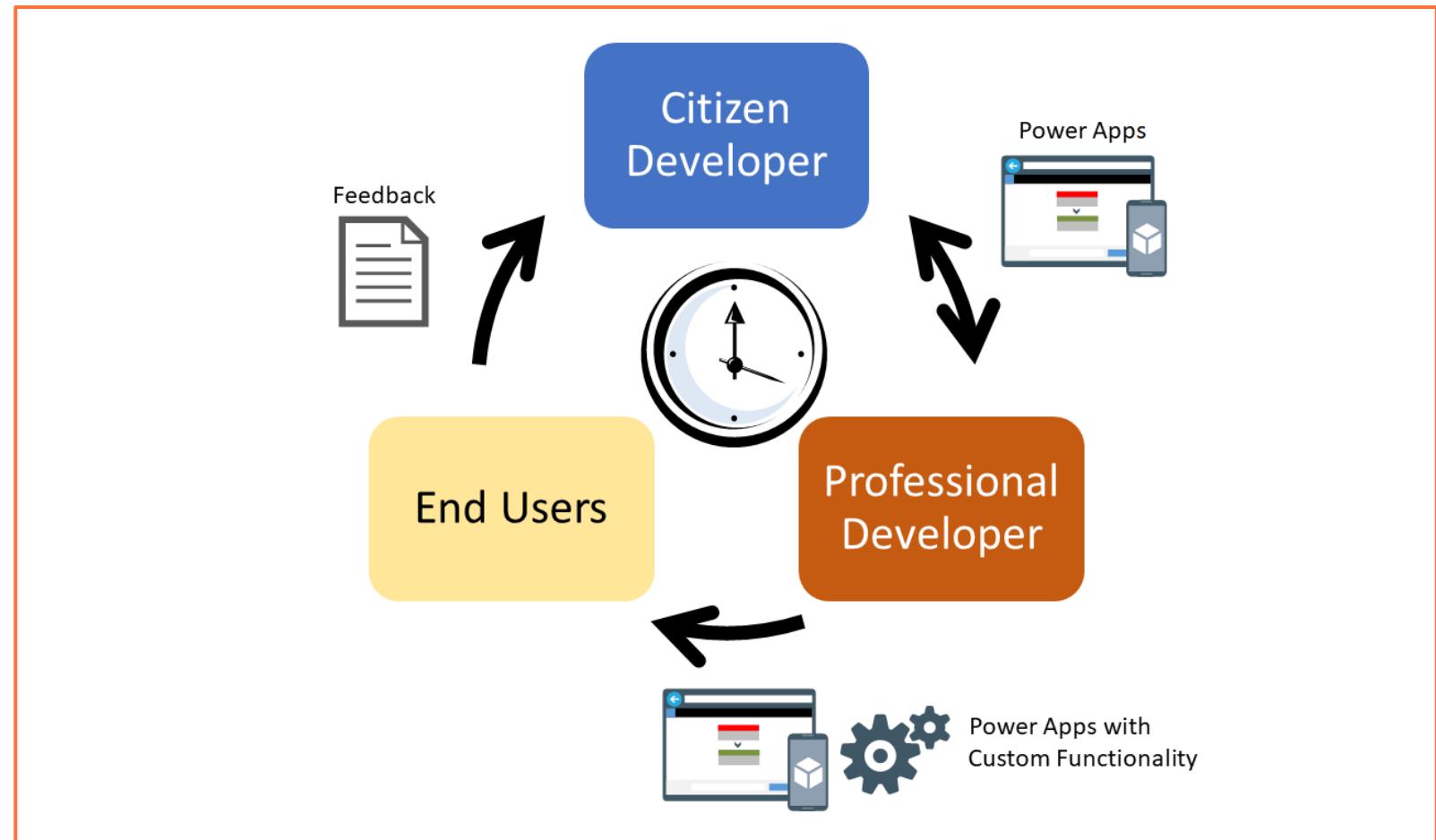
The screenshot shows the Microsoft Power Pages editor interface. On the left, there's a sidebar with navigation tabs for 'Pages', 'Styling', 'Data', and 'Set up'. Under 'Main navigation', there are links to 'Home', 'Pages', 'Contact us', 'My new Page', 'Directory', 'My Sample Page', and 'Suppliers'. Under 'Other pages', there are links to 'Access Denied', 'Default Offline Page', and 'Page Not Found'. The main canvas has a dark blue header with 'Company name' and a sub-header. Below it, there's a text input field with placeholder text 'Create an engaging headline, welcome, or call to action' and a button 'Add a call to action here'. To the right of this is a large image of a colorful, modern building facade. At the bottom, there's a section titled 'Introduction section' with placeholder text 'Create a short paragraph that shows your target audience a clear benefit to them if they continue past this point and offer direction about the next steps'. On the right side of the editor, there's a 'Copilot' feature with a 'PREVIEW' button, a message icon, and a note 'Describe what you need and AI will help create it'. Below this, there's a text input box for 'Choose a starter prompt, request an action, or ask a question' and a note 'Make sure AI-generated content is accurate and appropriate before using. [Learn more](#) | [See terms](#)'. The entire interface is framed by a red border.

The business value of Microsoft Power Platform

Easily adapt to changing workforce expectations by delivering custom, collaborative, digital experiences.

Become more agile by quickly building solutions based on your organization's rapidly changing needs.

Reduce extra costs associated with custom applications by leveraging low-code/no-code tools.





Enable seamless connectivity with Connectors

- Essential interfaces for integrating disparate services and data sources.
- Equipped with predefined actions that streamline interactions with data sources.
- Create your own custom connectors as needed.

Standard connectors

Home
Create
Templates
Learn
My flows
Approvals
Solutions
Automation center
Process mining
AI hub
Desktop flow activity
Connectors

Office 365 Outl... SharePoint OneDrive for B... Microsoft Forms Planner Microsoft Teams

Outlook.com RSS Power BI OneNote (Busi...) Notifications Office 365 Users

Google Calendar Standard approv... X (Unknown) Excel Online (R) Mail Microsoft To Do



Standard vs Premium

Standard connectors are included in your standard Microsoft 365 subscription:

The screenshot shows the 'Standard connectors' section of the Microsoft Power Automate connector catalog. At the top, there is a search bar labeled 'Search connector' and a dropdown menu labeled 'Standard connectors'. Below this, under 'Recently added connectors', there are six icons: Confluence (blue wavy icon), Azure AI Found... (purple and blue icon), Copilot for Fina... (green and blue icon), Microsoft Secur... (blue and white icon), Encodian - Word (blue icon with white 'E'), and Encodian - Pow... (blue icon with white 'E'). Under 'Standard connectors', there are six more icons: Office 365 Outl... (blue icon with white 'O'), SharePoint (black icon with white 'S'), OneDrive for B... (blue cloud icon), Microsoft Forms (black icon with white 'F'), Planner (purple and pink icon), and Microsoft Teams (blue icon with white 'T').

Premium connectors require a Power Apps or Power Automate premium license:

The screenshot shows the 'Premium connectors' section of the Microsoft Power Automate connector catalog. At the top, there is a search bar labeled 'Search connector' and a dropdown menu labeled 'Premium connectors'. Below this, under 'Recently added connectors', there are six icons: PDF4me Excel (blue and red icon), CleverTap (red icon with white 'C'), Send an SMS (purple icon with white 'S'), Draup MCP Ser... (light gray icon with blue arrow), Bluesky Social (... (orange icon with white 'B'), and Azure Confiden... (purple icon with three cubes). Each icon has a small green 'PREMIUM' badge below it. Under 'Premium connectors', there are six more icons: Documentero (blue icon with white document and gear), HighQ (orange icon with white dots), Microsoft Power Automate (black icon with white 'P'), Microsoft Power Apps (blue icon with white 'A'), Microsoft Power BI (purple icon with white 'B'), and salesforce (blue cloud icon with white 's').



Put all your data to work with Microsoft Dataverse

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

A screenshot of the Microsoft Power Apps Tables page. The page has a purple header with a search bar and various navigation links like 'New table', 'Open', 'Edit', 'Import', 'Export', 'Properties', 'Publish', 'Advanced', and 'Delete'. On the left, there's a sidebar with 'Power Apps' at the top, followed by 'Home', 'Create', 'Learn', 'Apps', 'Dataflows', 'Flows', 'Tables' (which is selected and highlighted in purple), 'More', and 'Power Platform'. The main area shows a list of tables: 'Country', 'CountryStats', 'CPETHEMEAPPING', 'CSGTeam', 'Currency', 'Customers' (which is highlighted with a red box), 'DC', 'Demandes de Formation', and 'DirectReports'. Each table entry includes its name, ID, type, status, and whether it's a primary key.

Name	ID	Type	Status	PK
Country	cr9b3_country	Standard	No	
CountryStats	cr9b3_countrystats	Standard	No	
CPETHEMEAPPING	cr9b3_cpethemem...	Standard	No	
CSGTeam	speakerr_csgteam	Standard	No	
Currency	transactioncurrency	Standard	Yes	
Customers	cr9b3_customers	Standard	No	
DC	craf9_dc	Standard	No	
Demandes de Formation	cr9b3_demandesd...	Standard	No	
DirectReports	cr9b3_directreports	Standard	No	



Simplify design with Power Fx

Power Fx is used throughout Microsoft Power Platform.

- Power Apps:** As mentioned above, Power Fx is the foundational language used when building canvas apps in Power Apps.
- Microsoft Dataverse:** It can be used to build calculated columns in Dataverse tables.
- Microsoft Copilot Studio:** Power Fx formulas can be used when building out topics in Copilot Studio.

The screenshot shows a Microsoft Power App interface. At the top, there is a formula bar with the expression `If(IsBlank(PropertyName.Text),false,true)` highlighted by a red box. Below the formula bar, the app displays a list of properties on the left and a detailed view of a selected property on the right. The selected property is "1234 Sample Drive S, Fargo N.D." with an asking price of \$450,000.00, 3 bedrooms, and 2.5 bathrooms. A red arrow points to the property name in the list. The app also includes sections for "Listing Images" showing "Front" and "Inside" views, and buttons for "Edit Property" and "Schedule Open House".

DEMO – Volunteer Shift Solution

Power Apps | Shift Management

Active Contacts

Full Name	Email	Company Name	Business Phone
Jim Glynn (sample)	someone_j@example.com	Coho Winery (sample)	555-0109
Maria Campbell (sample)	someone_d@example.com	Fabrikam, Inc. (sample)	555-0103
Nancy Anderson (sample)	someone_c@example.com	Adventure Works (sample)	555-0102
Patrick Sands (sample)	someone_k@example.com	Alpine Ski House (sample)	555-0110
Paul Cannon (sample)	someone_h@example.com	Alpine Ski House (sample)	555-0107
Rene Valdes (sample)	someone_i@example.com	A. Datum Corporation (sample)	555-0108
Robert Lyon (sample)	someone_g@example.com	Contoso Pharmaceuticals (sample)	555-0106
Scott Konersmann (sample)	someone_f@example.com	City Power & Light (sample)	555-0105
Sidney Higa (sample)	someone_a@example.com	Blue Yonder Airlines (sample)	555-0104

Rows: 13

Volunteer Hub

Shifts

Search list in your own words

View AI Insights

Shift Name	Start Time	End Time	Location	Max Volunteers	Description
Afternoon	6/1/2024 1:00 PM	6/1/2024 5:00 PM	Hall B	4	Late shift
Evening	6/1/2024 6:00 PM	6/1/2024 10:00 PM	Hall C	6	Night shift
Holiday	6/5/2024 10:00 AM	6/5/2024 2:00 PM	Hall D	2	Holiday shift
Morning	6/1/2024 8:00 AM	6/1/2024 12:00 PM	Hall A	5	Early shift
Test Shift	10/23/2025 4:00 AM	10/23/2025 5:00 AM			
test2	10/23/2025 4:00 AM	10/23/2025 5:00 AM			Sunny
Weekend	6/2/2024 9:00 AM	6/2/2024 3:00 PM	Hall A	3	Weekend

Volunteer Assignments

New

Assign 2

Assignment Name: Assign 2
Hours Worked: 3
Notes: On time
Status: Confirmed

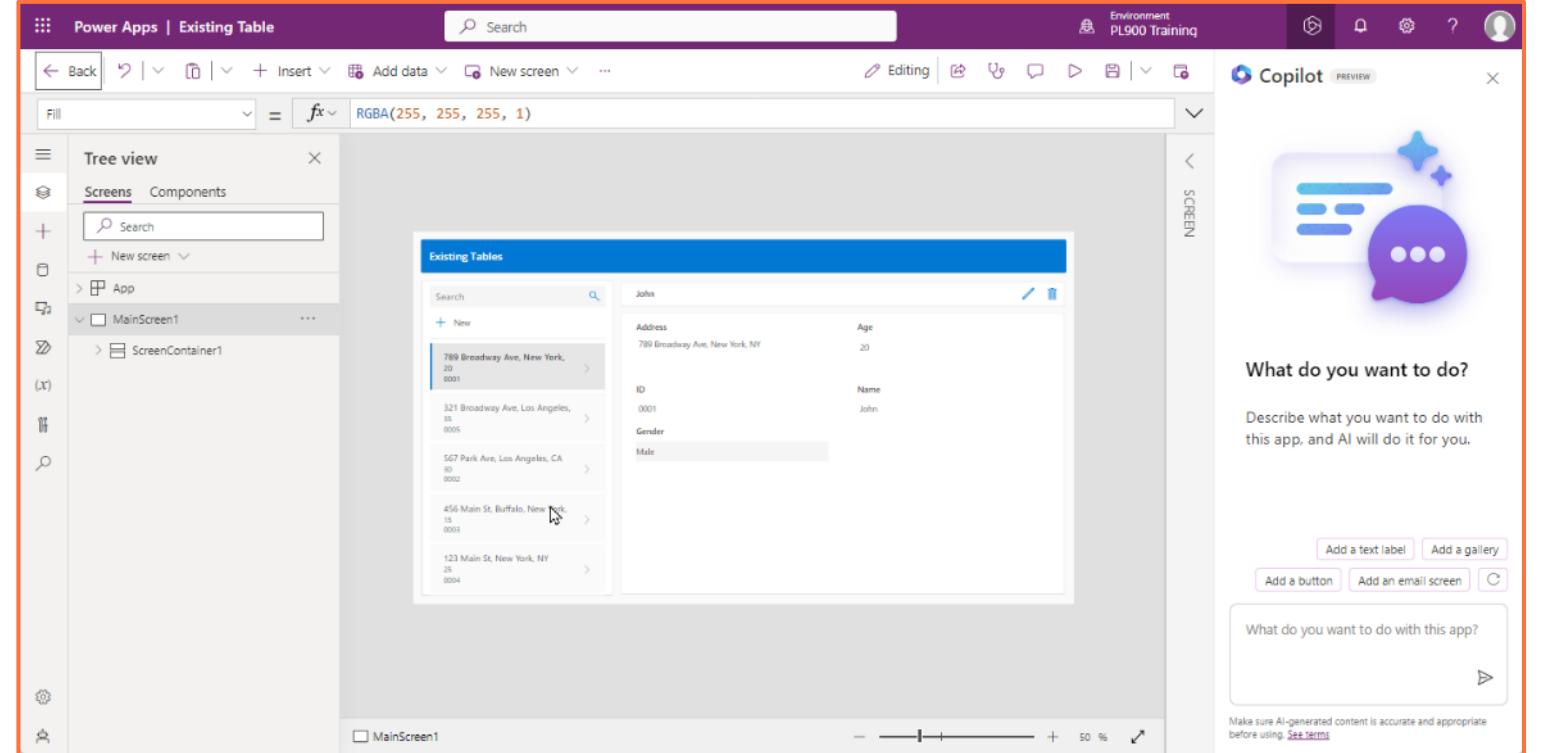
Contact: Scott Konersmann (sample) X
Yvonne McKay (sample)
Susanna Stubberod (sample)
Nancy Anderson (sample)
Maria Campbell (sample)
Sidney Higa (sample)
Scott Konersmann (sample)

Shift: Afternoon



Streamline productivity with Copilot

- Simplify app creation by describing the type of app you want to build.
- Embed Copilot controls in your applications to provide users with an AI-powered experience.
- Easily create flows by telling Copilot what your flow should do.
- Quickly create data models by telling Copilot what you need.



Crafting effective Copilot prompts



A good copilot prompt is descriptive and provides Copilot with a level of detail to ensure that Copilot knows exactly what to return.

A good prompt should contain the four elements below:

Goal

What do you want from Copilot?



Context

Why do you need it and who is involved?



Source(s)

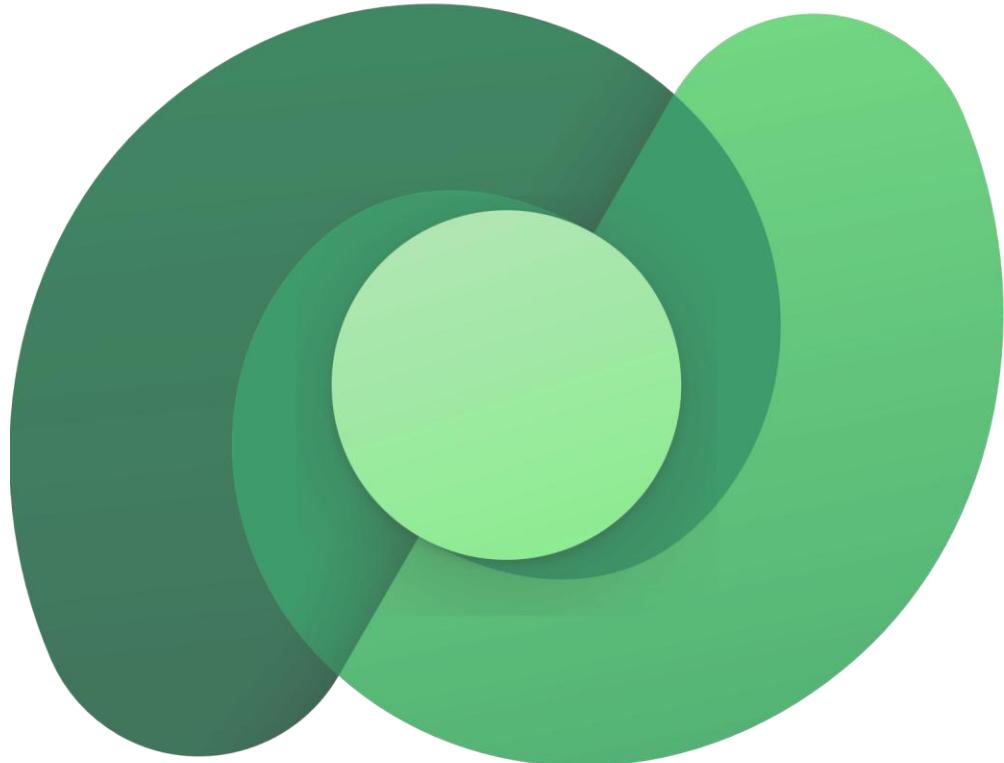
What information or samples do you want Copilot to use?



Expectations

How should Copilot respond to best fulfill your request?

Dataverse Foundations

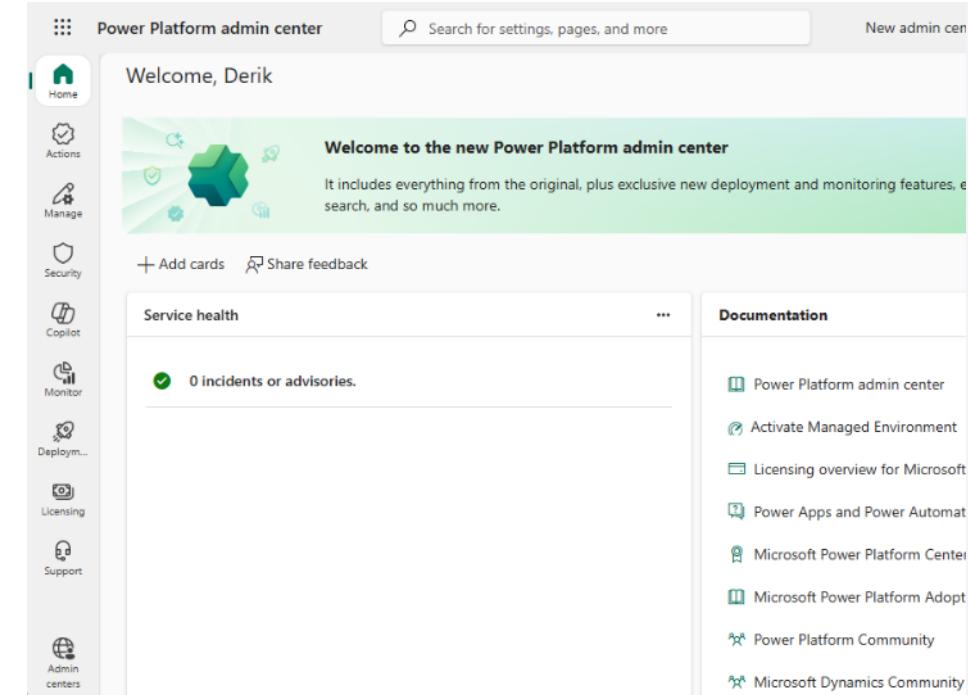


Power Platform admin center

Administration settings are available in the Power Apps admin center. When you look to manage Dataverse, always check for administration settings as your first step.

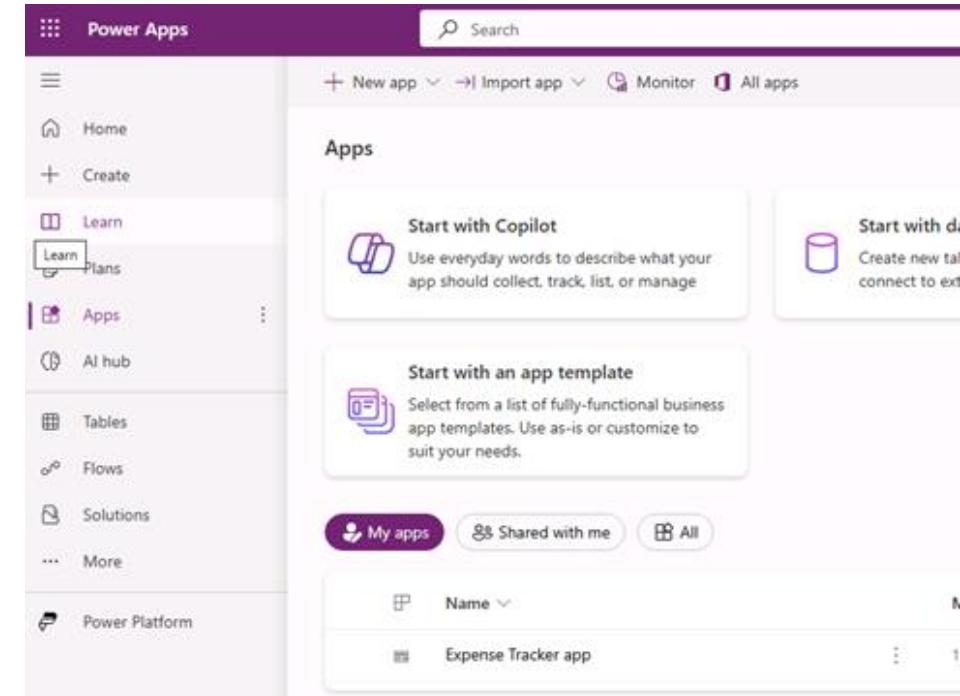
Some of the options available include:

- **Actions:** View recommendations about your Power Platform implementation. The recommendations enhance security, reliability, and overall health of your implementation.
- **Manage:** Manage your environments, environment groups, and tenant settings.
- **Monitor:** Measure and improve operational health metrics of resources built or deployed in Power Platform, such as apps.
- **Security:** Run your organizational workloads in the safest way possible with a wide set of security features available.
- **Copilot:** Access educational resources, track usage, and access governance controls about Copilot features.



