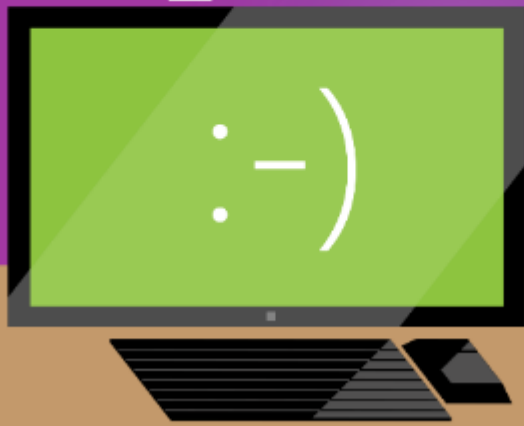




App in a Day

Computer Revolution Uganda



Agenda

Introduction to canvas apps and model-driven apps
Get started with Common Data Service/ Dataverse
Practice
<i>Break – 10 minutes</i>
Get started with model-driven apps in Microsoft Power Apps
Get started with Microsoft Power Automate
<i>Break – 10 minutes</i>
Introduction to business process flows in Microsoft Power Automate
Practice
Get started with AI Builder
<i>Lunch Break - 40minutes</i>
Hands-on Lab
<i>Summary and Closing Q&A</i>

Microsoft Power Platform

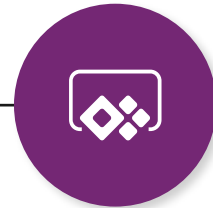
The low-code platform that spans Office 365, Azure, Dynamics 365, and standalone applications

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

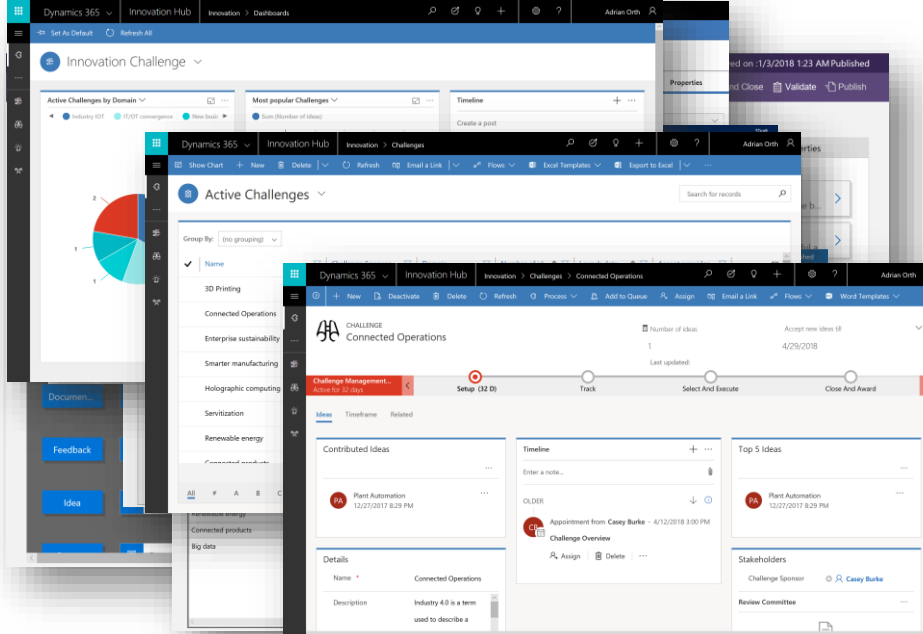


Common Data Service

Canvas Apps



Canvas apps
Start with user experience
WYSIWYG designer
Task- and role-based apps
Mash up data from 200+ sources

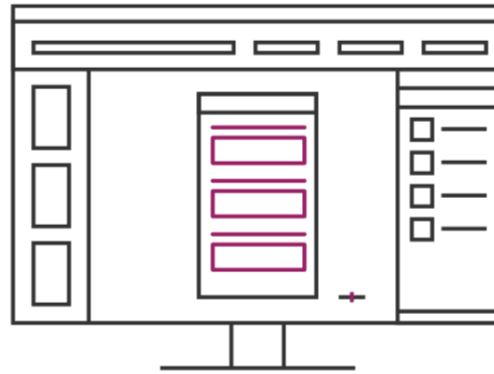


Model-driven apps
Built on the Common Data Service for Apps
Start with a data model, relationships, and business processes
Build End-to-End business applications