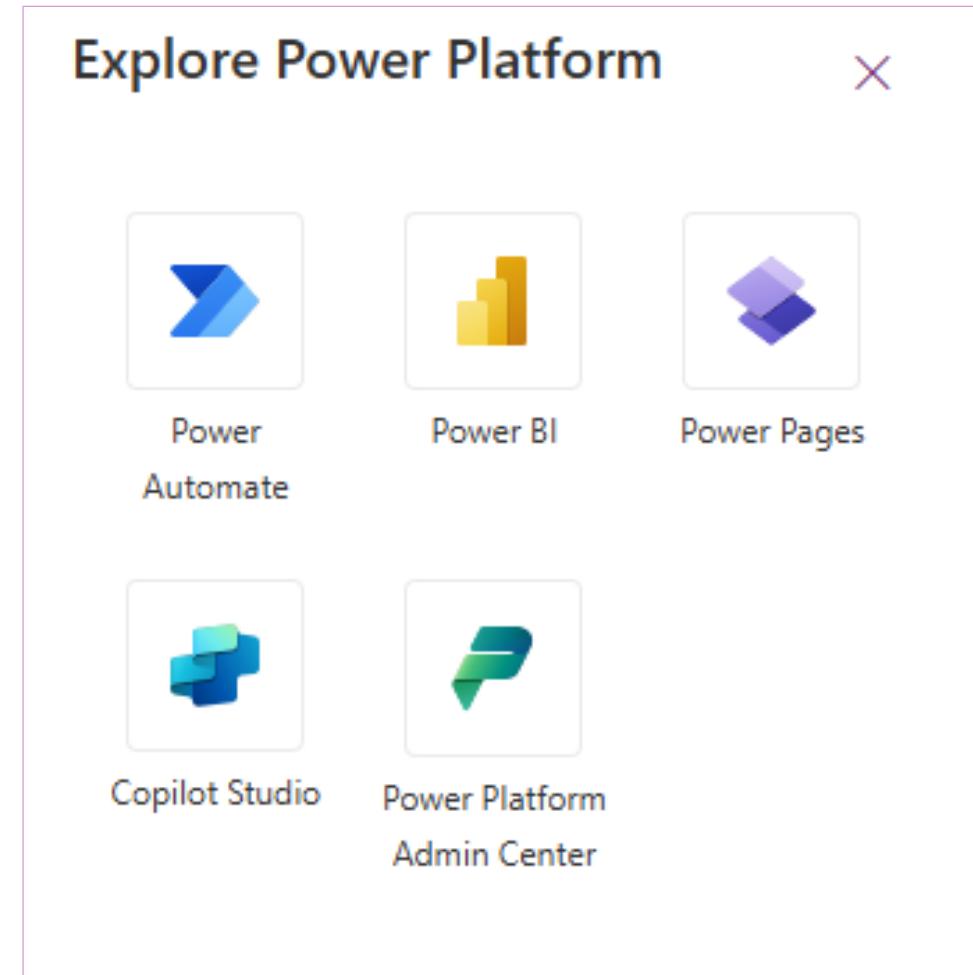
Power Apps maker Portal

- **Create:** Used to create new applications.
- **Plans:** Provides access to any plans that you have deployed.
- **Apps:** Used to manage your existing apps.
- **Tables:** Allows you to manage the Microsoft Dataverse tables deployed in this environment.
- **Flows:** Provides access to any flows created for this environment.
- **Solutions:** Provides access to any solutions deployed to this environment.
- **Websites:** Provides access to any websites created in this environment.
- **Agents:** Provides access to any agents created for this environment.

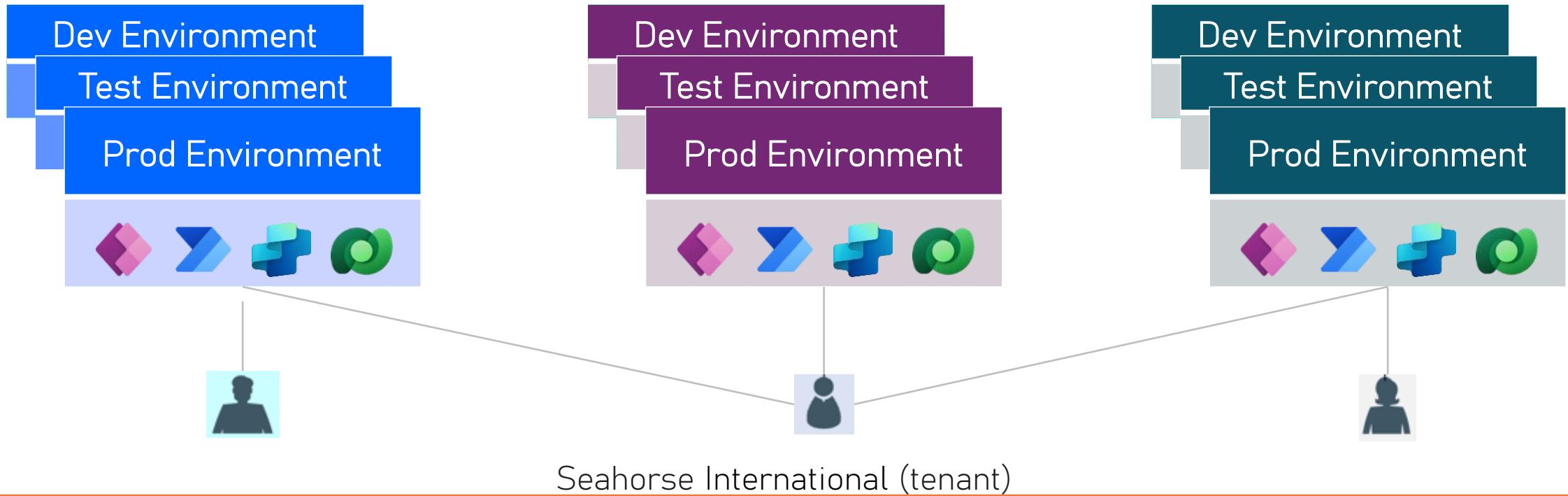


Additional Power Platform Maker Portals

- **Power Automate:** Used to build and manage your Power automate flows. <https://make.powerautomate.com>
- **Power BI:** Used to create and manage Power BI dashboards. <https://App.powerbi.com>
- **Power Pages:** Used to create modern, secure business websites that can be used by employees and customers. <https://make.powerpages.microsoft.com>
- **Copilot Studio:** Used to create intelligent agents that can be used by employees and customers. <https://Copilotstudio.microsoft.com>



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 associated with that database.
- Each environment is created under a Microsoft Azure Active Directory (Azure AD) tenant—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, it is created within datacenters in that geographic location.

Types of environments

Type	Description
Production	Used for permanent work in an organization. Requires 1 GB of available database capacity.
Default	Automatically created for each tenant and shared by all users.
Sandbox	Nonproduction environments for development and testing.
Trial	Temporary environments for short-term testing, expiring after 30 days.
Developer	Created by users with the Developer Plan license, intended for personal use.
Microsoft Dataverse for Teams	Automatically created for Teams when apps are built or installed.

Managed Environments

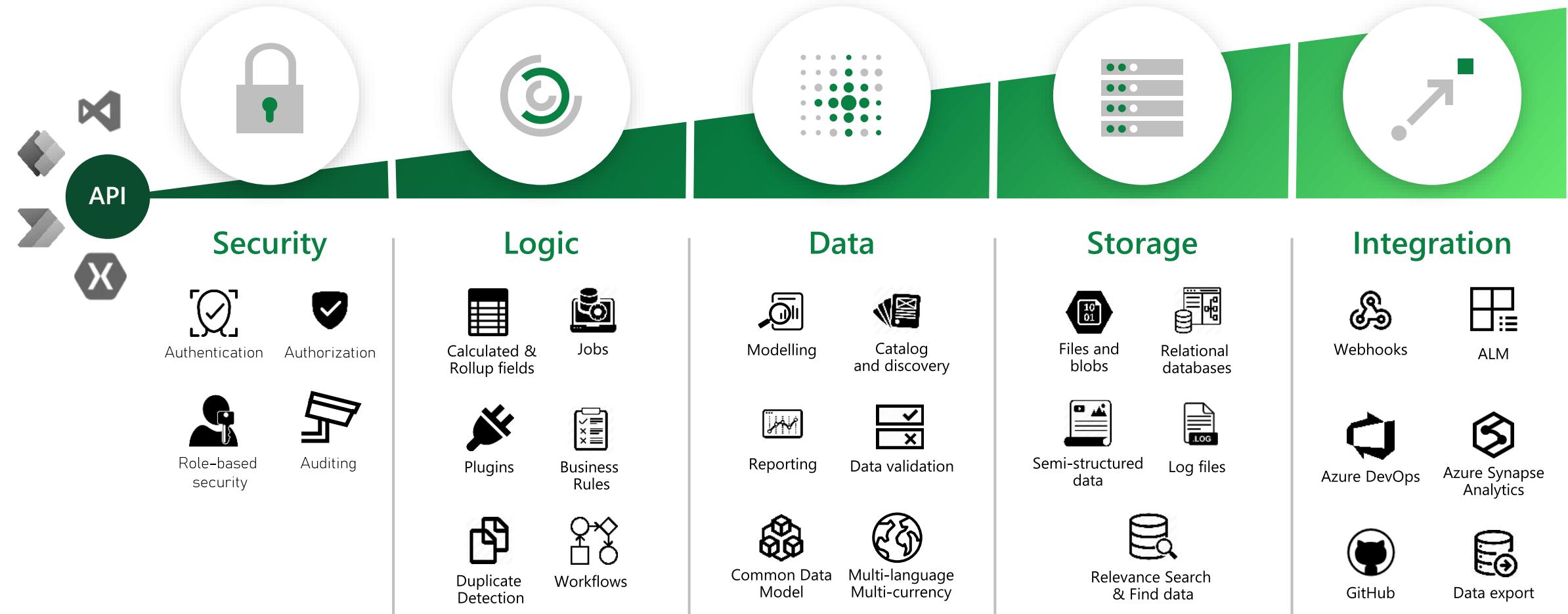


Managed Environments is a suite of premium level capabilities administrators can use to manage Power Platform at scale.

Key features available in a Managed Environment include:

- **Limit sharing:** Allows administrators to limit how broadly users can share canvas apps.
- **Weekly usage insights:** Every week analytics are delivered to your mailbox.
- **Data policies:** Data policies define the connectors that data can be shared with.
- **Pipelines in Power Platform:** Power Platform administrators can create one or more pipelines, associate any number of environments, then share access with those that will administer or run pipelines.
- **Solution checker:** Solution checker in Managed Environments is used to enforce rich static analysis checks on your solutions against a set of best practice rules and identify problematic patterns.

Microsoft Dataverse – what's in the box?



Overview of Microsoft Dataverse



Dataverse

- Cloud-based data storage and management platform

Provides:

- Data storage
- Security
- Integration
- Scalability
- Low-code development

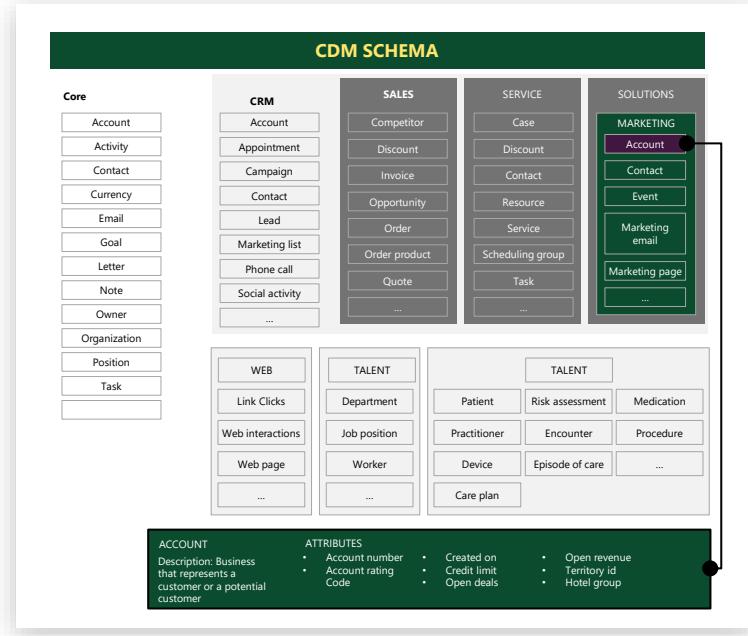
Common Data Model

- Set of open-sourced, standardized, extensible data tables and relationships

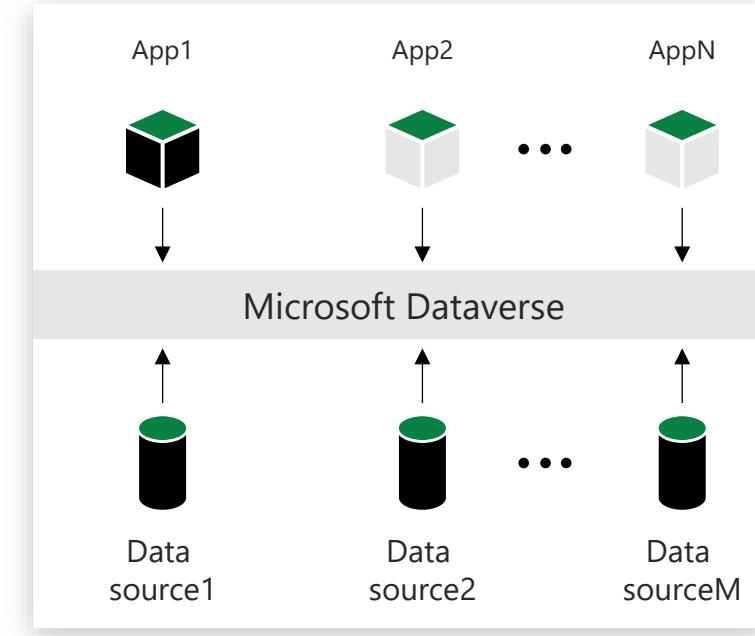
Provides:

- Standardization
- Extensibility
- Interoperability

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

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.

Activity: Specialized tables for tracking activities such as appointments, emails, phone calls, and tasks.

Virtual: These tables allow you to integrate data from external sources into Dataverse without physically storing the data in Dataverse

Elastic: These tables are designed to handle very large datasets, optimized for performance and scalability

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 (for example: date columns).

Understand relationships

1

Relationships represent the way that tables are connected.

2

One-to-many relationships:

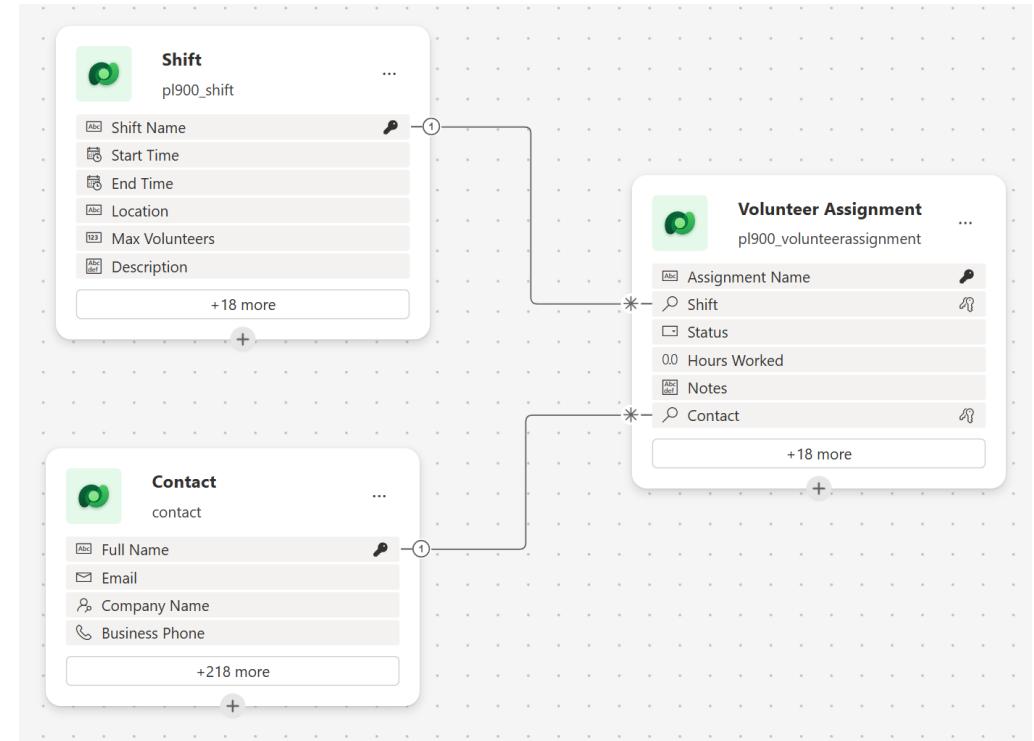
Can be parent-child relationships

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

3

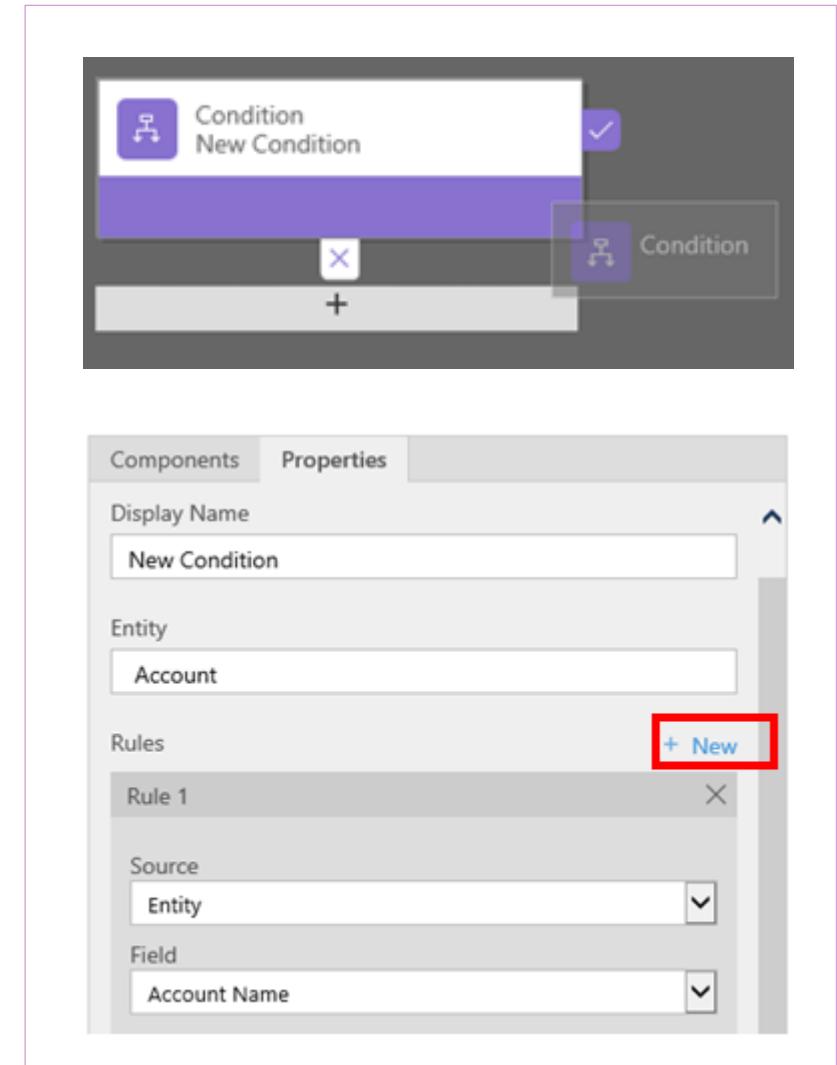
Many-to-many relationships:

Example: A contact can attend multiple events; an event might have many contacts who attend.



Methods to implement business logic

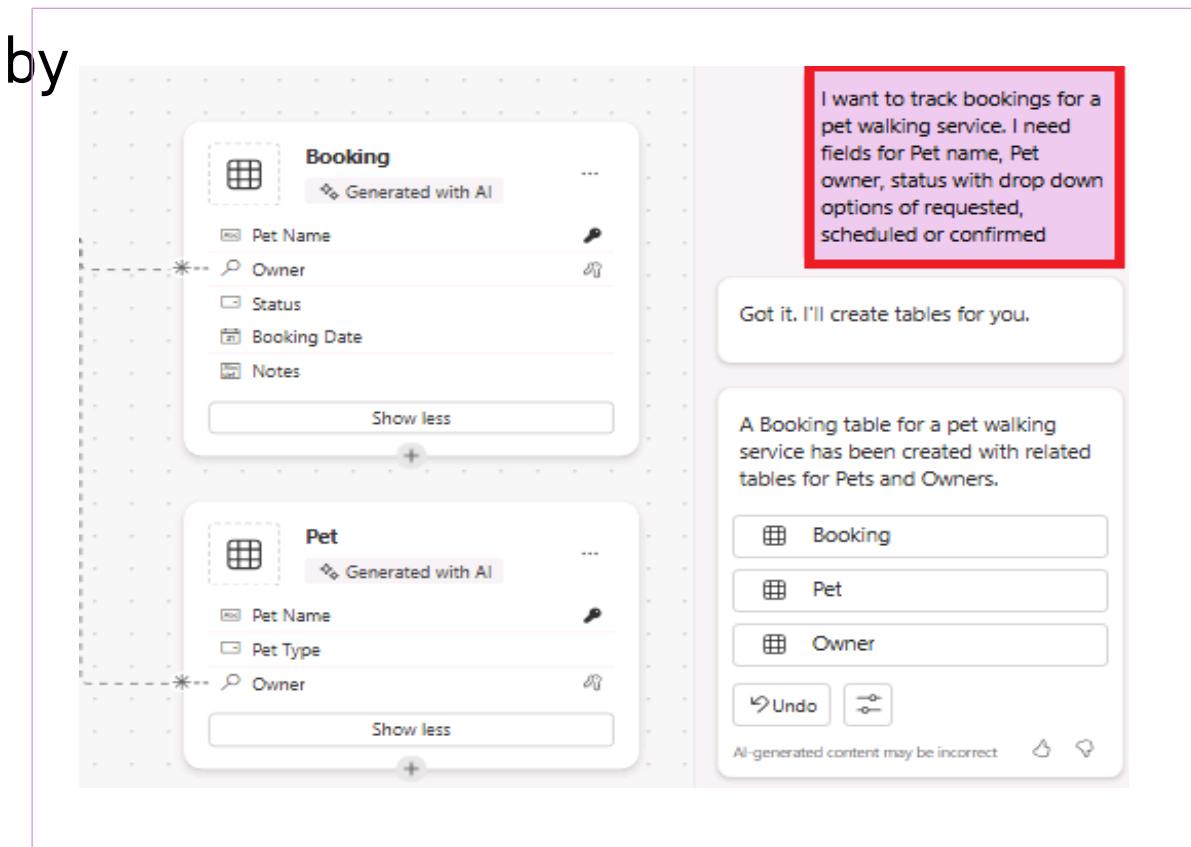
- **Business Rules:** Defines logic and validations directly on Dataverse Tables.
- **Power Fx:** Provides a low-code programming language that integrates seamlessly with Dataverse. Power Fx supports live recalculations.
- **Power Automate** Ideal solution for creating workflows within Dataverse or between Dataverse and other services.
- **Pro-development** Plug-ins, custom APIs, Azure functions



Modifying tables and columns (Copilot)

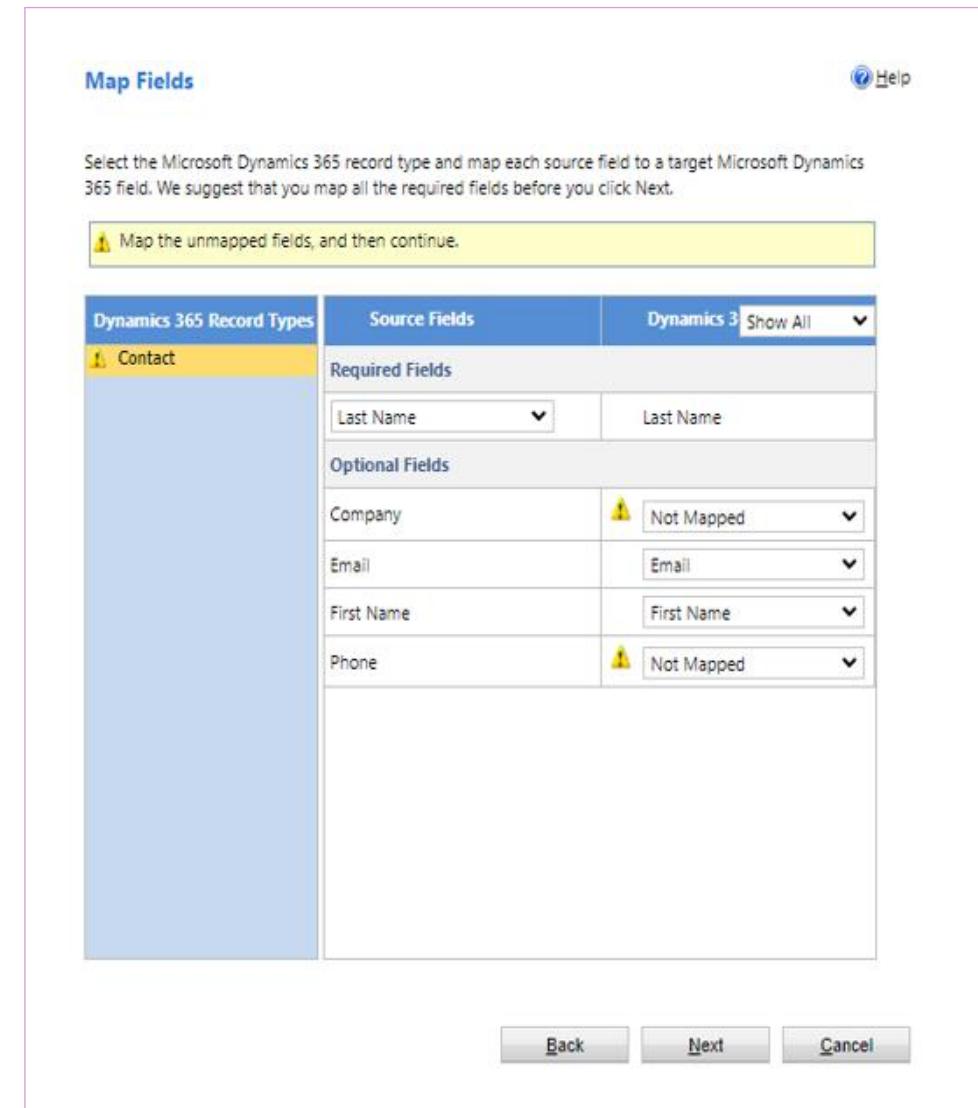
Copilot allows you to create a data model by describing what you want to build.

- Create tables and columns
- Delete tables and columns
- Add existing tables
- Build relationships



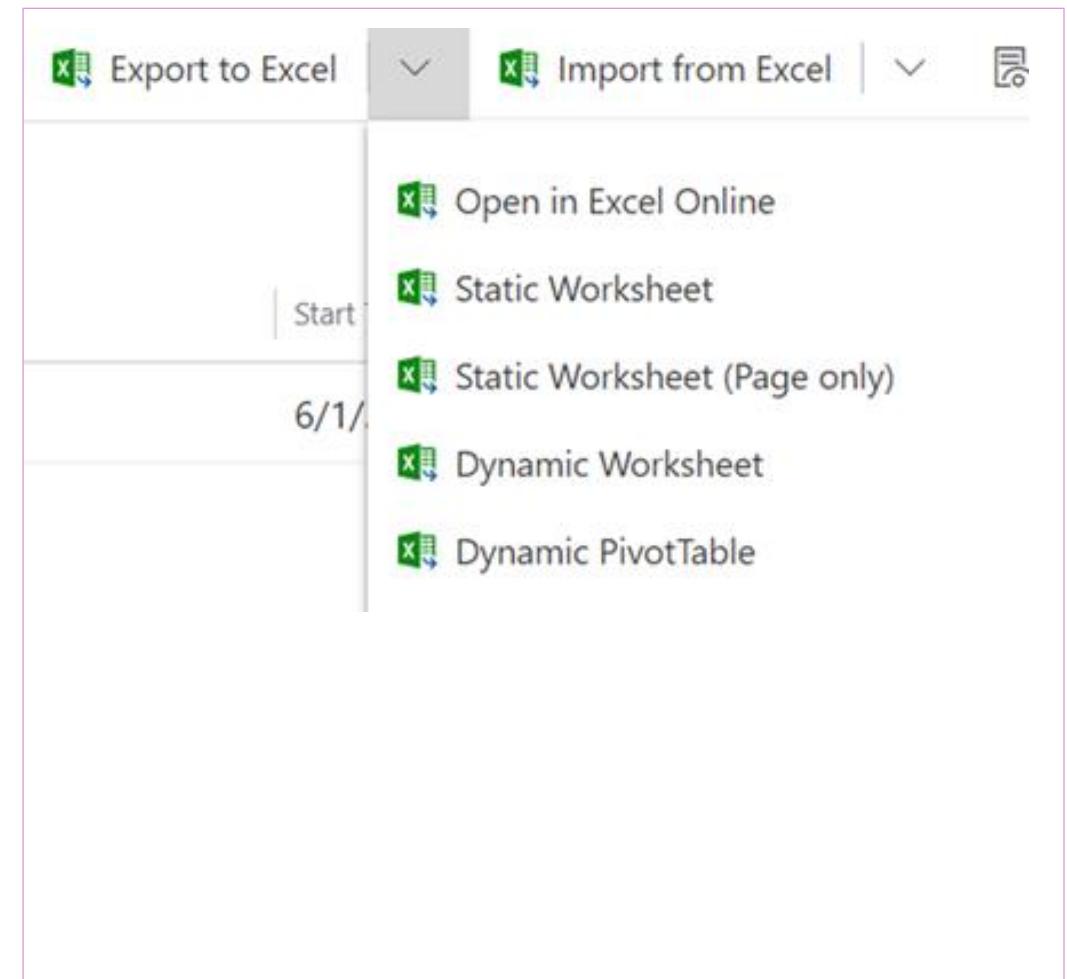
Importing Data

- **Data import wizard:** Import data into any Dataverse table from various file types such as CSV, TXT, XML, and Excel.
- **Import from Excel in model-driven apps:** Imports directly into a table using a model driven application.
- **Import data from Excel in Power Apps maker portal:** This basic import method is for only simple column mapping and does not support choice values or relationships.
- **Data flows**



Exporting Data

- **Export from Excel in model-driven apps:** Users can export table data to Excel using Static, Dynamic, or Dynamic PivotTable options.
- **Word and Excel templates:** Excel templates can be customized for specific columns, while Word templates can generate structured outputs from single or multiple table rows.
- **Power Apps maker portal:** Straightforward way to export all rows and columns from selected tables into .CSV files, packaged in a zip file for download.
- **Power Automate and Azure Synapse Link:** Power Automate enables custom data extraction using cloud flows, while Azure Synapse Link allows continuous data replication to Azure for analytics.



Power Platform Admin and security



Purpose of the Security Model



Control access to records

Defines actions that users can take on records, based on who the user is, and who owns the record.



Control access to UI elements

Forms, Dashboards, Business Process Flows



Control access to features

Mobile, Export to Excel, Print, etc.



Simplify the user experience

User interface will hide entities, records and features a user does not have the privileges to use.

Security Roles Explained

Define the permissions a user or team has

Options for assigning security roles to users



Permissions defined by privileges and access levels



All users must be assigned at least one security role



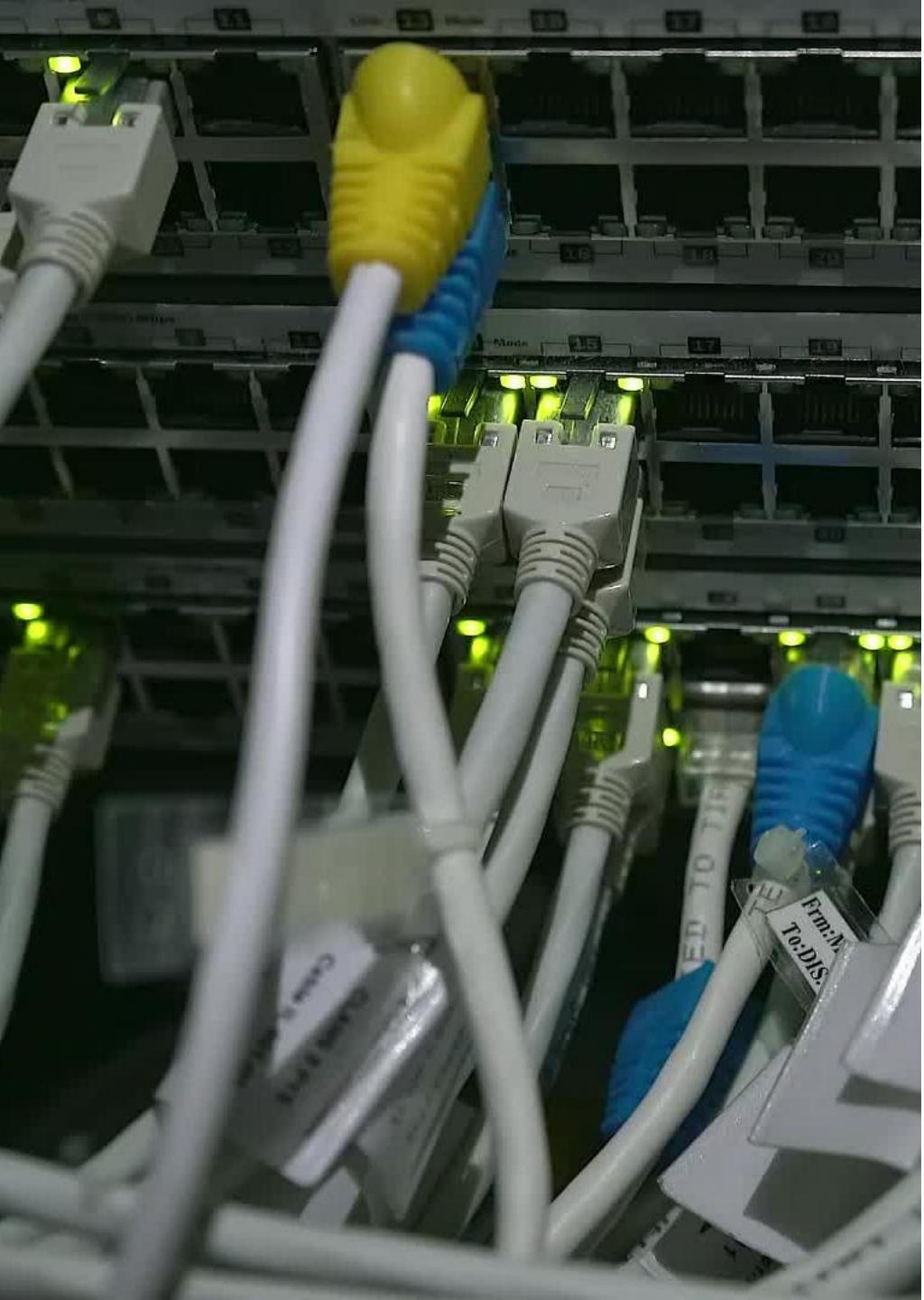
Modify the default roles before you assign them



Create copies of the default roles as templates



Create new Security Roles, adding the privileges you require – usually only for roles with few privileges



Data loss prevention (DLP) policies

- Act as safeguards, controlling how data flows between connectors to prevent unauthorized or accidental data sharing.
- **Business Connectors:** Trusted connectors to access business data like Microsoft Dataverse, SharePoint, or SQL Server, approved for handling sensitive data.
- **Non-Business Connectors:** Connectors (often 3rd party) such as X (Formerly Twitter) or Gmail, that are not suitable for sensitive data.
- Administrators can apply DLP policies at different levels:
- **Environment-Level Policies:** Tailored to specific environments like development or production.
- **Tenant-Level Policies:** Applied across the organization for consistent protection.

Compliance, privacy, and accessibility

Compliance and data privacy:

Microsoft is committed to the highest levels of trust, transparency, standards conformance, and regulatory compliance.

- Trust Center Resources
- Data Location Management
- Data protection
- Resources to manage GDPR compliance



Accessibility in Microsoft Power Platform:

Microsoft Power Platform is accessible and inclusive to every kind of user, all over the world.

An accessible canvas app will allow users with vision, hearing, and other impairments to successfully use the app.





Understanding Application Lifecycle Management (ALM)

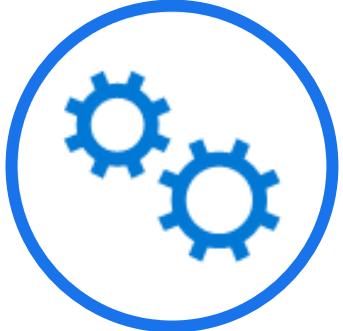
- **Planning:** Define the business requirements, goals, and scope of the application.
- **Development:** Build the application using tools like Power Apps, Power Automate, and Dataverse.
- **Testing:** Validate the application in a testing environment to ensure it meets requirements and functions as expected.
- **Deployment:** Move the application to a production environment, where it becomes available to end users.
- **Maintenance:** Monitor and update the application over time to address bugs, add new features, and adapt to changing business needs.

Solutions Overview



- Solutions are a container to track the changes you make to Dataverse, Power Apps and Power Automate flows
- Solutions are how you transport and install changes to target environments
- You can define a solution as your preferred solution.
- Best practice is to build items in a solution.

Types of Solutions



Unmanaged

- Used during development
- Used to transport to other development environments



Managed

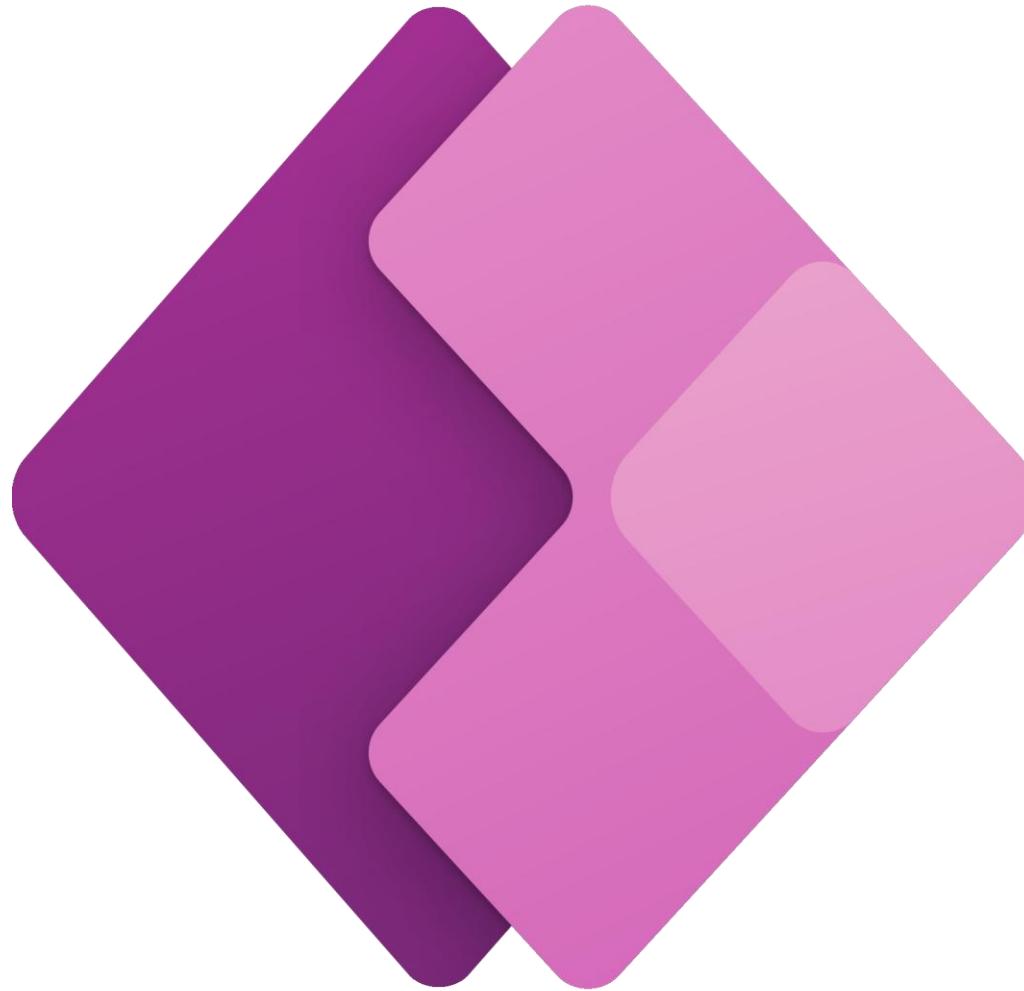
- Used to distribute to non-development environments

Lab 1 – Dataverse Foundations

<https://github.com/readyxrm/pl900ppcc>

1. Create CHO – Volunteer Shifts Solution.
 2. Build Shift table and columns.
 3. Build Volunteer Assignment table and link to both Shift and Contact.
 4. Add sample shifts (e.g., Food Distribution, Shelter Support, Medical Tent).
 5. Add sample contacts (volunteers).
 6. Create a few volunteer assignments linking them.
 7. View relationships in the table diagram.
-  Outcome: Learners see how Dataverse models real-world relationships.

Canvas Apps





Canvas apps

These offer 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 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 complete flexibility when you build apps.

Welcome Alex
Alex@Contoso.com

1234 Randall Drive S -
Fargo \$ 450,000.00

3456 Example St S -
Fargo \$ 250,000.00

4321 Demo St N -
Moor \$ 250,500.00

5678 S Demonstration
Fargo \$ 200,000.00

9876 Example Way -
West \$ 449,900.00

Add New Property +

1234 Sample Drive S
Fargo NA

Asking Price \$ 450,000.00

Bedrooms: 3 Bathrooms: 2.5

Listing Images

Front View Inside

Edit Property

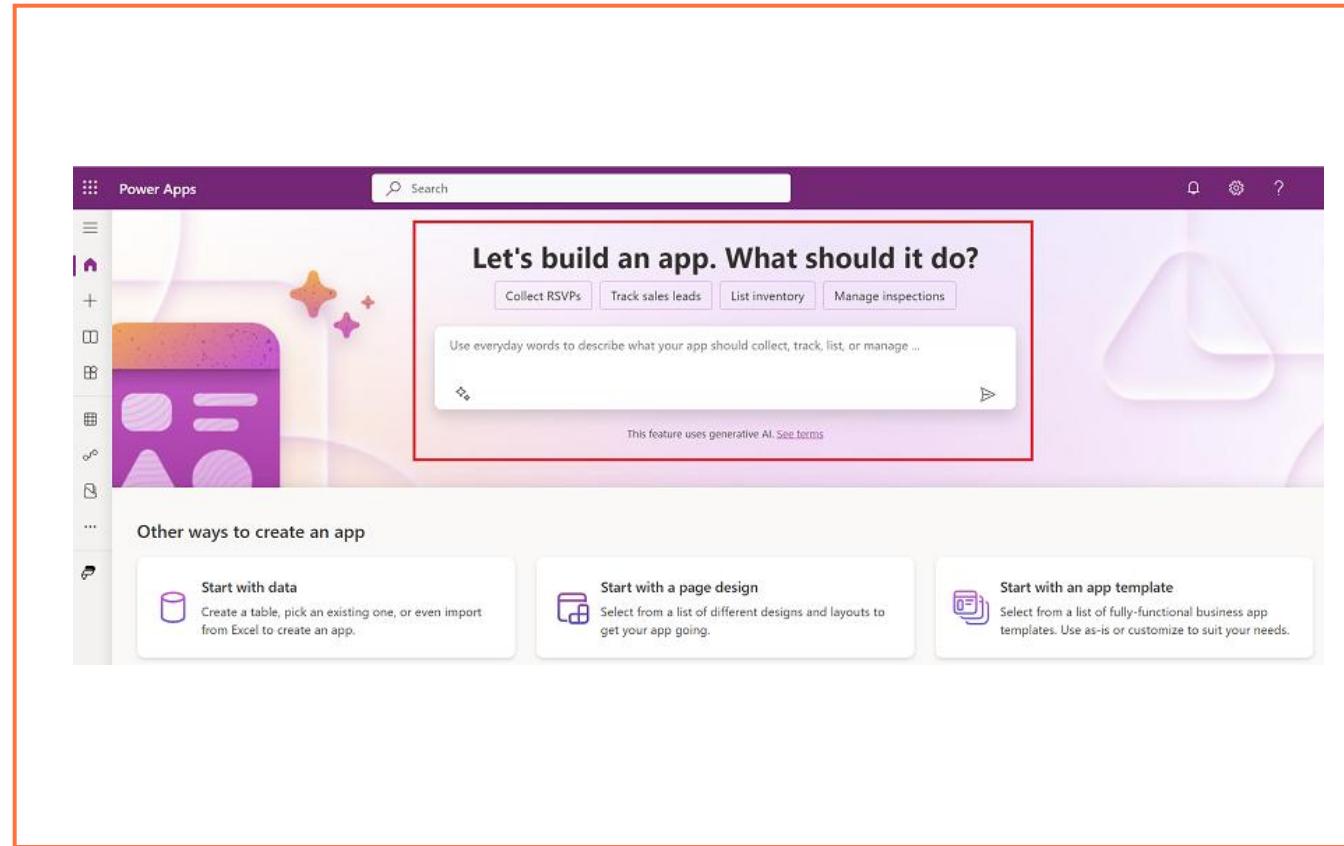
Schedule Open House

Copilot in Power Apps



In canvas apps, Copilot can be used in two ways:

- **App creation:** Copilot can assist app makers while designing their canvas applications in Power Apps.
- **Assist users:** App makers can add a special Copilot control to the individual Power Apps they create that can aid users while they work in the application.



Create apps through a conversation.



- Describe what you want to create:** Provide a detailed description of the tables you want to create.
- Add existing table:** Existing tables can be added as needed.
- Add columns:** Describe the type of column you want to create, and it will be created.
- Remove columns:** Tell Copilot to remove any columns that you are not interested in.

The screenshot shows the Microsoft Copilot interface for creating an app. At the top, there's a search bar and a 'Save and open app' button. The main area displays two tables: 'Employee' and 'Time Off Request'. The 'Employee' table has columns for Employee Name, Department, and Email. The 'Time Off Request' table has columns for Employee, Start Date, End Date, Status, and Time Off Type. A sidebar on the right shows a conversation with Copilot, starting with 'employee Time Off requests', followed by 'Got it. I'll create tables for you.', 'A table for managing employee Time Off requests has been created along with related tables.', and 'Employee' and 'Time Off Request' table icons. Below this, prompts like 'Add a time off type field to the time off request table' and 'The Time Off Type column has been added to the Time Off Request table.' are shown. The interface is framed by a red border.



Learn basic elements

Power Apps Studio

Interface you use to build your app

Galleries

Display rows from a table of data

Forms

Display details from a specific table row

Input controls

Text inputs, buttons, dropdowns, toggles, and more

Intelligent controls

Rich controls for more advanced operations

Functions

Glue that binds all the controls, inputs and data sources

Responsive design

Containers are used control how the app displays on different form factors



Power Apps Studio

The screenshot displays two side-by-side views of the Power Apps Studio interface, both featuring a dark theme with orange highlights.

Left View: Create new tables

- Header:** Power Apps | App | Create new tables, Environment dev-eb.
- Toolbar:** Back, New table, Existing table, View data, Create relationships, Remove, Save and open app.
- Content:** A modal window titled "Get started with Copilot" asks "Describe the tables you want Copilot to build ...". It includes a "Generate" button and a "0/2000" character counter.
- Sidebar:** Options to "Describe new tables" or "Start with Copilot".

Right View: Existing Table

- Header:** Power Apps | Existing Table, Environment PL900 Training.
- Toolbar:** Back, Search, Add data, New screen, etc.
- Tree view:** Shows "Screens" and "Components". Screens include "MainScreen1" and "ScreenContainer1". Components include "App".
- Table view:** "Existing Tables" section lists addresses:
 - 780 Broadway Ave, New York, NY 10001
 - 321 Broadway Ave, Los Angeles, CA 90001
 - 565 Park Ave, Los Angeles, CA 90002
 - 456 Main St, Buffalo, New York, NY 14201
 - 123 Main St, New York, NY 10004
- Form view:** A form for "John" with fields: Address (780 Broadway Ave, New York, NY), Age (20), ID (0001), Name (John), Gender (Male).
- Copilot sidebar:** "What do you want to do?" and "Add a text label", "Add a gallery", "Add a button", "Add an email screen".
- Footer:** "Make sure AI-generated content is accurate and appropriate before using." and "See terms".



Galleries

- **Visual Container:** A gallery is a control that displays multiple records from a data source in a list, table, or grid format.
- **Dynamic Content:** Each item in the gallery is generated based on the data source, such as a SharePoint list, Excel table, or Dataverse table.
- **Customizable Layouts:** You can choose vertical, horizontal, or flexible height layouts and customize what fields are shown.
- **Interactive:** Users can click or tap on items to view details, edit, or trigger actions.
- **Common Use Cases:**
 - Displaying a list of employees, products, or tasks.
 - Creating dashboards or summary views.
 - Filtering and searching through data collections.