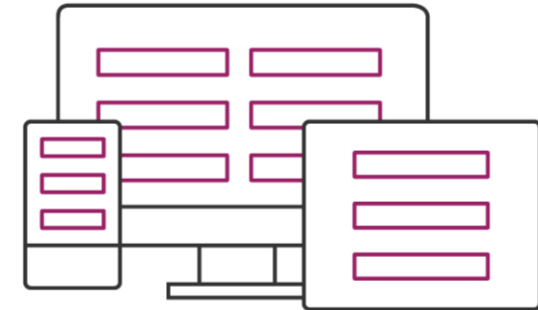
Canvas Apps help business-power-users to create and use custom business apps across platforms using Excel and PowerPoint skills



Connect to data & systems you're already using *easily*



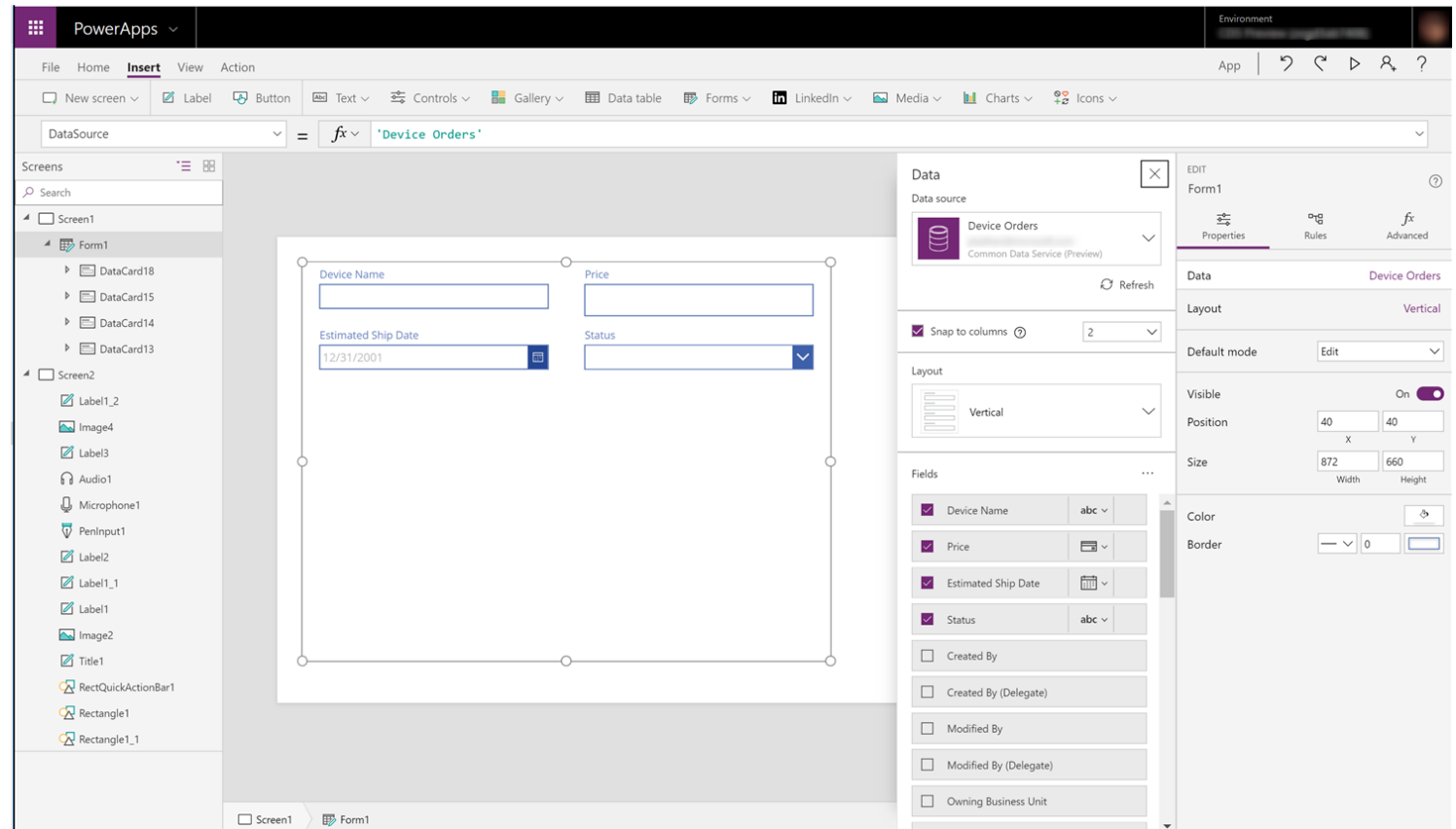
Create apps, forms, and workflows *without writing code*