Address	City	Price
1234 Randall Drive S -	Fargo	\$ 450,000.00
3456 Example St S -	Fargo	\$ 250,000.00
4321 Demo St N -	Moor	\$ 250,500.00
5678 S Demonstration	Fargo	\$ 200,000.00
9876 Example Way -	West	\$ 449,900.00



Forms

The screenshot shows the Microsoft Power Apps Forms Designer interface. On the left, there's a navigation pane with 'Screens' and three cards: 'BrowseScreen1', 'DetailScreen1', and 'EditScreen1'. The main area displays a 'DataCardKey20' form with the following fields:

- Text** = Parent.DisplayName
- ApproverEmail**: Ben.Change@contoso.com
- AssetType**: Tablet
- AssignedTo**: Jack
- DeviceName**: iPad Air 4
- ImageThumbnailURL**: <https://www.apple.com/br/pr/products/ipad-air-4>
- ImageURL**: http://store.storeimages.cdn-apple.com/8544/assets/images.apple.com/is/image/AppleInc/aos/published/images/iipa/ipad/air/ipad-air-4-1024x1100_GEO_AU2
- SecurityCode**: abc
- ID**: (empty)

The right side of the screen shows the 'DataCardKey20' properties panel with sections for 'Options' (selected), 'Advanced', 'Form customization', 'Layout' (set to 'Vertical'), and 'Fields' (list of all fields). A 'Refresh' button is also present.



Input controls

← Save Save & Close New Deactivate Delete

Grapefruit - Unsaved
Custom table · Custom table custom main form ▾

General Resources Related

Name	* Grapefruit
Owner	* [REDACTED]
Price	1.20
Number of units	3
Total price	3.60
Shipping included	<input checked="" type="checkbox"/>



Intelligent controls

The screenshot shows the Microsoft Power Automate interface. On the left, under the 'AI Builder' section, there is a list of five intelligent controls: Business card reader, Receipt processor, Form processor, Object detector, and Text recognizer. Each item has a small diamond icon next to it. To the right of this list is a vertical dropdown menu. The top item, 'Image', is selected and highlighted with a light gray background. Below it are other options: 3D object, Camera, Measuring camera, Barcode reader, Video, Microsoft Stream, Audio, Microphone, Add picture, Import, and Export.

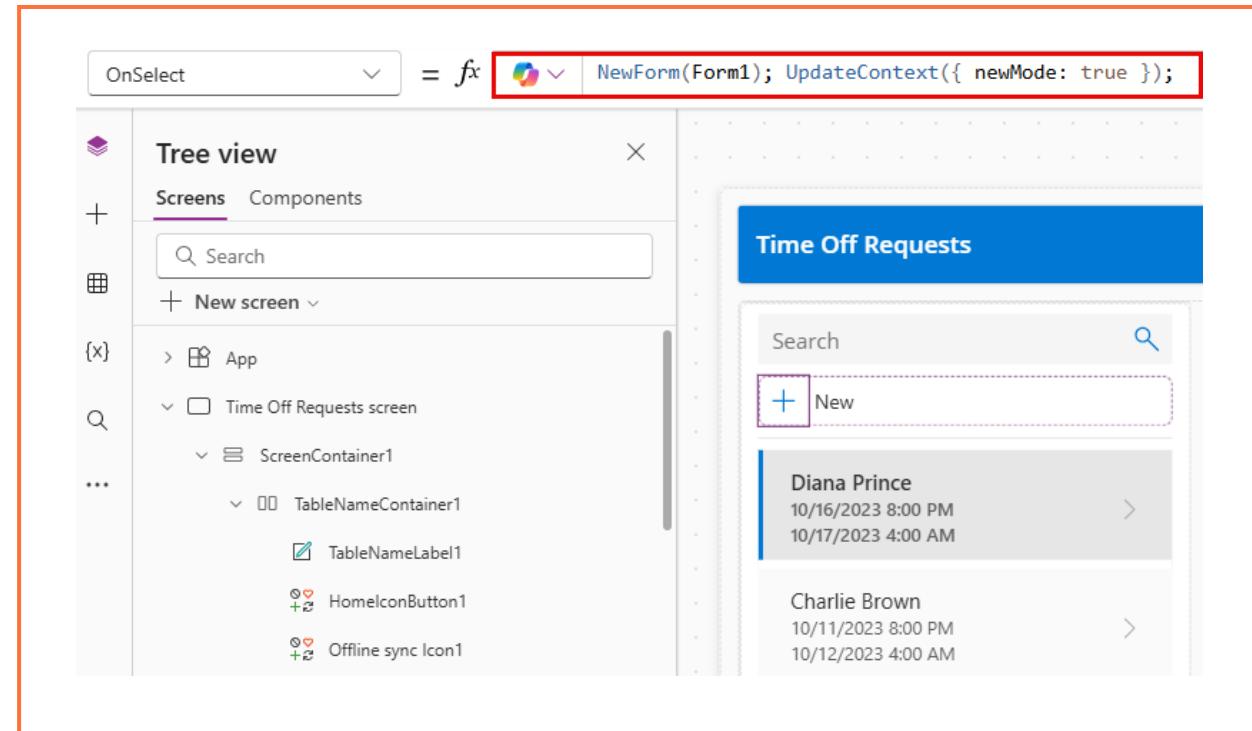
- ▼ AI Builder
- Business card reader
- Receipt processor
- Form processor
- Object detector
- Text recognizer

- Image
- 3D object
- Camera
- Measuring camera
- Barcode reader
- Video
- Microsoft Stream
- Audio
- Microphone
- Add picture
- Import
- Export



Functions

- **Functions** Take parameters, complete an operation, and return a value.
- **Signals** Return information about the environment.
- **Enumerations** Return a predefined constant value.
- **Named operators**, such as ThisItem and Parent, provide access to information from within a container.

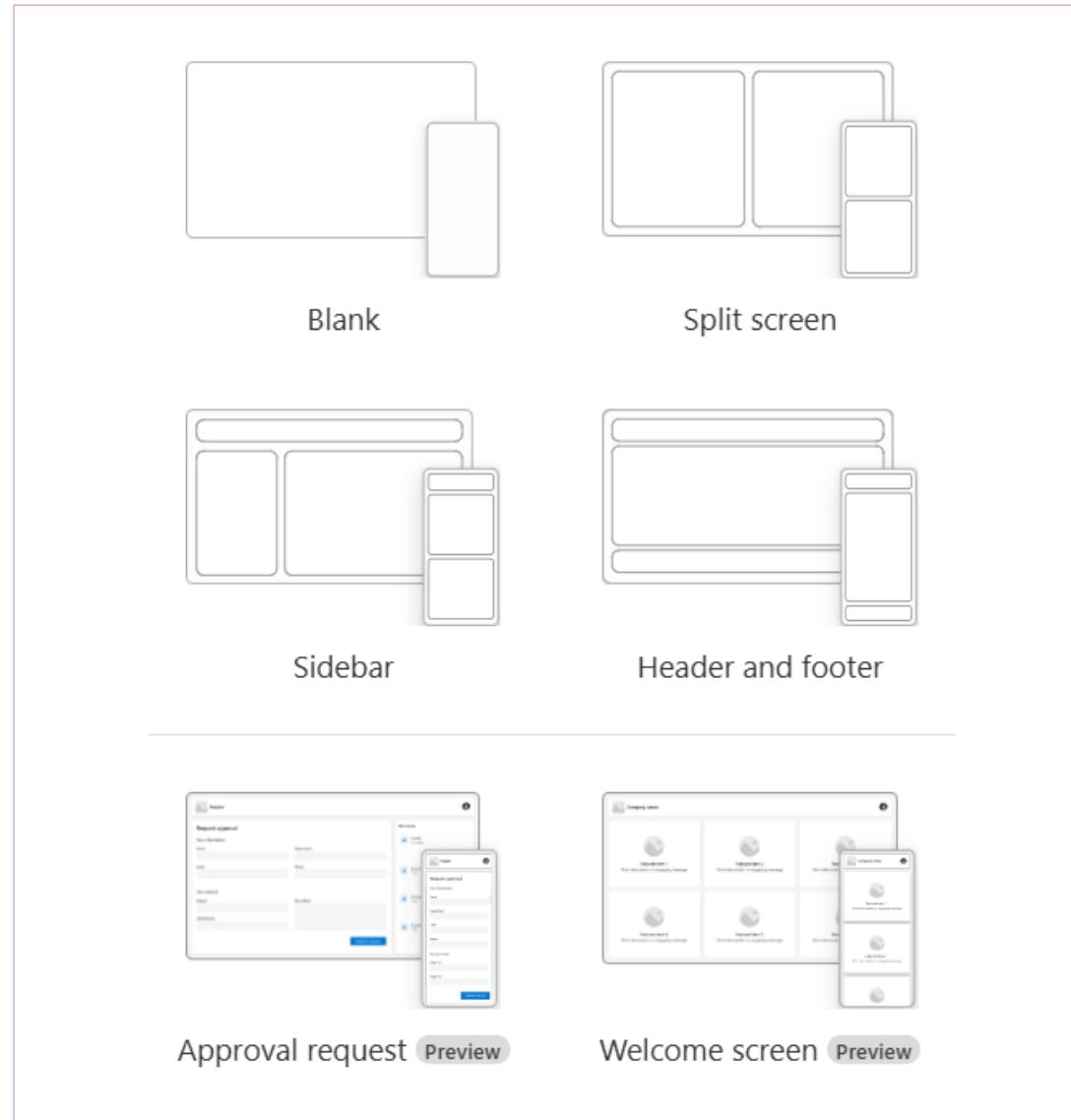


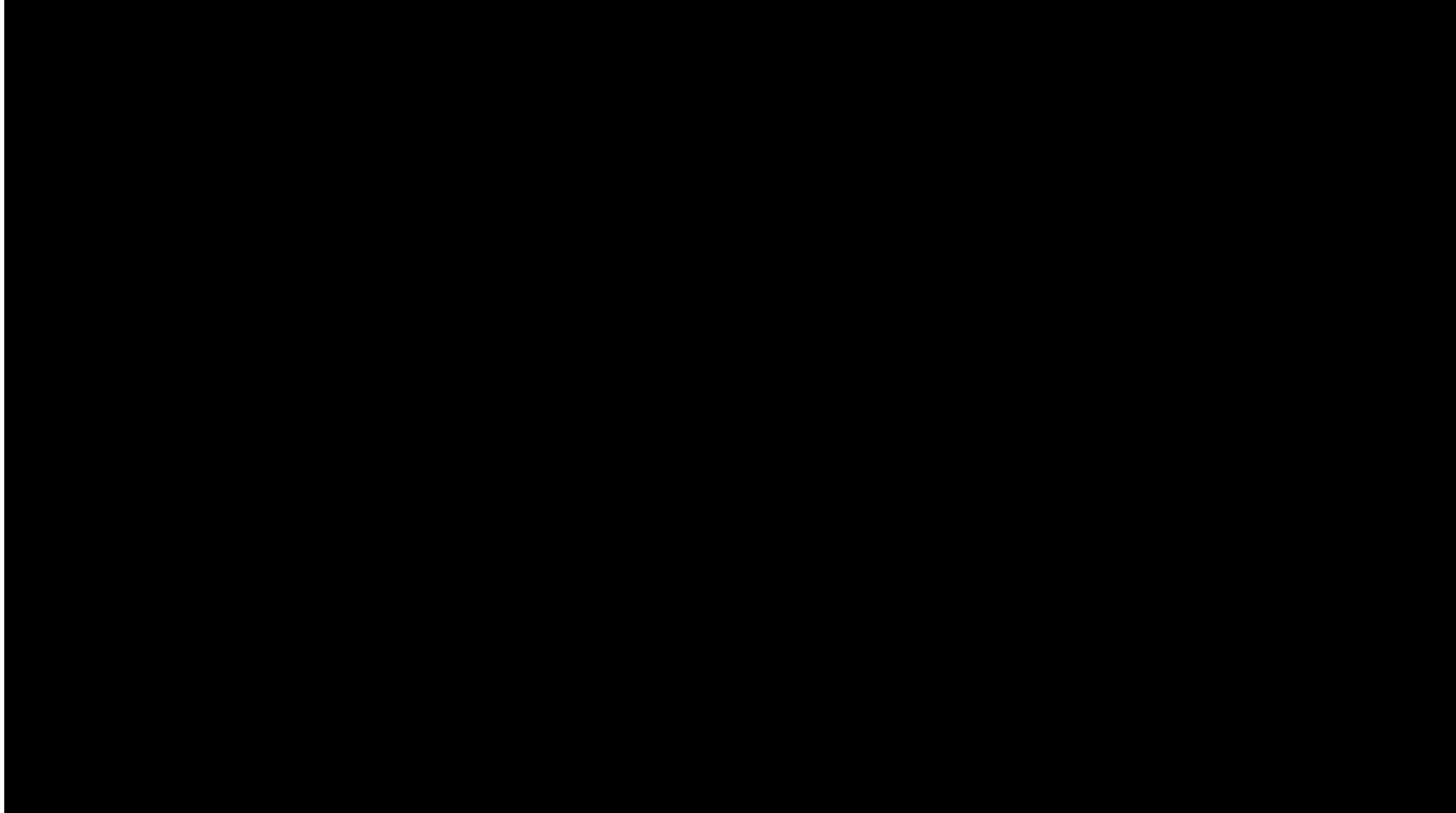
Microsoft Learn has a complete reference of the different functions available,

Responsive Design

Power Apps provides three main types of layout containers; each suited to different design needs:

- **Auto-layout containers:** These containers simplify responsive design by automatically positioning and resizing child components.
- **Manual layout containers:** These containers give you precise control over the positioning of child components.
- **Flexible height containers:** These containers are designed to adjust their height dynamically based on the content inside them.



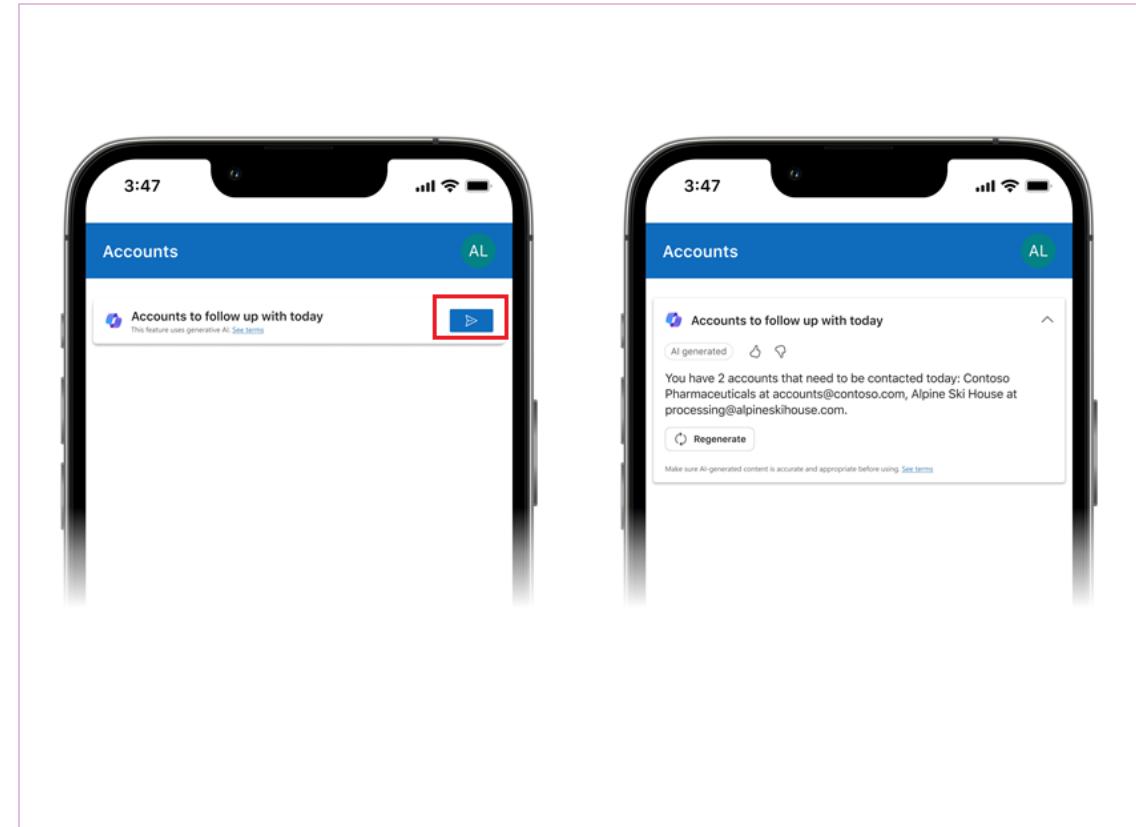


Copilot Controls

What are Copilot controls?

Copilot controls act as intelligent assistants embedded within your app.

- Boost productivity:** Copilot controls streamline workflows by providing AI-generated answers to questions about app data.
- Optimize for mobile users:** Instead of navigating through multiple screens, users can simply type or speak their query and get instant results.



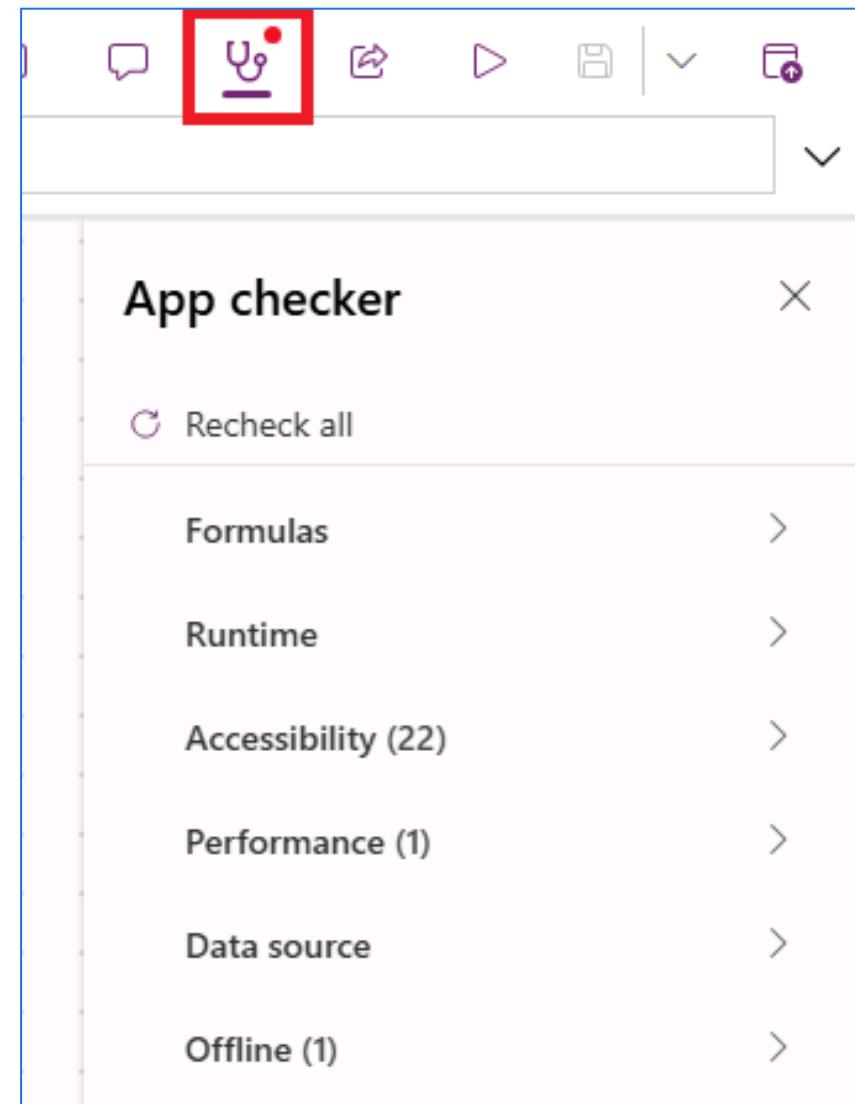
App Checker

App Checker: Tool designed to identify formula errors, performance bottlenecks, and other issues that may impact your app's functionality.

- **Formula Errors:** Identifies errors in your app and provides suggestions on how to resolve them.
- **Performance Recommendations:** If your app uses inefficient formulas or queries that could slow down performance, the App Checker will provide suggestions to optimize them.

Accessibility checker: Helps you identify and resolve potential accessibility issues in your app, ensuring it is usable by individuals with disabilities.

- Missing screen reader support
- Keyboard navigation issues
- Color contrast compliance

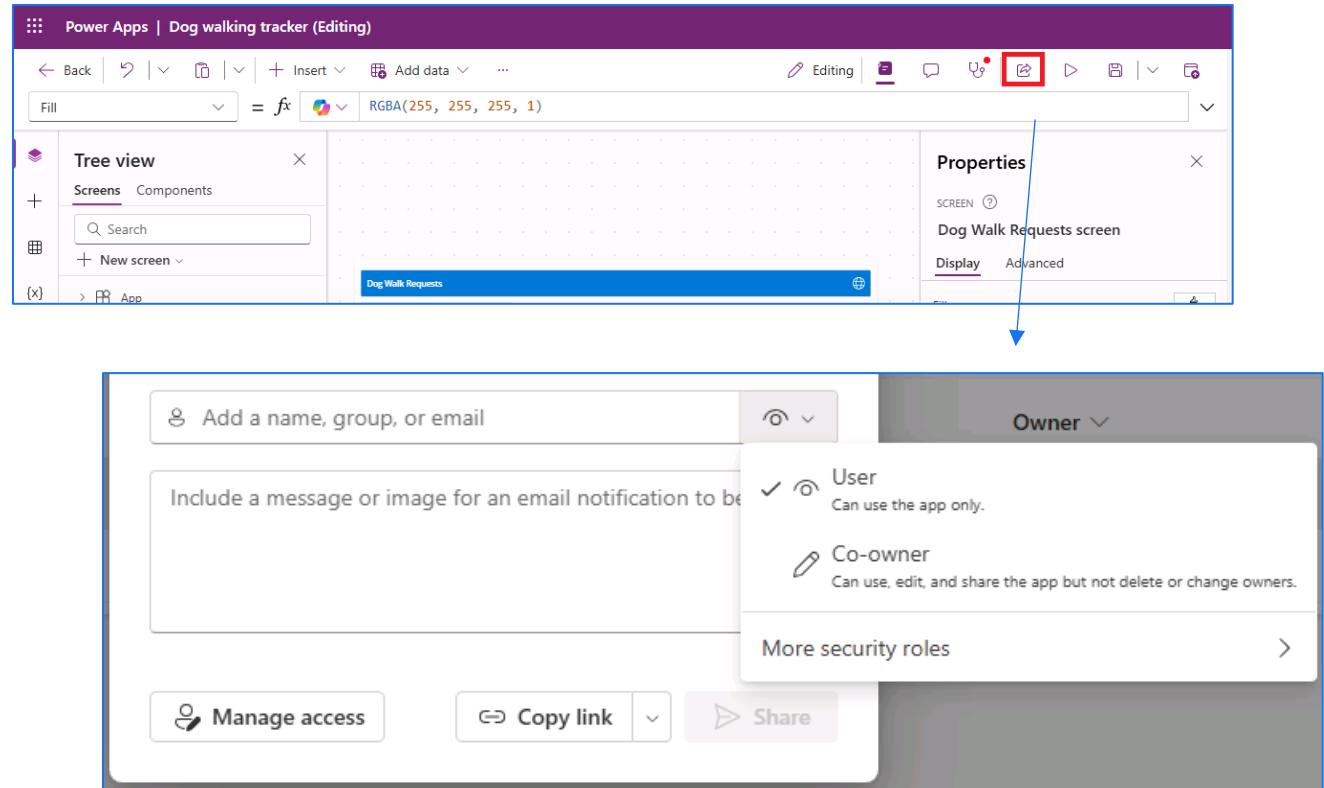


Share an app

- Prepare to share an app:
 - Save the app.
 - Click "Share".
 - Specify users or groups.
 - Consider security groups.
- Permissions:

Users and contributors need permissions to any data connects and gateways that a shared app uses.