Use apps *on any device* – both web and mobile

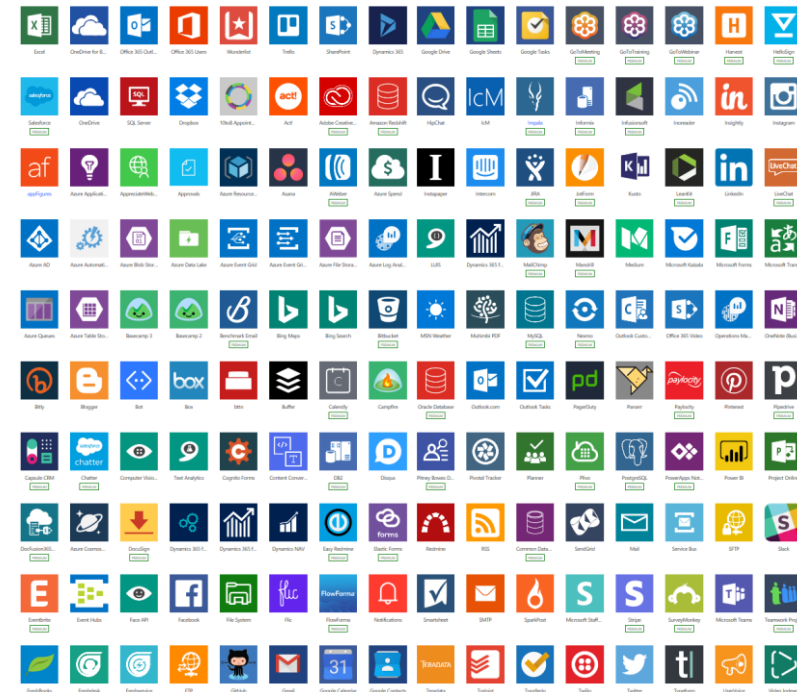
Easy Authoring

- Truly WYSIWYG – full control over user experience, use it as you build it
- Create app logic with familiar Excel-like expressions
- Mash up data from multiple sources right at the app level



Cloud and on-premises connectivity

- Built-in connectivity to 200+ cloud services, files, databases, web APIs, etc.
- Seamless hybrid connectivity to on-premises systems via the On-Premises Data Gateway
- Build custom connectors for everyone to leverage



Enterprise-grade

Cloud and on-premises connectivity

Pro-developer extensibility

Cross-platform

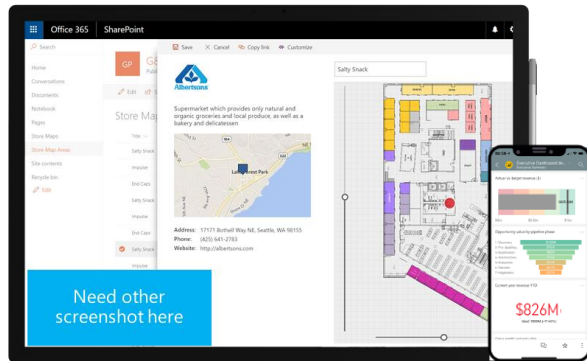
- Publish instantly to iOS, Android, Windows, and the web
- Sharing apps is like sharing documents
- Manage across environments



Customize, extend, and build all the apps you need

Seamless Dynamics 365, Office 365, and Azure integration along with connectors to more than 200 data sources

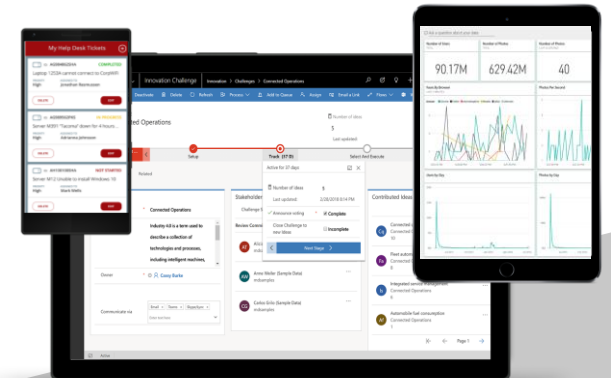
Tailor out-of-the-box solutions, embedded forms and dashboards



Highly customized task- and role-based apps



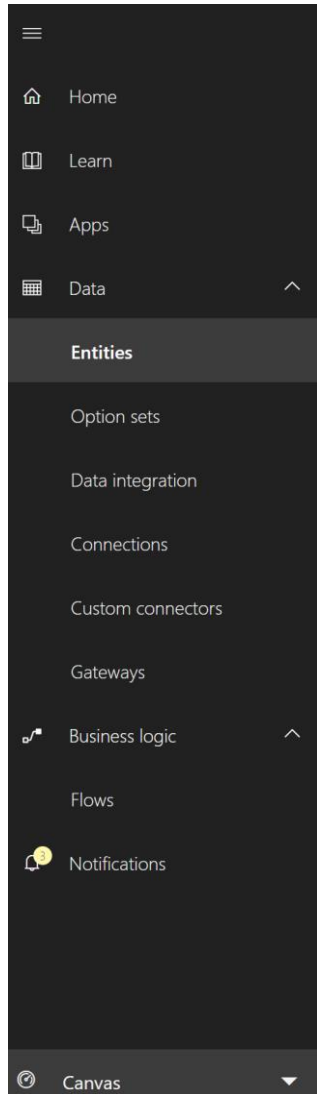
Immersive, end-to-end solutions



SOPHISTICATION

Power Apps concepts

PowerApps Maker Portal [<https://web.powerapps.com/>]