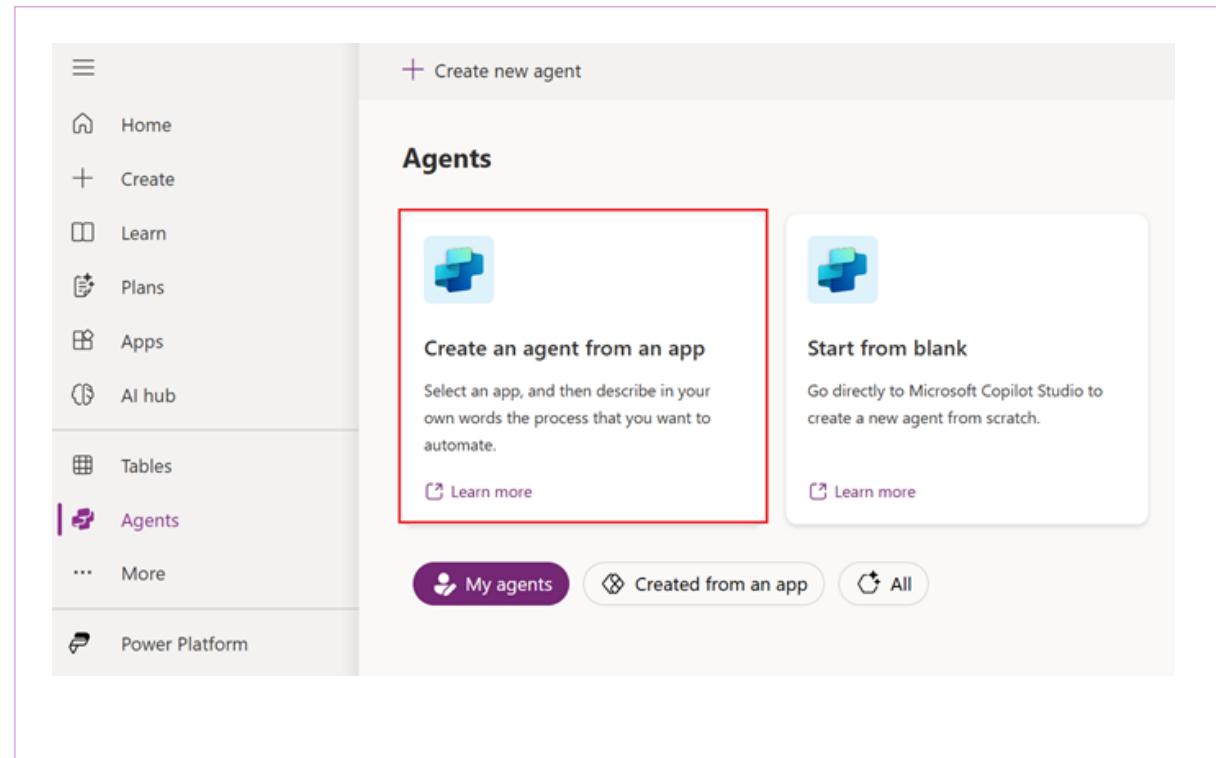
Some permissions are implicit; others must be explicitly granted.



Agent Builder

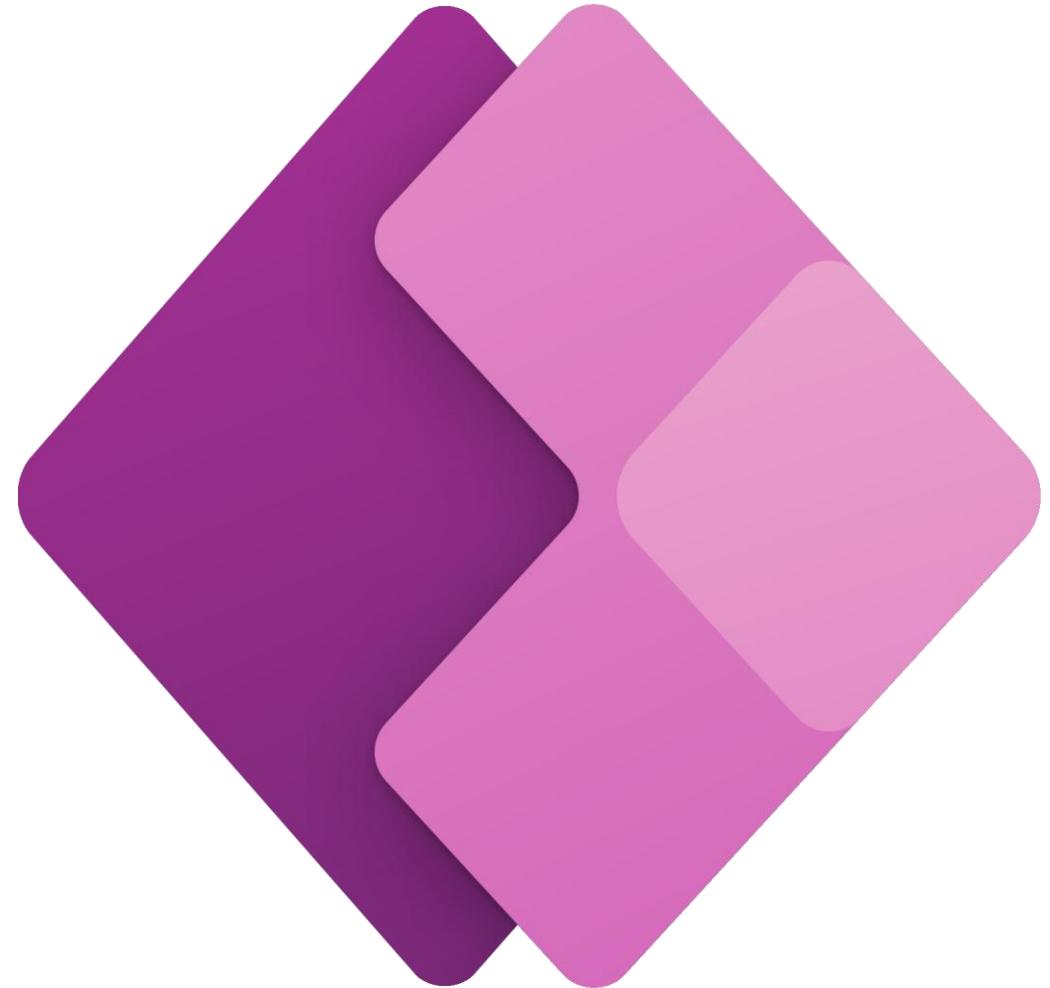
Uses a combination of app metadata and the intended goals for the agent to generate step-by-step processes, extract relevant knowledge, and identify triggers for specific actions.

- **Metadata and goal alignment:** Analyzes the structure and logic of your app, such as its data sources, workflows, and user interactions, and aligns this information with the desired outcomes for the agent.
- **Skill extraction and integration:** Integrates the extracted skills into a fully functional copilot agent, equipping it with everything needed to perform its role effectively.



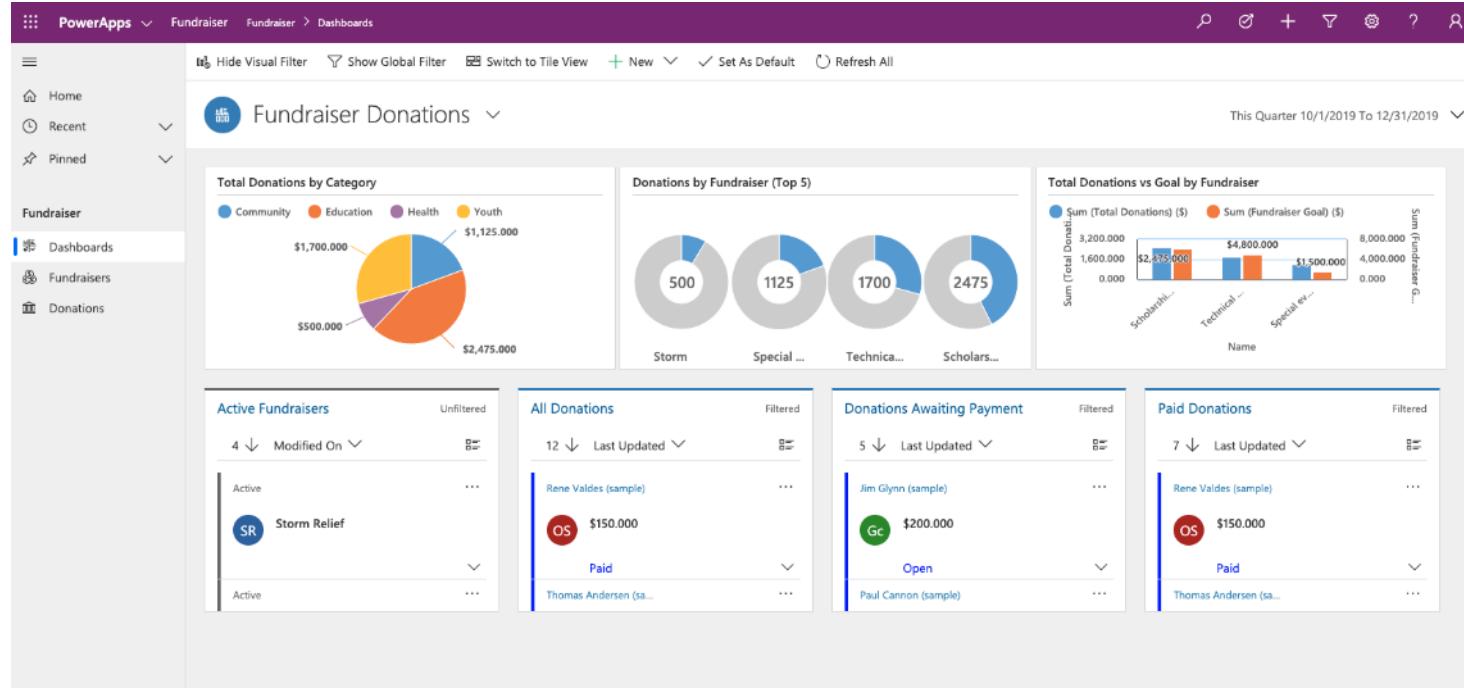
Lab 2: Build a canvas app

Model-Driven Apps





Model-driven apps

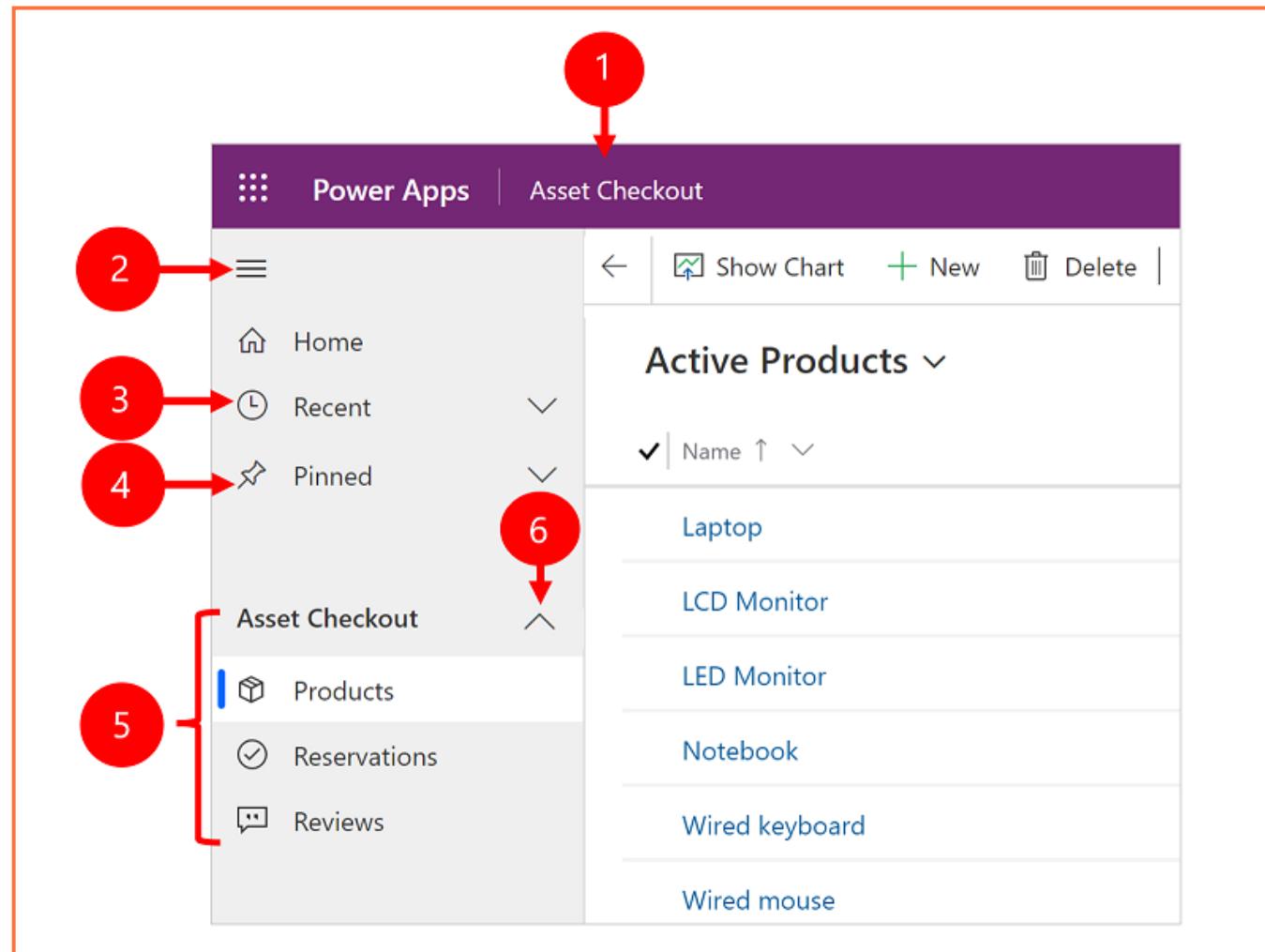


Model-driven apps build from data in Microsoft Dataverse. With model-driven apps, there's no need to worry about choosing its size; it is responsive, meaning it works on mobile or tablet with no extra work for you.

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

Model-driven application navigation

1. **Change app:** Allows switching between model-driven apps.
2. **Collapse/expand site map:** The site map represents all the different tables and items that can be worked with.
3. **Recent:** Provides quick access to records you have recently accessed.
4. **Pinned:** Allows you to pin records you use most often.
5. **Page navigation:** Lists each table and dashboard page available for the current work area.
6. **Collapsible groups:** Allows you to expand and collapse groups as needed.



Working with views

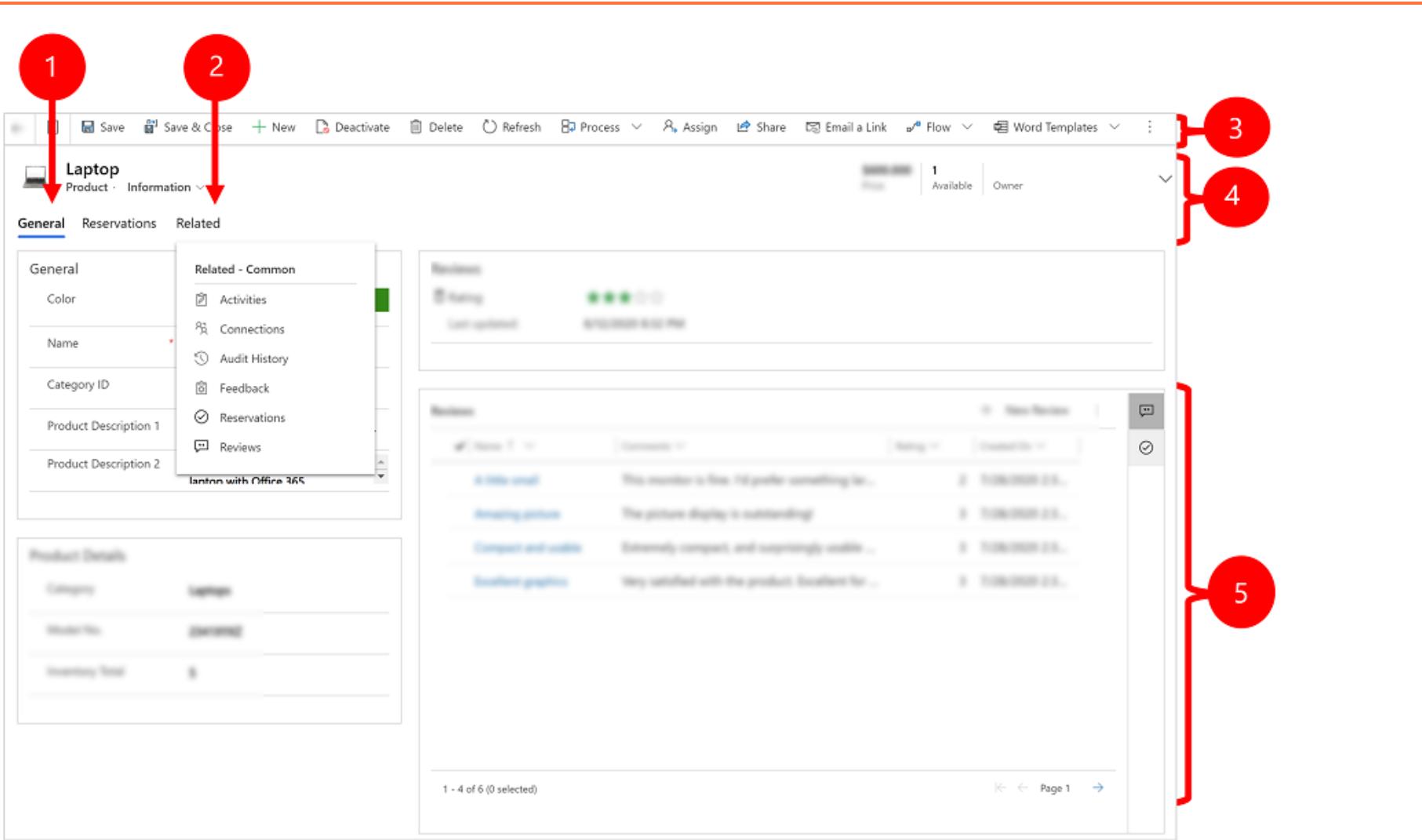
The screenshot shows a list view of products in Microsoft Dynamics 365. The view is titled "Active Products" and displays columns for Name, Category ID, Color, Model No., Price, and Rating. A single product, "Laptop", is selected and highlighted in blue. The interface includes standard ribbon navigation and search functionality.

- 1: Back arrow icon in the top-left corner.
- 2: Selected product row, "Laptop".
- 3: "Show Chart" button in the top ribbon.
- 4: "Edit" button in the top ribbon.
- 5: "Search this view" input field with a magnifying glass icon.
- 6: "Activate" button in the top ribbon.
- 7: "Deactivate" button in the top ribbon.
- 8: Alphabetical sorting icons at the bottom of the column headers.

Name	Category ID	Color	Model No.	Price	Rating
Laptop	C1	White	2341XYZ	\$600.000	3
LCD Monitor	C4	Black	PY5-00012	\$200.000	3
LED Monitor	C4	White	PY9-00018	\$300.000	3
Notebook	C1	Black	J5D-00018	\$700.000	3
Wired keyboard	C3	Black	B2M-00009	\$15.000	3
Wired mouse	C2	Black	B2M-007	\$10.000	3
Wireless keyboard	C3	White	PY5-00018	\$50.000	4

1 - 8 of 8 (1 selected)

Working with forms

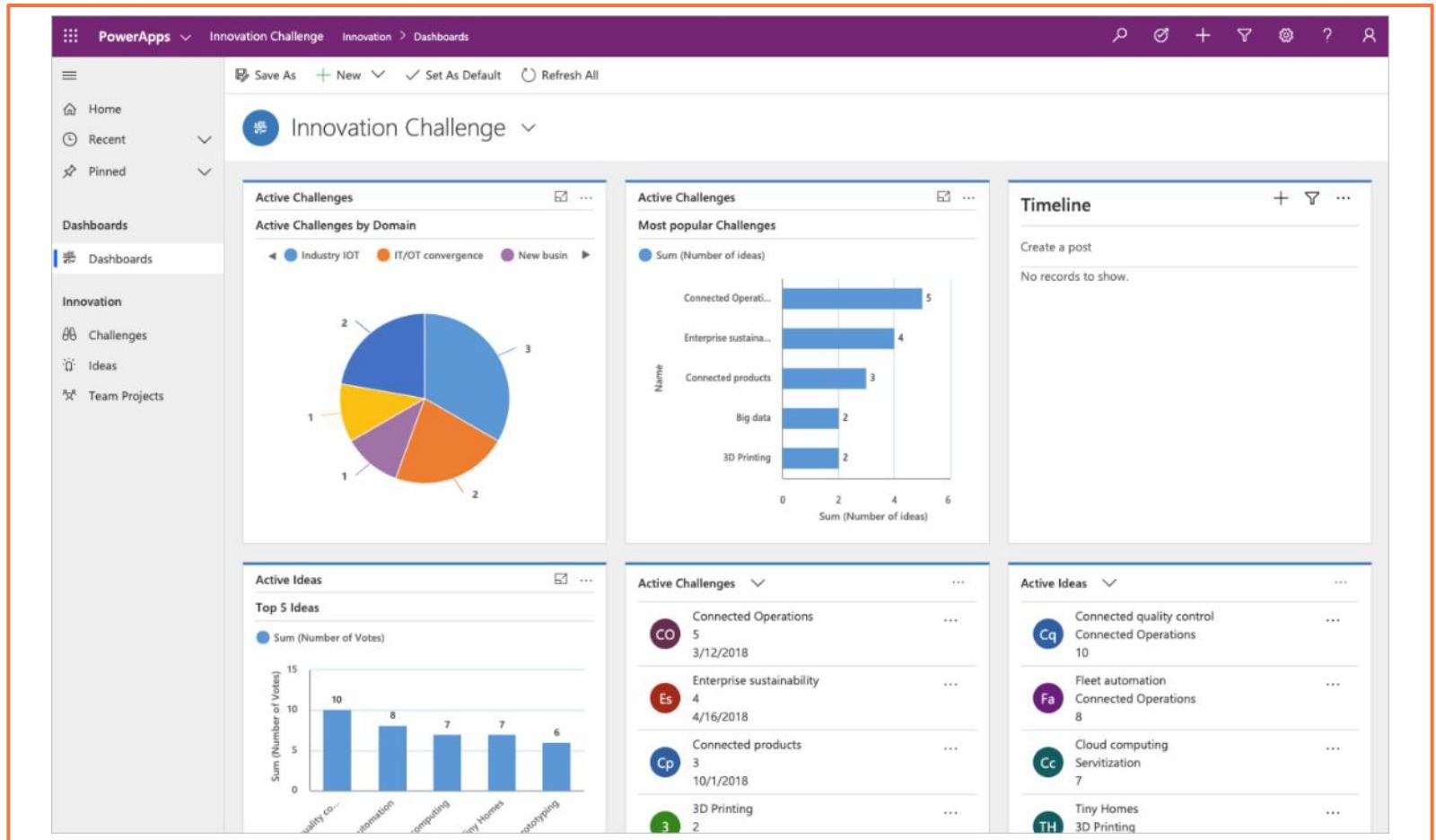


Model-driven apps

Model-driven app design is a component-focused approach to app development. It does not require code, and the apps you make can be simple or very complex.