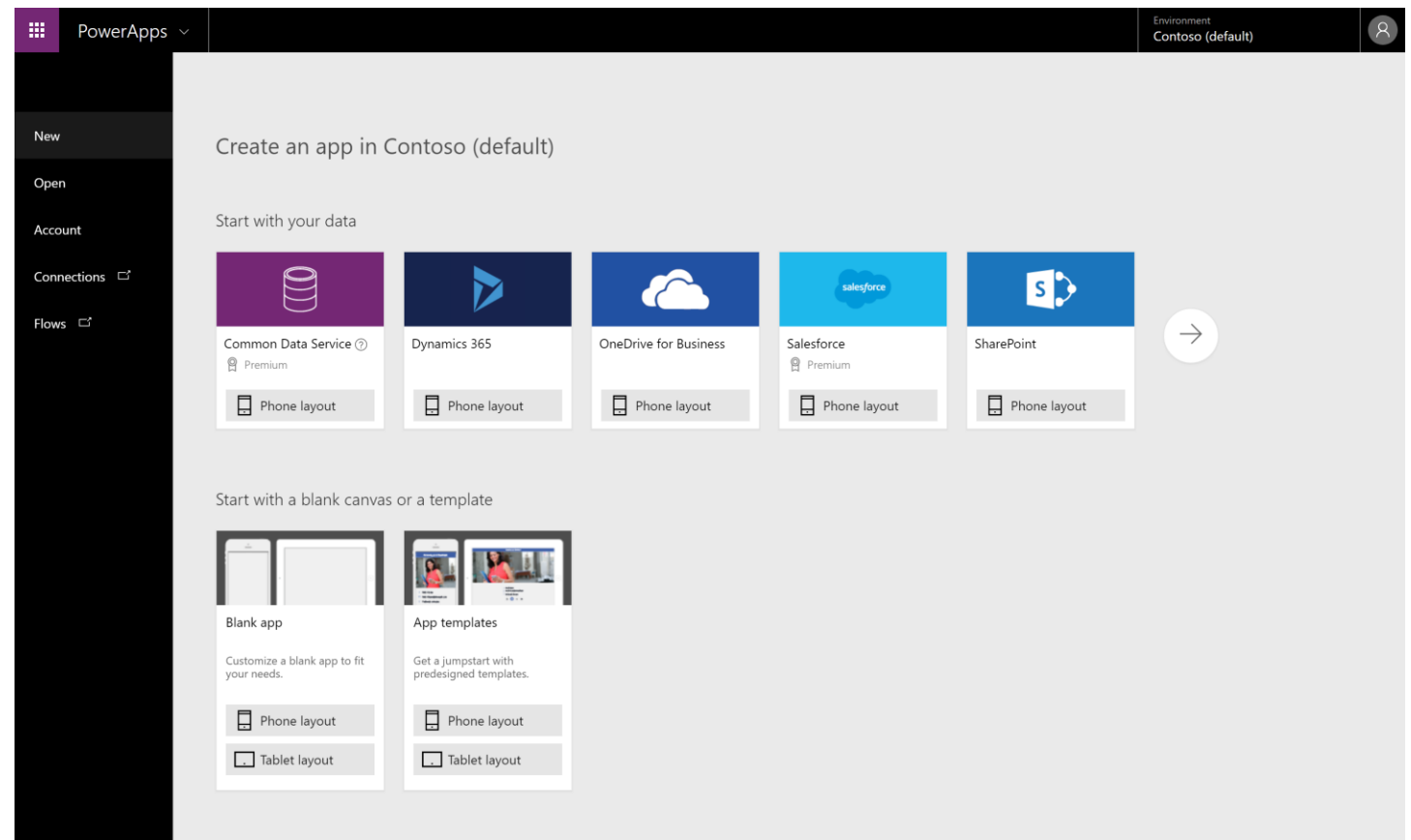


Home page for Makers

- Learn
 - Guided learning, documentation, community, what's new
- Manage Apps
 - View apps, open apps, create new apps, run sample apps, create apps from sample apps
- Data