The approach to making model-driven apps:

1. Model your business data.
2. Define your business processes.
3. Build the app.



Building blocks of model-driven apps

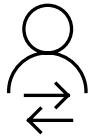


Data

Tables

Columns

Relationships



User interface

App

Site map

Forms

Views



Logic

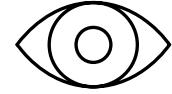
Business process flows

Workflows

Actions

Business rules

Flows



Visualization

Charts

Dashboards

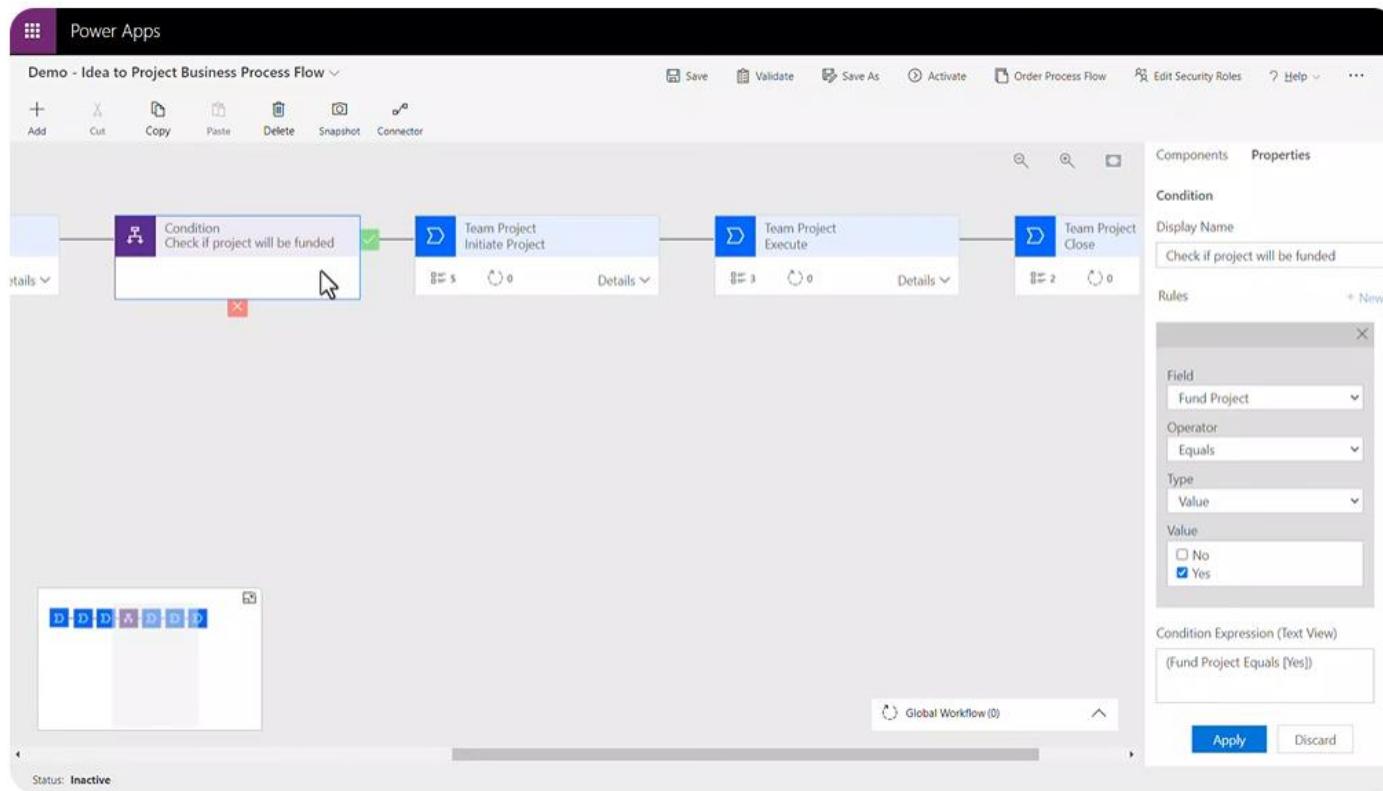
Embedded Power BI

Visualize with AI (NEW)



YouTube

Search



Your guide to building Business Process Flows like an Expert 😎



Elaiza Benitez
4.41K subscribers

Subscribe

325



Share



23K views 1 year ago #WTF #benitezhere #LetsAutomate



Your guide to building Business Process Flows like an Expert 😎

Create a model-driven application (stages)

Stage	Purpose
Model business data	To ensure that the data is constructed in the correct way to address the business problem.
Define business processes	To help users to update the tables and complete their work efficiently and accurately.
Compose the app	To create the app and select the tables, and elements of tables relevant to the app.
Configure security roles	To ensure that app users can only interact with data relevant to their roles.
Share the app	App distribution.

Form Types

The image displays four distinct forms from the Microsoft Dynamics 365 application:

- MAIN**: A standard entity form showing contact details for Edgar Swenson. It includes sections for General, Details, Notes & Activities, Preferences, and Related items. Fields shown include Salutation, First Name, Middle Name, Last Name, Job Title, Company Name, Business Phone, Home Phone, Mobile Phone, Fax, and Email.
- Card**: A card view for contacts, showing cards for Edgar Swenson and Suzanne Diaz. Each card displays the contact's name, photo, and a 'More' button.
- Quick View**: A compact view of account information for Liam. It shows a photo, contact name, email address (liam@example.com), and business phone number. The email field is highlighted with a red border.
- Quick Create: Contact**: A modal dialog for creating a new contact. It has sections for Details (First Name, Last Name, Job Title, Account Name) and Contact Information (Email, Mobile Phone, Business Phone, Description). Buttons for Save and Close and Cancel are at the bottom.

Views

The screenshot shows the Microsoft Power Apps View editor interface. The top navigation bar includes 'Power Apps | View', 'Environment PL-900 MSLearn', and standard toolbar buttons for Back, View column, Components, Undo, Redo, Switch to classic, Validate, Save As, and Save and publish.

The left sidebar is titled 'Table columns' and lists various columns under the 'Event' category, such as Event Name, Event Date, Max Attendees, and Status. It also includes options for Created By, Modified By, and Record Created On.

The main area displays a table of event data:

Event Name ↑	Event Date ↓	Max Attendees ↓	Active Events
Art Exhibition	11/7/2023	150	Locally
Book Launch	10/26/2023	100	Not yet
Food Fair	9/21/2023	300	Locally
Music Festival	12/3/2023	500	Livestream
Spring Conference	6/6/2025	500	Spring
Tech Conference	10/16/2023	200	Technically

On the right side, there are filter and sort settings:

- Name ***: Active Events
- Description**: (empty text box)
- Sort by ...**: Event Name (asc)
- Then sort by ...**: (empty text box)
- Filter by ...**: Status is 0
- Edit filters ...**: (button)



Design of model-driven apps

The screenshot shows the Microsoft Power Apps studio interface. The top navigation bar includes 'Power Apps | Innovation Challenge', a search bar, and environment information ('Environment PL900 Training'). The left sidebar has tabs for 'Pages' (selected), 'Data', and 'Automation'. Under 'Pages', there's a 'Search' bar and sections for 'Navigation', 'Innovation', and 'All other pages'. The main workspace displays a dashboard titled 'Innovation Challenge' with a pie chart titled 'Active Challenges by Domain'. The legend indicates five categories: Industry IOT (blue), IT/OT convergence (orange), New business models (purple), Other (yellow), and Sustainability (dark blue). The pie chart shows the distribution of challenges across these domains.



Differentiate between canvas and model-driven apps

Canvas

- Not Dataverse driven
- Task or screen focused
- Custom UI
- Device integration
- Easily embeddable

Model-driven

- Dataverse driven
- Back office / process focused
- Responsive / consistent UI
- User personalization
- Data relationship navigation
- Security trimming of UI

Lab 3: Build a model-driven app

Power Automate



Automating Routine Tasks: Reminders for Shift Assignments

Workflow Automation

Set up automated workflows that send reminders to volunteers before their shifts begin, improving communication efficiency.

Volunteer Shift Reminders

Automated reminders help reduce missed shifts by notifying volunteers ahead of time, minimizing manual follow-ups.

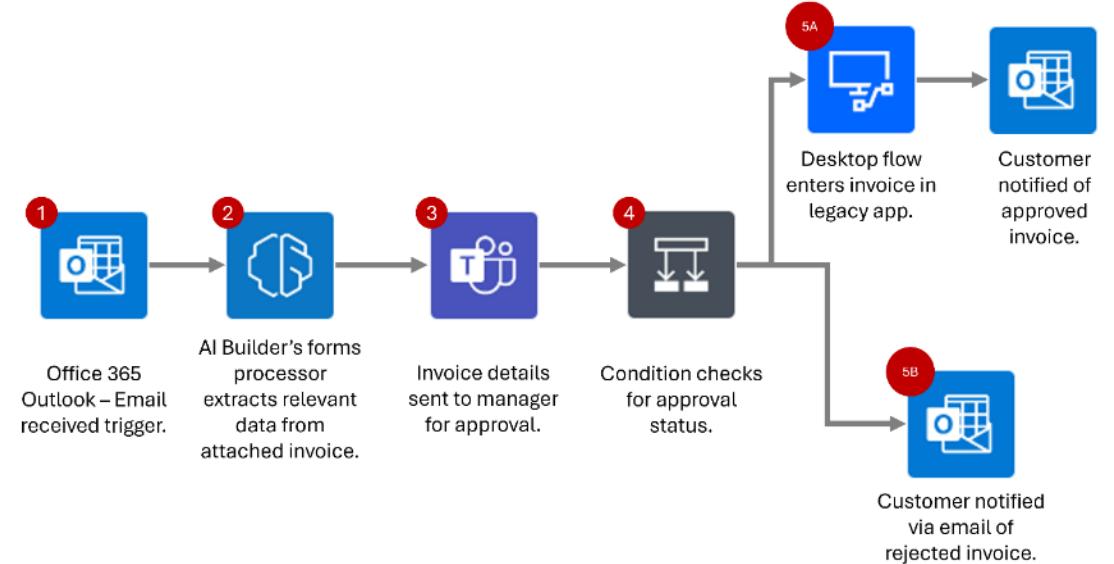




The value of Power Automate

Common scenarios and capabilities:

- Automating repetitive tasks
- Guiding a user through a process
- Connecting to external data sources
- Automating desktop-based processes

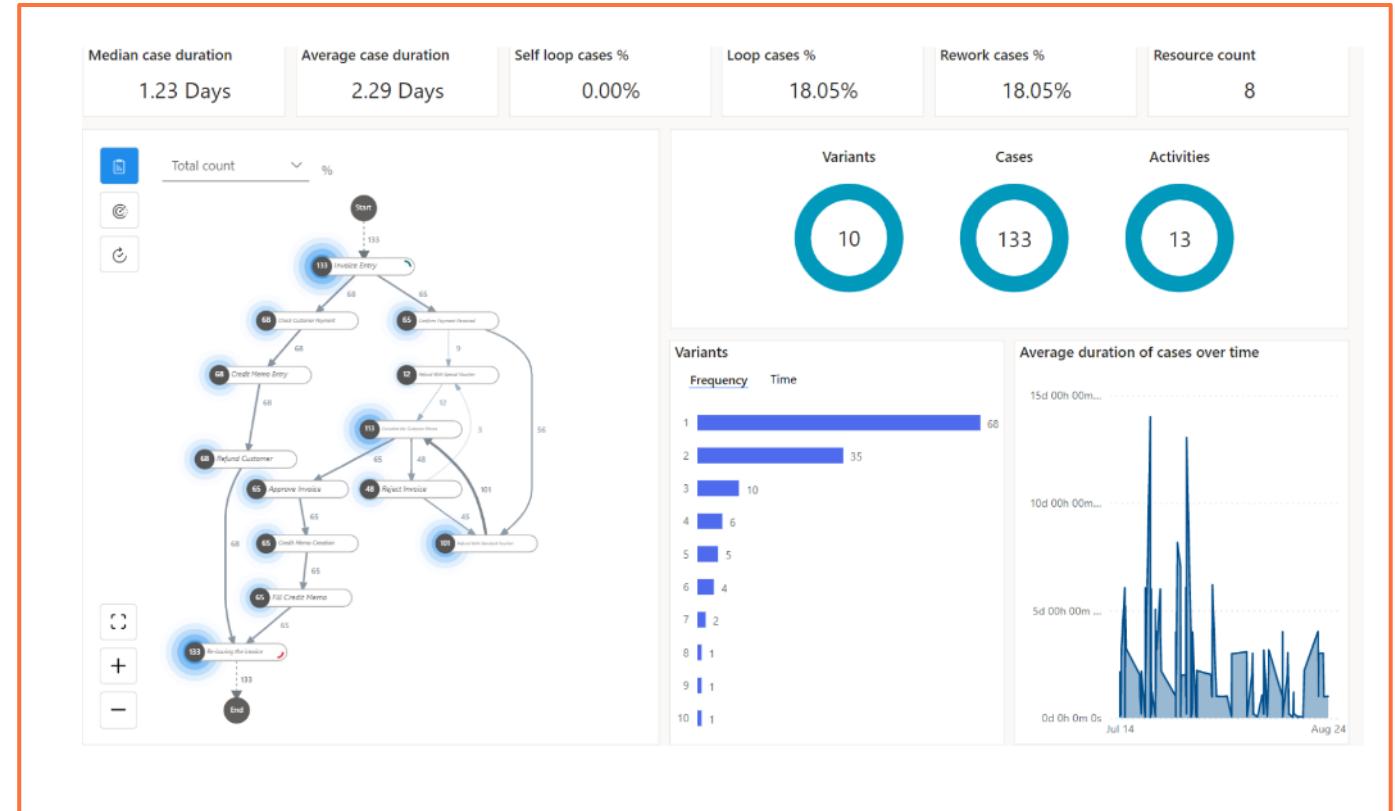




Process Mining

Process mining helps organizations to:

- **Improve operational efficiency:** Identify bottlenecks and inefficiencies in processes.
- **Enhance customer experience:** Identify and eliminate process pain points to help organizations improve the customer experience and increase satisfaction.
- **Optimize resources:** Identify opportunities for automation, reducing the need for manual intervention and allowing resources to be allocated more effectively.
- **Ensure compliance:** Identify non-compliant processes and take corrective action to avoid legal and financial risks.





Types of Flows

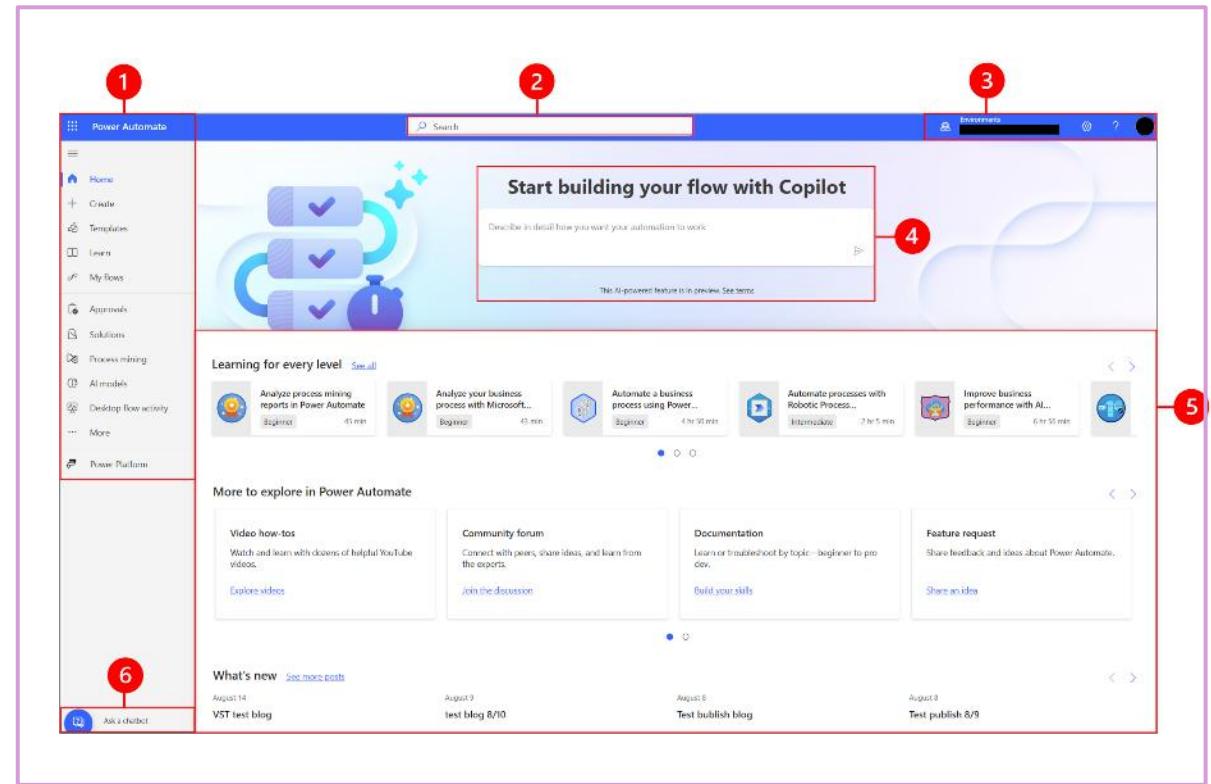
- **Cloud Flows:** Represent workflows that can perform one or more tasks after being triggered by an event. For example, saving attachments in an email to a OneDrive folder, when a new email arrives.
- **Desktop Flows:** Designed to automate tasks on your computer, or in scenarios where a cloud flow would not work. For example, you could create a desktop flow to perform the steps of entering an invoice into a legacy application that does not have modern API's available.

Flows				
	Name	Modified	Type	
	Invoice Approval	1 d ago	Automated	
	Create a flow that to get todays weather forecast ...	5 d ago	Instant	
	Create a flow that to get todays weather forecast ...	6 d ago	Instant	
	Untitled	3 wk ago	Instant	
	Run a flow from Copilot	7 mo ago	Instant	
	Check my Weather	7 mo ago	Instant	



Power Automate Apps

- Power Automate Maker Portal
- Power Automate Mobile App
- Power Automate Desktop App





Create a flow from a template

The screenshot shows the Microsoft Power Automate web interface. On the left, a sidebar menu is visible with options like Home, Create, Templates (which is currently selected), Learn, My flows, Approvals, Solutions, Process mining, AI models, Desktop flow activity, More, Power Platform, and Ask a chatbot. Below the sidebar is a search bar labeled 'Search templates'. The main area displays a grid of template cards, each with a title, a small icon, and details such as 'By Microsoft' or 'By Microsoft Power Automate Community'. The cards include: 'Post MSN Weather updates to Yammer group everyday' (Scheduled, 2872), 'Save Outlook.com email attachments to your OneDrive' (Automated, 206729), 'Save email attachments from Outlook.com to Dropbox' (Automated, 6045), 'Complete a custom action for the selected file' (Instant, 43333), 'Keep my schoolwork in sync with my Google Drive' (Automated, 13015), 'Save Gmail attachments to a Dropbox folder' (Automated, 6182), 'Get daily reminders from your Outlook.com email' (Scheduled, 10655), and 'Run sentiment analysis on tweets and push results to a Power BI dataset' (Automated, 6166).

- Search using keywords for relevant templates.
- Example template: Create a flow to save email attachments to OneDrive for Business.



The types of flows you can create with Power Automate

Power Automate works by creating flows – here are the three types:

- Cloud flows (API)
 - Instant
 - Automated
 - Scheduled
- Desktop flows (RPA)

The screenshot shows the Microsoft Power Automate interface. On the left is a navigation sidebar with options like Home, Action items, My flows, Create, Templates, Connectors, Data, Monitor, AI Builder, Build, Models, Document automation (preview), Process advisor, Create, Processes, Solutions, and Learn. The main area has a blue header bar with a search bar and user account information.

Three ways to make a flow

Start from blank

- 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.
- Desktop flow: Automates processes on your desktop environment.
- Business process flow: Guides users through a multistep process.

Start from a template

Top picks: Notify a team when a new Forms response is submitted, Notify a team when a new item is created in a SharePoint List, Follow up on a message, Create a task from a message.

Remote work: When the status of a task in Planner changes to complete, notify a channel.

Email: Save a message to OneNote.

Notifications: Schedule a meeting with a message sender.

Save to cloud: Start an approval in Teams when a file is added to a SharePoint folder.

Approval: Instant, 18032, 15591, 11688, 10800.



Scheduled flows

Scheduled flows can run:

- once a day, an hour, or a minute.
- on a date that you specify.
- after a number of days, hours, or minutes that you specify.

Build a scheduled flow



Stay on top of what's important without the effort—you choose when and how often the flow runs.

Examples:

- Automate team reminders to submit expense reports
- Auto-backup data to designated storage on a regular basis

Flow name
Add a name or we'll generate one

Run this flow *

Starting 2/16/20 at 10:00 AM

Repeat every 2 Week

On these days S M T W T F S

This flow will run:
On Wednesday, every 2 weeks

Skip Create Cancel



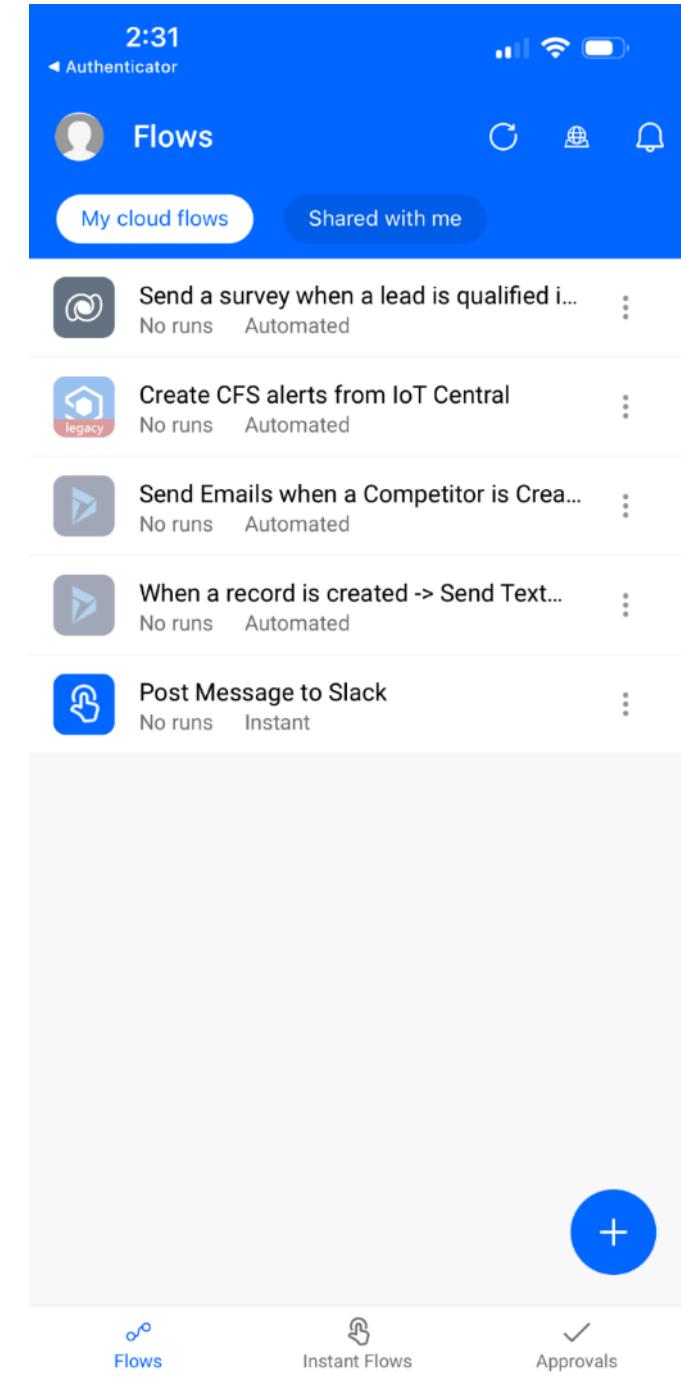
Button flows

Create a flow using a button through the Power Automate mobile app

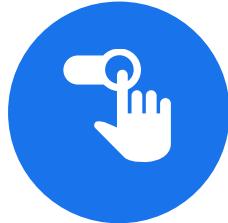
- Activity feed
- Browsing
- Buttons
- Managing flows

How button flows are started

- Buttons are flows that are started through a manual action.



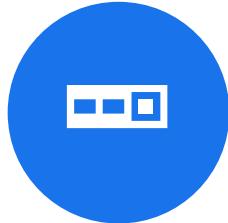
Key Concepts:



A Trigger: The starting action of the flow such as new email arriving in your inbox or a new item being added to a SharePoint list.



Actions: What you want to happen when a trigger is invoked such as start the action of creating a new file on OneDrive for Business.



Connectors: Act as bridges between Power Automate and external applications.



Actions

- File and Folder Actions
- Web Automation Actions
- UI Automation Actions
- Excel Actions
- Email Actions
- System Actions
- Conditionals and Loops
- Variables and Data Manipulation
- Scripting and Custom Code

Add an action

Search for an action or connector

> Favorites

AI capabilities

- Run a generative action Preview
- Process documents
- Run a prompt
- Respond to the agent

Built-in tools

- Control
- Date Time
- Data Operation
- Flow button for mobile



Contents

POWER AUTOMATE DESKTOP APP

8m 51s video

Power Automate mobile app

4m 31s video

3. How Connectors Work in Cloud Flows

Understanding a connector

4m 53s video

Understanding what a trigger does

1m 41s video

Understanding what an action does

3m 50s video

Chapter Quiz

2 questions

4. What Are Expressions in Cloud Flows?

Microsoft Power Platform Fundamentals (PL-900) Cert Prep: Power Automate

Understanding expressions and the structure of an expression

Common Functions

- Math
- Logical comparison
- Data conversion
- Data generation

utcNow()

Optional, you can specify a different format with the <format> parameter.