 - Manage Entities, option sets, data integration, connections, custom connections & gateways
- Business Logic: Add Flows to your apps
- Switch mode between Canvas and Model-driven

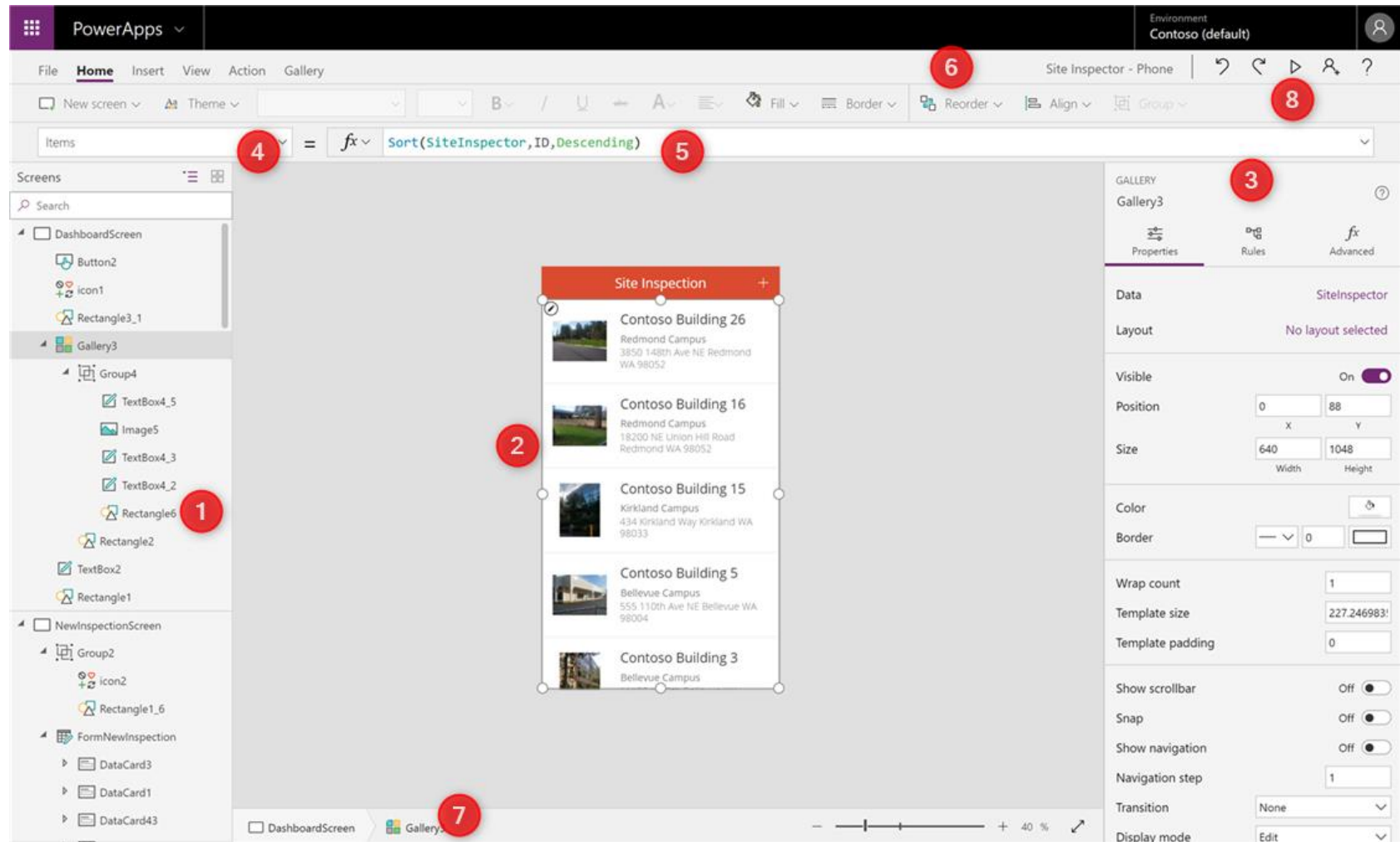
PowerApps Studio for the Web [<https://create.powerapps.com/>]