Parameter Required Type Description

<format>	No	String	A numeric format string that is either a single format specifier or a custom format pattern. The default format for the timestamp is "o" (yyyy-MM-ddTHH:mm:ss.fffffff), which complies with ISO 8601 and preserves time zone information.
----------	----	--------	---

If the format isn't a valid value, an error is generated.

Return value	Type	Description
<current-timestamp>	String	The current date and time

Example 1

Suppose today is April 15, 2018 at 1:00:00 PM. This example gets the current timestamp:

utcNow()

And returns this result: "2018-04-15T13:00:00.0000000Z"



There's a newer version of this course. We've archived this course because there's a newer one available.

Overview

Notebook

Transcript



Dynamic content

The screenshot shows the 'Run a prompt' interface in Microsoft Power Automate. The main area displays a 'Parameters' tab with a dropdown menu set to 'AI Summarize'. Below it is a 'Test prompt' button and an 'Input Text' field containing 'Body X'. A blue callout box highlights the 'Body X' input field. To the right, a sidebar lists various dynamic content options:

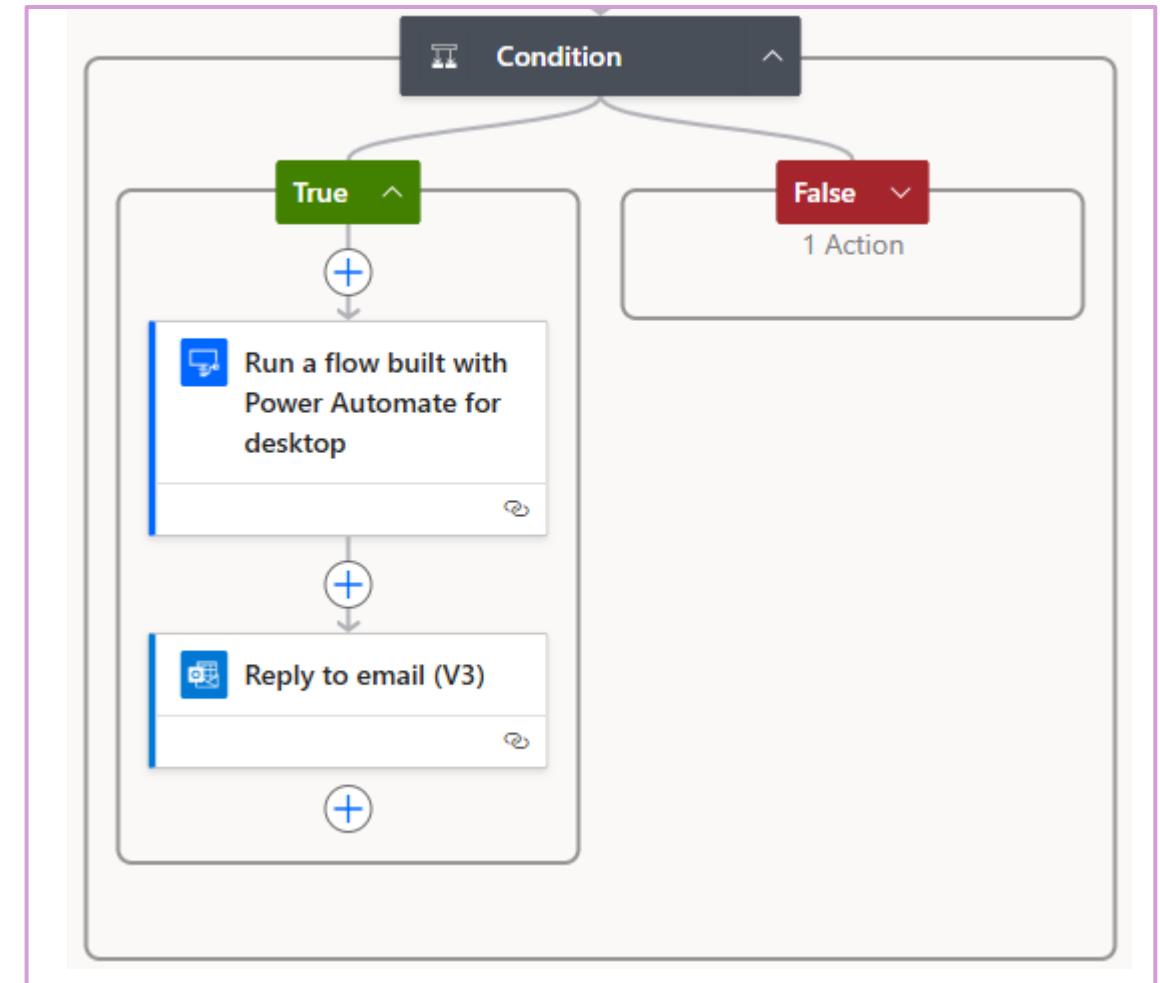
- HTML to text
- The plain text content.
- The plain text content.
- When a new email arrives (V3)
- From
- The mailbox owner and sender of the message
- To
- The recipients for the message
- Subject
- The subject of the message
- Body
- The body of the message
- Importance
- The importance of the message (low, normal, high)
- Has Attachment

At the bottom of the interface, a status bar indicates 'Connected to Derik.Bormann@MuriusTechSolutions.com' and a 'Change connection' link.



Loops and Branching

- **Loops:** Loops allow you to repeat actions multiple times, making them ideal for processing lists or performing repetitive tasks.
- **Branching:** Branching introduces conditional logic into your flow, enabling it to take different paths based on specific criteria.





Approvals

Approval actions are events you want your flow to perform after the trigger starts the flow.

Types of approvals:

- Everyone must approve
- First to Respond
- Customer responses
- Wait for all responses

Add an action > Standard approvals X

Standard approvals ☆


Create an approval


Start and wait for an approval


Start and wait for an approval of text


Wait for an approval



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 do 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 updated in Dynamics, or when an event has been deleted from Outlook, for example.

On a schedule:

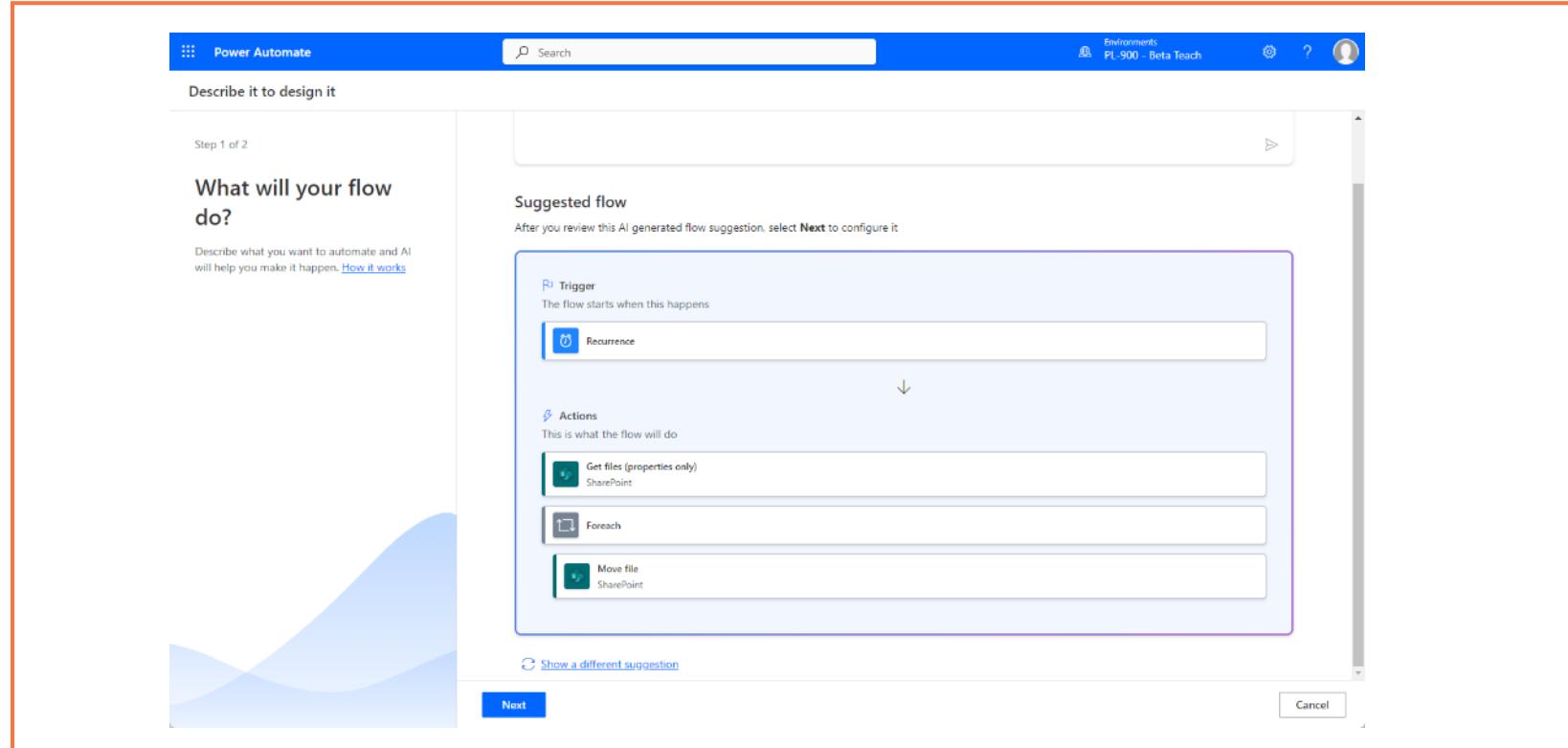
You can set up a flow to be triggered at a certain time of day and with a recurrence. This allows for workflows such as checking every day at 8.00 AM if there are account renewals pending and, if so, sending an email to the necessary people.

On a button press:

This trigger can take different shapes. Consider when a flow virtual button is run through the mobile app, or a physical button is clicked with third-party options, or even when a button is pressed inside Power Apps. This gives you control to "run" a flow on-demand.



Copilot in Power Automate



- Create flow by describing what you want it to do.
- Receive troubleshooting assistance and resolution suggestions.



Flow Checker

Flow checker identifies two area of concern:

- **Errors:** These are problems with your flow that will cause it not to function correctly.
- **Warnings:** These are issues that may impact performance or how it functions but will not necessarily cause the flow not to execute.

Flow Checker

Errors (1) Warnings (0)

1 Operation errors

 Mark as read or unread (V3) Open operation >

Parameter errors

- 'Message Id' is required.



Testing Flows

Two options for testing flows:

- **Manual Testing:** Your flow is triggered manually by performing the action that initiates it.
- **Using Previous Run Data:** Your flow runs using data from earlier runs. This approach is particularly useful when working with complex flows or scenarios where recreating the trigger conditions is time-consuming.

Test Flow

Manually
Perform the starting action to trigger it.

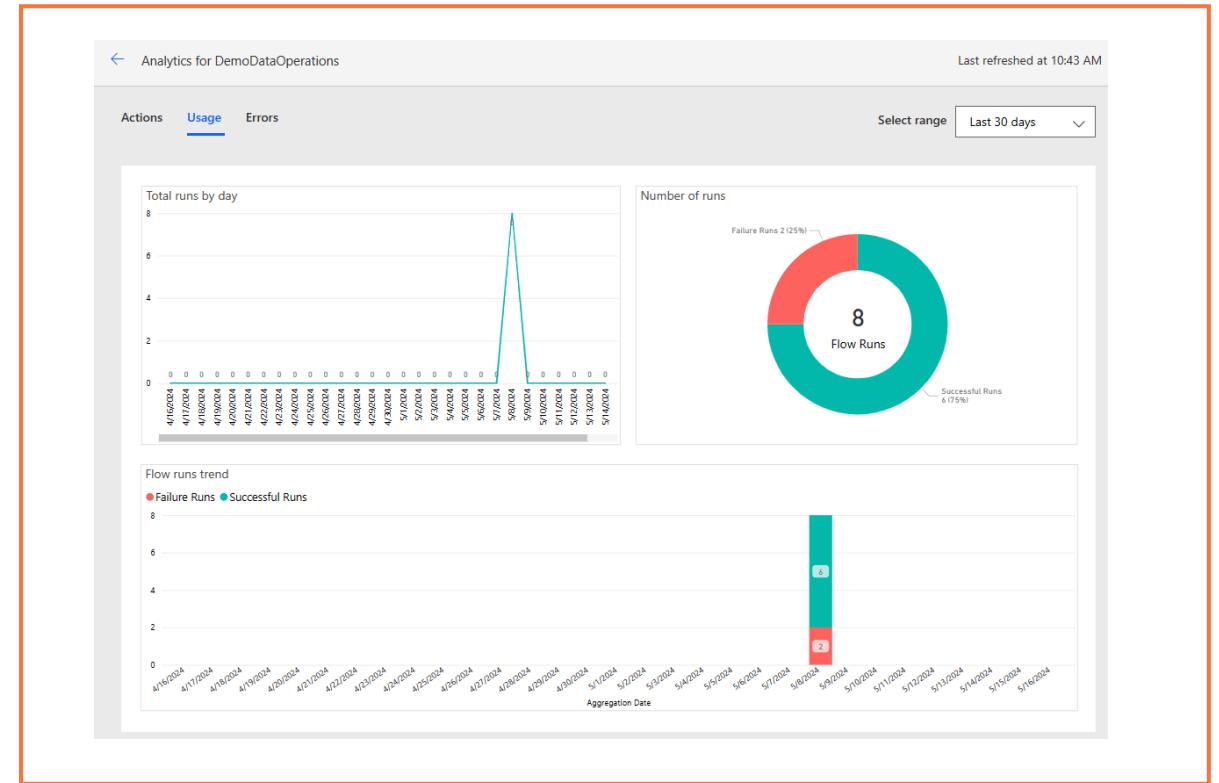
Automatically

- With a recently used trigger.
- Test Succeeded 3 weeks ago
- Test Succeeded 3 weeks ago
- Test Succeeded 3 weeks ago
- Test Failed 3 weeks ago



Monitoring flow performance

- **Identify and resolve issues:** Regular monitoring allows you to quickly detect and address problems such as errors or delays in flow execution.
- **Enhance performance:** By analyzing flow performance, you can identify areas for optimization, such as reducing unnecessary actions or improving trigger conditions.
- **Ensure security and compliance:** Monitoring helps uncover potential security vulnerabilities or compliance risks within your flows.
- **Understand usage patterns:** Analytics provide valuable insights into how flows are utilized, revealing trends in frequency, user activity, and resource consumption.





Sharing flows

- **Share a flow with co-ownership:** Co-ownership enables multiple users to manage and edit a flow collaboratively.
- **Share a flow with run-only permissions:** Sharing a flow with run-only permissions allow users to execute a flow without editing or viewing its design.
- **Send a Copy of a flow:** Sending a copy of a flow allows you to share the flow's design with another user while maintaining control over the original version.

Flows

Cloud flows Desktop flows Generative actions (preview) Shared with me

	Name	Modified	Type
	Schedule a reply	1 h ago	Instant

Co-owners

Adding an owner gives them full control of this flow, so make sure you only share with people you trust. They'll be able to add or remove other users as owners, access the run history, and can update, edit or delete this flow.

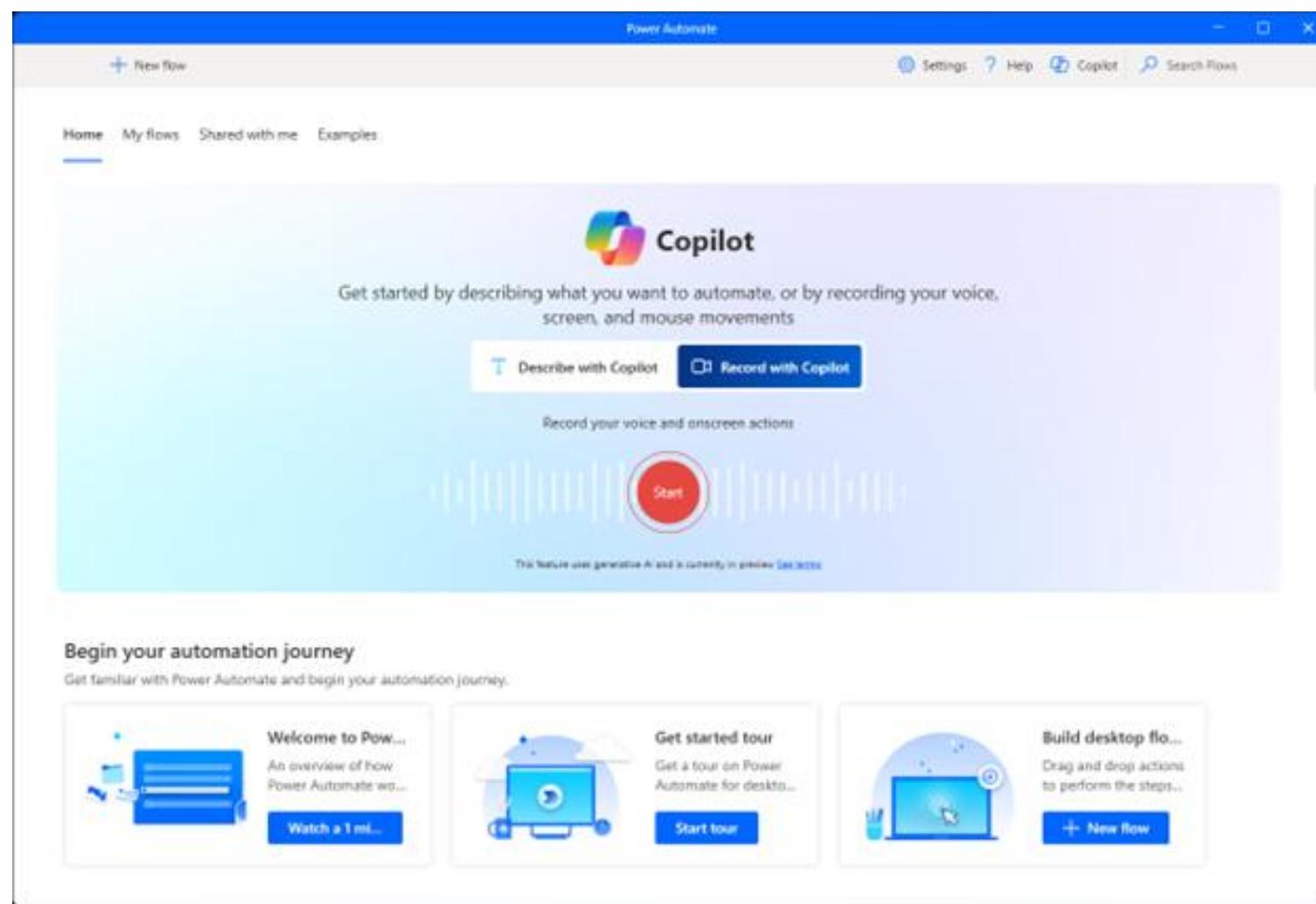
[Learn more](#)

Add a user or group as owner

Enter names, emails, or user groups

MOD Administrator

Build desktop flow with Record-with-copilot



Lab 5: Build a Power Automate flow

Power Pages





What Are Power Pages?

Branded Website Creation

Power Pages allow users to create websites that reflect their brand identity effectively without coding.

Secure Web Portals

These portals provide strong security features to protect data and user privacy online.

No Coding Required

Users can build and customize public web portals without extensive programming knowledge.



What can Power Pages do for you?

- **Build Secure External Websites:** Create public or partner facing portals with authentication and role-based access.
- **Collect and Display Data from Dataverse:** Use forms and lists to interact with business data stored in Microsoft Dataverse.
- **Automate Workflows:** Trigger Power Automate flows from form submissions for approvals, notifications, and more.
- **Enable Self-Service Scenarios:** Let customers or partners submit requests, track cases, or update profiles without contacting support.
- **Manage Permissions and Security:** Define who can view or edit content using web roles and table permissions.
- **Embed AI and Agents:** Add Copilot Agents to answer questions and guide users.

My Red Cross

Log in

Volunteer at the Red Cross

With you on the team, we can make an important contribution to the community. The Red Cross has many activities you can get involved in. With us, you will receive good training so that you will be confident in your role as a volunteer.

BECOME A VOLUNTEER

How to become a volunteer?

The first step to becoming a volunteer is to fill out our registration form. After you have registered as a volunteer, your registration will be forwarded to your local Red Cross society.

We will contact you.

Once your local Red Cross Society has received your registration, they will contact you to get to know you better. They will also provide information about which activities you can choose to get involved in.

Our Red Cross societies are run by volunteers, and aim to contact you within 14 days by email or phone.



Explore use cases

Customer portals

- **Retail & e-commerce:** Access tailored recommendations
- **Healthcare:** Book appointments, review medical records

Partner collaboration

- **Technology:** Share project updates and documentation.
- **Real-estate:** Access shared property listings, marketing assets

Employee self-service

- **Education:** Check payroll information
- **Hospitality:** Track shifts

Bank

Home Pages Contact us Mona Kane

Online or in person, our experts are ready to meet with you

Schedule an appointment

We Are Committed To You And Your Time

Your time is valuable, and we pledge to respect it by making sure the appointments you schedule are comfortable, useful, and on time. We want you to be happy with every single interaction we share. It's good business and, more importantly, just what we do.

Stress-Free Scheduling

Our online scheduler makes it easy to get the meeting time

Nearby Branches

We make it easy to choose the location to meet that is

Timely Reminders

Our automated confirmation and reminder messages helps

Select an appointment time
Today - Jul 29

Morning

8:00 am	9:00 am
10:00 am Available	11:00 pm Available

Afternoon

12:00 pm Available	1:00 pm Available
2:00 pm Available	3:00 pm Available
4:00 pm Available	

Next



Simplified authoring

Describe with Copilot or leverage templates to simplify site creation.

- Starter layouts
- Scheduling
- Application submission
- Registration
- Dynamics 365
- FAQ

A screenshot of the Microsoft Copilot website builder interface. The top navigation bar is purple, showing 'Environment MSLearn PL-900' and various icons for notifications, settings, and help. The main heading is 'Start building your website with Copilot'. Below it are two buttons: 'Create a site for project management' and 'Design a portal for employee training'. A large input field prompts 'Describe the site you want and let AI create the first draft'. Below the input field is a note: 'Make sure AI-generated content is accurate and appropriate before using it. [See terms](#)'. Underneath, there's a section titled 'Other ways to create a site' with a button labeled 'Start with a template' featuring a folder icon. The text below says 'Select from a gallery of premade site templates to get your site going.' At the bottom right are links for 'Privacy' and 'Terms of service'.



Power Pages Security principals

- **Multiple identity providers:** Select the providers that your organization uses for flexible login experiences.
- **Role based security:** Users are assigned to different roles which impact the data they can access.
- **Table permissions:** Specify the access level that a user has to data that is sitting in Dataverse.
- **Page permissions:** Individual page access is controlled through page permissions.
- **Site visibility:** Allows you to control who has access to a site.

A screenshot of the Microsoft Power Pages interface showing the 'Site visibility' settings. The top navigation bar includes 'Power Pages', a notification icon with '5' notifications, a bell icon, a gear icon, a question mark icon, and a user profile picture. The main content area is titled 'Site visibility' and describes controlling who can see and interact with the site. It shows that the site is currently set to 'Private - When you're building your site'. There is also an option for 'Public - When you're ready to go live'. Below this, there is a section titled 'Grant site access' with a sub-section 'People who can access to the site'. A text input field 'Enter name or email address' is present, along with a 'Share' button.



Administrative experiences

Power Platform admin center

The screenshot shows the 'Manage' section of the Power Platform admin center. Under 'Websites', it displays the 'Contoso Event Management' site. The 'Site Details' card shows the following information:

- Contoso Event Management**
- <https://eventmanagement-9894.powerappsportals.com>
- Application Type:** Developer Website
- Early Upgrade:** No
- Site Visibility:** Private
- Site State:** On
- Application Id:** 7f28295c-bc6e-41ca-b...
Org URL: https://orga7d237d9.c...
- Data Model:** Enhanced
- Owner:** Denik Bormann

The 'Security' section is partially visible below.

Perform site administrative tasks, such as managing SSL certs, configuring available features and more.

Power Pages management

The screenshot shows the 'Power Pages Management' interface under the 'Power Apps' tab. It displays the 'Contoso Event Management' website settings. The 'Website' card shows:

- Name:** Contoso Event Management
- Primary Domain Name:** ...
- Default Language:** English
- Parent Website:** ...

The 'Content' section includes 'Content Snippets' and 'Basic Forms'. The 'Options' section includes 'Header Template' and 'Footer Template'.

Backend management tool. Access user data and make more advanced modifications.



Creating a Power Pages site with Copilot

Start building your website with Copilot

Create a site for project management Design a website for community engagement

Create a site for managing property listings at a real-estate company. There should be a page where multiple listings can be viewed at one time.

▶

Describe

Describe the type of site you want to create.

Pick Layout

Copilot offers different layout options to choose from.

Add Pages

Specify the initial pages you want added to your site.



Power Pages design site

Five primary design workspaces

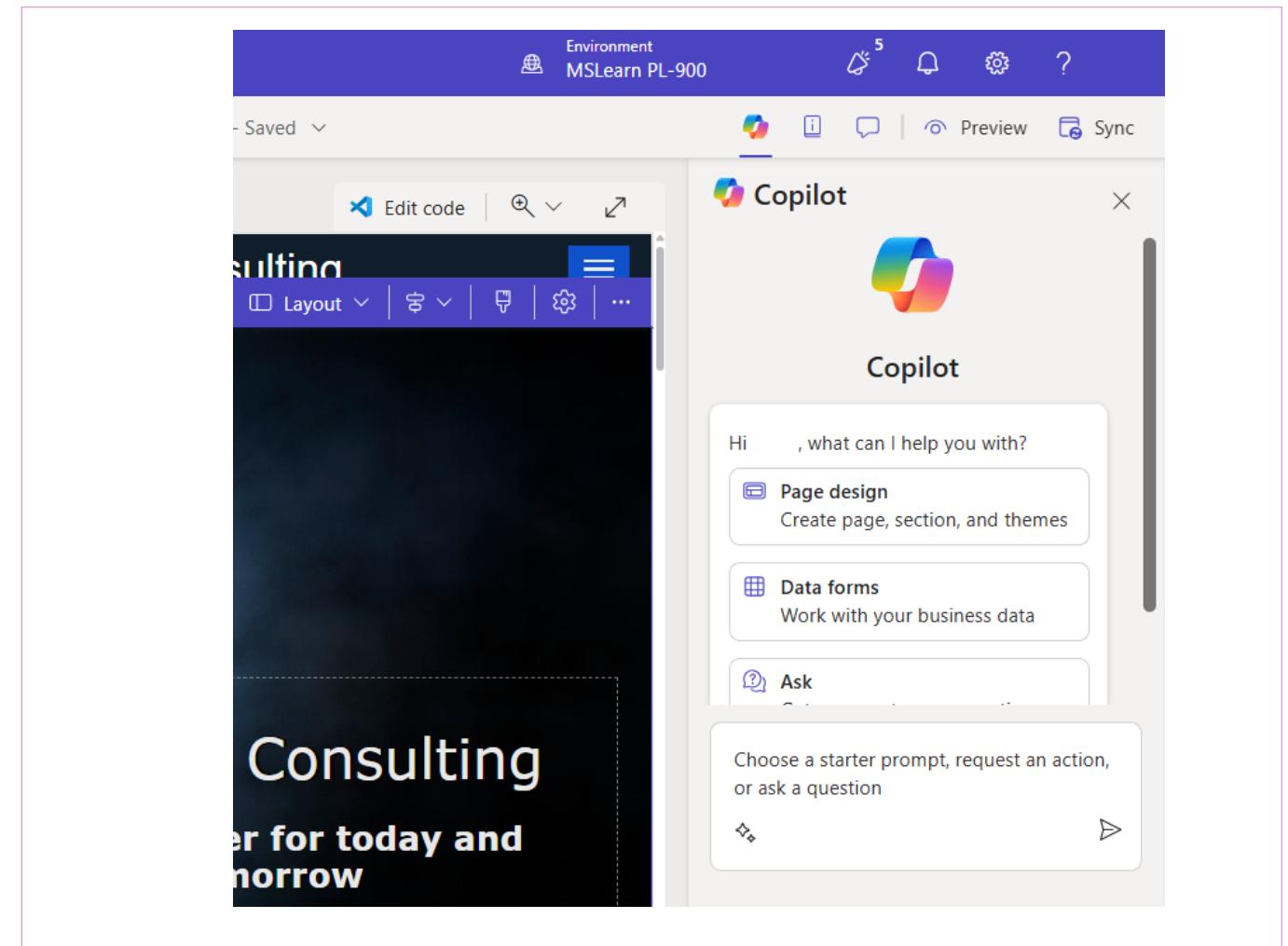
- Pages workspace
- Styling workspace
- Data workspace
- Setup workspace
- Security workspace

A screenshot of the Microsoft Power Pages design site. The interface has a dark theme with a light gray header bar. The header bar features the "Power Pages" logo on the left, a search icon, and user profile icons on the right. Below the header is a navigation bar with a house icon, a "Pages" button, and a "+ Page" button. To the right of the navigation bar is a main content area. On the far left, there is a vertical sidebar with several workspace options: "Pages" (selected and highlighted with a red border), "Styling", "Data", "Set up" (with a "New" badge), and "Security". Below these are three dots indicating more options. The main content area displays a "Main navigation" section with a list of pages: "Home", "About Us", "Contact Us", "Events" (which is expanded to show "Events" and "FAQ"), and "FAQ". Below this is a section titled "Other pages". To the right of the sidebar, there is a preview of a page titled "Contoso Con" with some placeholder text and a "Choose" button. At the bottom right of the preview area are two circular icons labeled "Text" and "Data".



Use Copilot to assist in design.

1. Create and Modify Pages
2. Edit Page Content
3. Style and Theme Adjustments
4. Add Data-Driven Components
5. Configure Security and Permissions
6. Generate Forms Automatically
7. Setup Site Navigation

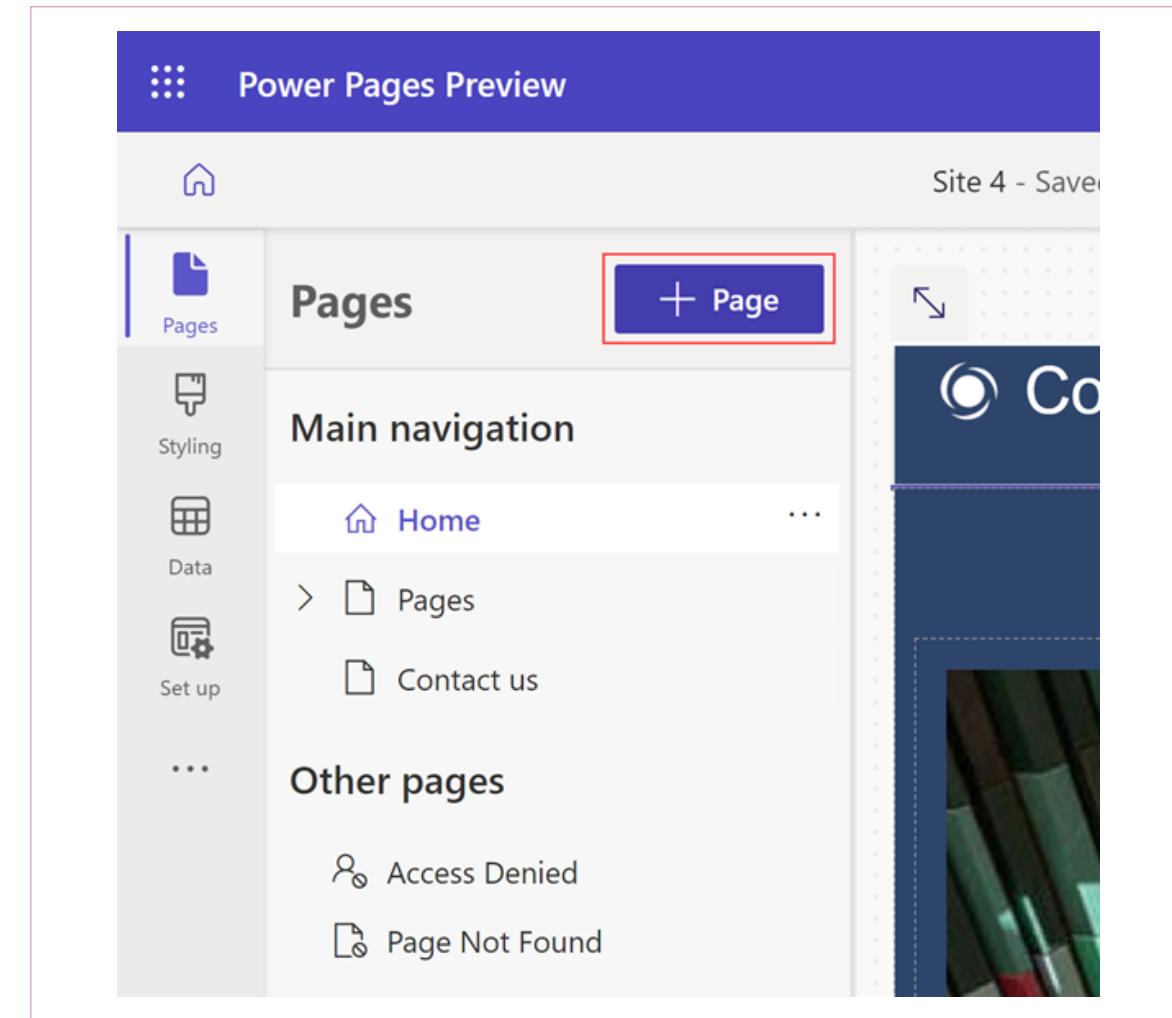




Pages workspace

Create, edit page design, and arrange the web pages in your site

- Add new pages
- Configure navigation
- Modify page content
 - Define sections
 - Add components
 - Format items





Pages workspace (Cont.)

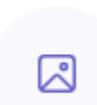
Choose a component to add to this section



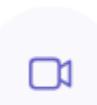
Text



Button



Image



Video



Card gallery



Form



Multistep form

...

Sections: For organizing content and layout.

Text: To add and format text content.

Button: To create interactive buttons.

Image: To insert images into pages.

Video: For adding videos to pages.

Spacer: To add spacing between sections.

Power BI: For embedding Power BI reports and dashboards.

List: To display data in a grid format.

Form: For creating forms and gathering user input.

Frame: To embed external content in an iframe.



Connecting to Dataverse data

From within Power Pages

- Create new Dataverse tables.
- Edit existing Dataverse tables.
- Build and edit Dataverse forms and views.

Dataverse form and views

- Display list of records.
- Display data for individual records.
- Create and edit forms for records.

Role-based security ensures there's no unauthorized access to Dataverse data.

	Scholarship Name ↑	Description	Application Date
1	American Architect Scholarship	American Architects scholarship is...	12/1/2023
2	Foreign Language Scholarship	Students who have taken at least ...	2/15/2024
3	Future Design Leaders Scholarship	All undergraduate and graduate s...	4/10/2024
4	Women in STEM Scholarship	The Women in STEM scholarship i...	9/9/2023
5	Enter text	Enter text	Enter or p...



Setup workspace

- **Site details:** Provides high-level details about your site.
- **Go-live checklist:** Step-by-step list that helps ensure that your site is ready to go live.
- **Site performance:** Identifies pages where performance might be an issue and provides suggestions for fixing.
- **Integrations:** Allows you to manage integrations with other services, such as Power Automate cloud flows and external apps.
- **Copilot:** Allows you to configure Copilot features on your site such as Site search, as well as add an agent to assist users

The screenshot shows the 'Set up' page in the SharePoint admin center. The left sidebar has icons for Pages, Styling, Data, Set up (which is highlighted with a red box), Security (with a 'New' badge), and an ellipsis. The main content area is titled 'Set up' and includes sections for General, Mobile, Integrations, and Copilot. A prominent purple banner at the top right states 'Security settings have moved to Security & compliance' with a 'Visit Security' button. Below this, the 'Site details' section displays a 'Check your security configuration' summary with a gauge showing '4/7 passed' and a note: 'Note: The security checks are indicative of security best practices. [Learn more](#)'.



Site Security

Run Deep scan: Scans your site for vulnerabilities and assists in fixing them.

Protect: Provides access to different tools to help control the data users have access to.

- Web roles
- Page permissions
- Table permissions
- Web application firewall

Manage: Provides the ability to manage site security elements.

- Identity providers
- Site visibility

The screenshot shows the Microsoft Power BI navigation menu. On the left, there is a vertical sidebar with icons for Pages, Styling, Data, and Set up. Below the Set up icon is a button labeled 'Security' with a blue shield icon and a 'New' badge. This 'Security' button is highlighted with a red rectangular box. To the right of the sidebar, the main content area is titled 'Security'. It contains several sections: 'Monitor' (with 'Run scan (preview)'), 'Protect' (with 'Web roles', 'Page permissions', 'Table permissions', and 'Web application firewall'), 'Manage' (with 'Identity providers', 'Site visibility', and 'Advanced settings (preview)').

Lab 5: Build a Power Pages website

Copilot Studio



Copilot

Every employee will have a Copilot

Works as your personal assistant

Grounded in work content like email, meetings and documents

The UI for AI



Agents

Every business process will have an agent

AI-powered system with actions, triggers and knowledge

Works on behalf of employees, teams and functions

Connected to Copilot or autonomous

Microsoft is the trusted platform to build your agents

Copilot Studio + Copilot Control System

Data

Microsoft			
MCP			
External Data			
Unstructured Data			
APIs & SDKs	M365 Agents SDK, M365 Copilot APIs, Developer SDK		

Protect

Data Security & Compliance



AI Security



Agent ID

Govern

Configuration & metering



Customization



Agent lifecycle

Measure

Readiness & adoption

Productivity measurement

Business value & ROI



Copilot Studio

Copilot Studio is the platform to **build agents** that **extend Microsoft 365 Copilot** or operate standalone

For end users

The screenshot shows the Copilot Studio Lite interface. At the top, there's a header with the Copilot Studio logo and a 'Field Service agent' dropdown. Below the header, a 'Describe' button is highlighted. The main area contains a conversation log and a configuration panel for a 'Field Service agent'. The configuration panel includes sections for troubleshooting, installation support, site preparation, compliance and safety, inventory management, and documentation. A large text input field at the bottom allows users to ask work questions.

Copilot Studio Lite
in Microsoft 365 Copilot and SharePoint

For IT & developers

The screenshot shows the full Copilot Studio graphical authoring environment. It features a flow editor where a 'Travel budget' copilot is being built. The flow consists of several steps: 'Describe what the topic does', 'Action' (Read SAP table), 'Outputs (1)', 'Create generative answers', and 'Input'. On the right side, there are panels for 'Data sources' (public websites, SharePoint, Azure OpenAI Services), 'Public websites' (with a search bar), and 'Custom data' (with a connection properties section). The overall interface is designed for IT professionals and developers to build complex generative AI flows.

Copilot Studio (full experience)
Full featured graphical authoring environment

Customize your agent

Easily tailor your agent's building blocks to meet your unique business



Enrich and focus with



Your business data



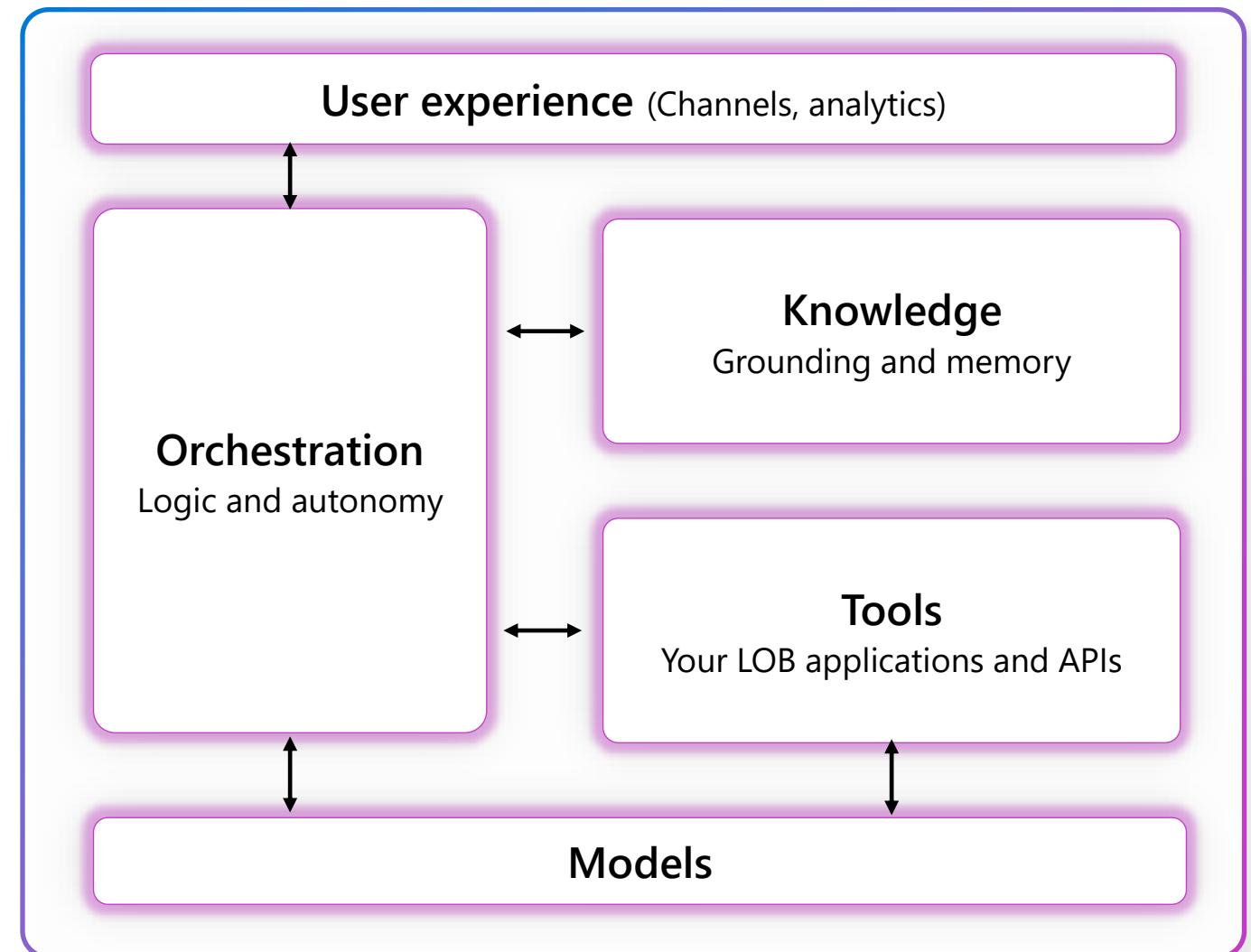
Your apps



Your workflows



Your automation





Describe your agent to create it

Helpdesk Expense tracking HR and benefits

Use everyday words to describe what your agent should do

Features labeled as 'preview' are subject to supplemental terms. [See terms.](#)

Recent

[See more](#)

Name	Type	Last modified	Last published	Owner	Protection status	Engaged sessions
 Copilot for Microsoft 365	Microsoft		Never		--	--
 Contoso Helpdesk Agent	Agent	# ebenitez (BAM...)	20 days ago	# ebenitez (BAM!)	 Protected	0

Explore agents

[See more](#)



Website Q&A
Agent template



Safe Travels
Agent template



Financial Insights
Agent template



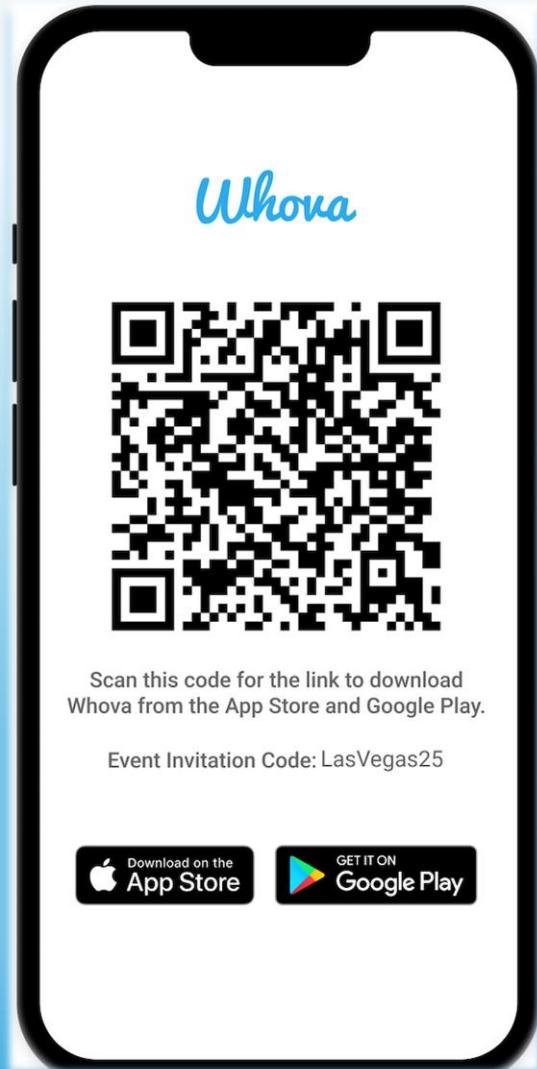
aka.ms/agent-academy

aka.ms/agent-academy/videos

Certification Exam Writing



Join us on the *Whova* app!



STAY IN THE KNOW

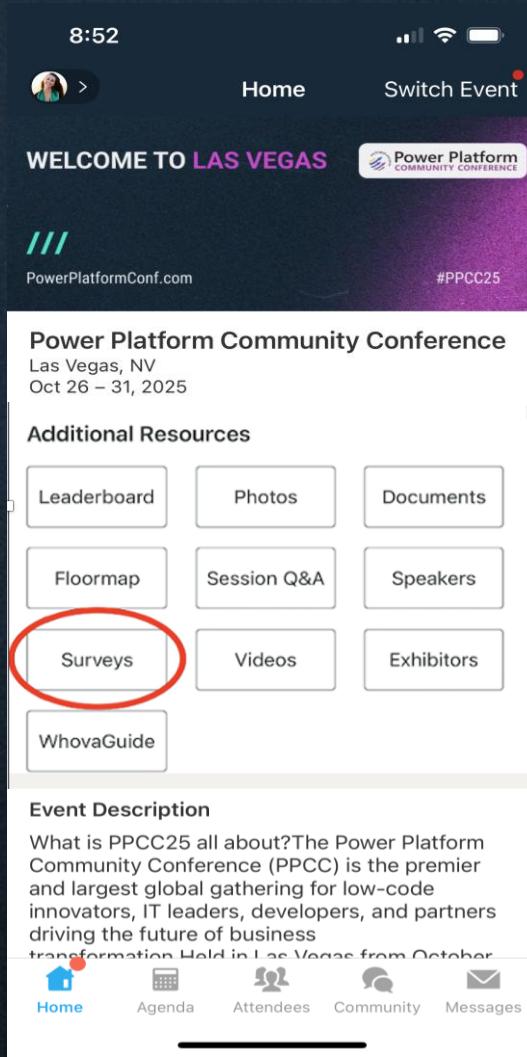
- Receive event updates and notifications
- Connect with other attendees
- Personalize your agenda
- Network & join meet-ups
- Access to Event Documents

Having Trouble Joining?

Search for our event, **Power Platform Community Conference**.

Event Invitation Code:
LasVegas25

Session Feedback Surveys



We really want to hear from YOU!

In the pursuit of making next year's Power Platform Community Conference even better, we want to hear your feedback about this session.

Here's How -

- *Simply go to the Whova App on your smartphone*
- *Scroll down on the Power Platform Community Conference Homepage to 'Additional Resources' to click "Surveys"*
- *Click Session Feedback.*
- *Scroll down to find this session title.*
- *Complete the session feedback survey.*
- *Finally, click 'Submit'*
- *It's just that easy!*

THANK YOU

PPCC 2025 DAY 1

Conclusion

Explored Power Platform

Covered fundamentals from data management to automation and agent creation through practical scenarios.

Certification Readiness

Prepared participants to pursue PL-900 certification validating their understanding and skills.

Real-world Application

Encouraged applying learned skills in real-world contexts to solve practical problems effectively.