- Canvas apps authoring experience
- Start with your data
- Start with a blank canvas
- Start with a template



PowerApps Studio parts

1. Left Navigation bar
2. Middle pane (current screen)
3. Right-hand pane
4. Property drop-down list
5. Formula bar
6. Ribbon
7. Bread-crumb navigation
8. Preview button (F5)



PowerApps Mobile (Player)

PowerApps Mobile for Windows, iOS, and Android

- Available from respective app-stores as a free app
- Sign-in using your work account (Office 365 / Dynamics 365 / Azure AD credentials)
- Access all your apps or apps shared with you across environments

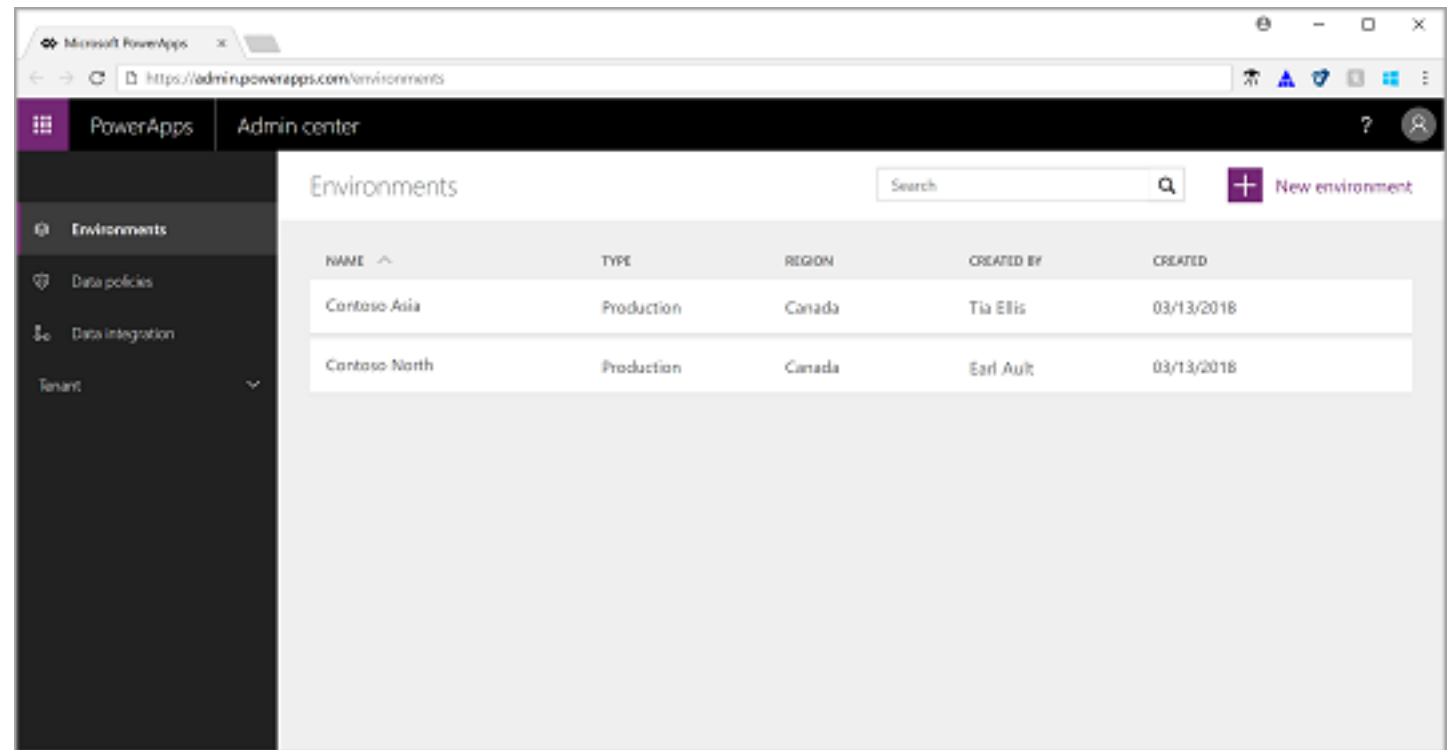


Google Play: <https://aka.ms/powerappsandroid>
Apple App Store: <https://aka.ms/powerappsios>
Microsoft Store: <https://aka.ms/powerappswin>



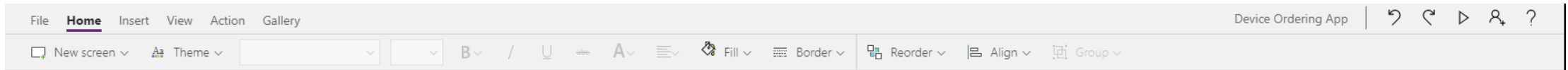
PowerApps Admin Center [<https://admin.powerapps.com>]

- Administration of PowerApps, Microsoft Flow and Common Data Service for Apps
- Create Environments & databases
- Assign Data Loss Prevention policies
- View active users in tenant
- View apps and flows in environment or tenant

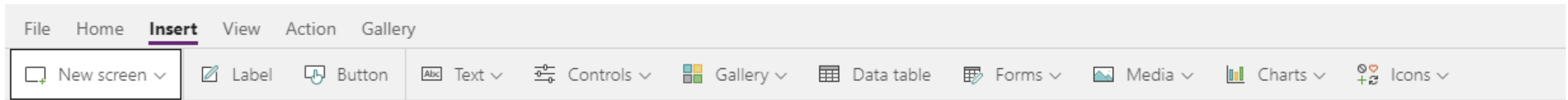


PowerApps Studio

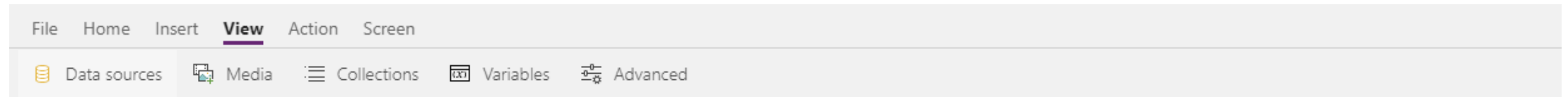
Common Properties



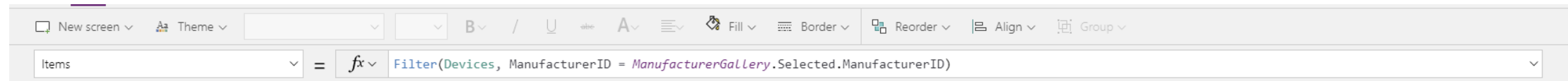
UI: Controls



View: Data



UI-Data Binding: Properties & Formula bar



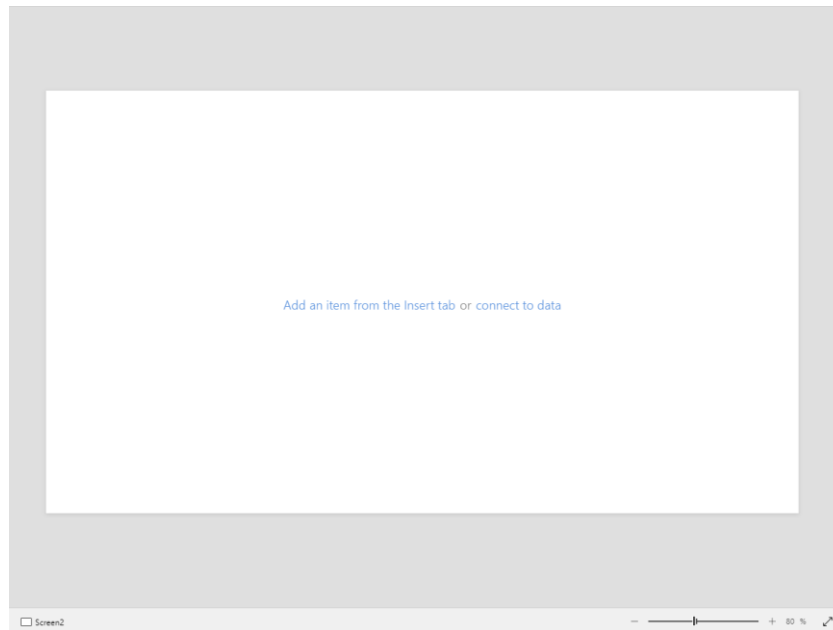
Screens & Controls View

Screens

Search

- MainScreen
 - Button2_1
 - Button2
 - ManufacturerGallery
 - Image3
 - DeviceGallery
 - Checkbox1
 - Subtitle1
 - Title1
 - Image1
 - Label3
 - HeaderLabel
- CompareScreen
 - icon1
 - CompareListGallery
 - Title1_6
 - Title1_5
 - Title1_4
 - Title1_3
 - Title1_2
 - Subtitle1_1
 - Title1_1
 - Image1_1
 - Label3_1
 - HeaderLabel_1

Canvas



Properties Panel

New screen Theme B / U A Fill Border Reorder AI

Items = fx Filter(Devices, ManufacturerID = ManufacturerGallery.Selected.ManufacturerID)

GALLERY DeviceGallery

Properties Rules Advanced

Data Devices

Layout Title and subtitle

Visible On

Position X: 204 Y: 80

Size Width: 1162 Height: 621

Color

Border 0

Wrap count 1

Template size 175

Template padding 0

Show scrollbar On

Snap Off

Show navigation Off

Navigation step 1

Transition None

Display mode Edit

SCREEN MainScreen

Properties Rules Advanced

Search for a property ...

ACTION

OnVisible

Collect(CompareList, {Pressed: Button2_1.Pressed})

OnHidden

OnStart

DATA

BackgroundImage

DESIGN

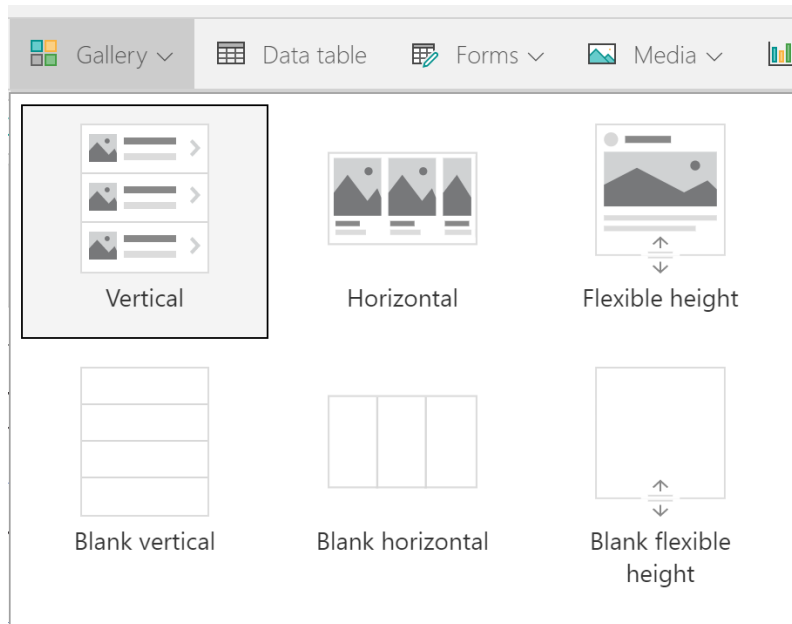
Fill

RGBA(255, 255, 255, 1)

ImagePosition

ImagePosition.Fit

Gallery



First item is used to the edit the gallery template

A screenshot of a gallery in edit mode. The gallery contains four items, each with a placeholder image, a title, and a subtitle. The first item is highlighted in yellow and has an 'Edit gallery' button in its top-left corner, indicated by a blue arrow. The items are:

- Item 1:** Title: Lorem ipsum 1, Subtitle: Lorem ipsum dolor sit amet.
- Item 2:** Title: Lorem ipsum 2, Subtitle: Suspendisse enim metus, tincidunt.
- Item 3:** Title: Lorem ipsum 3, Subtitle: Ut pharetra a dolor ac vehicula.
- Item 4:** Title: Lorem ipsum 4, Subtitle: Vestibulum dui felis, fringilla nec mi.

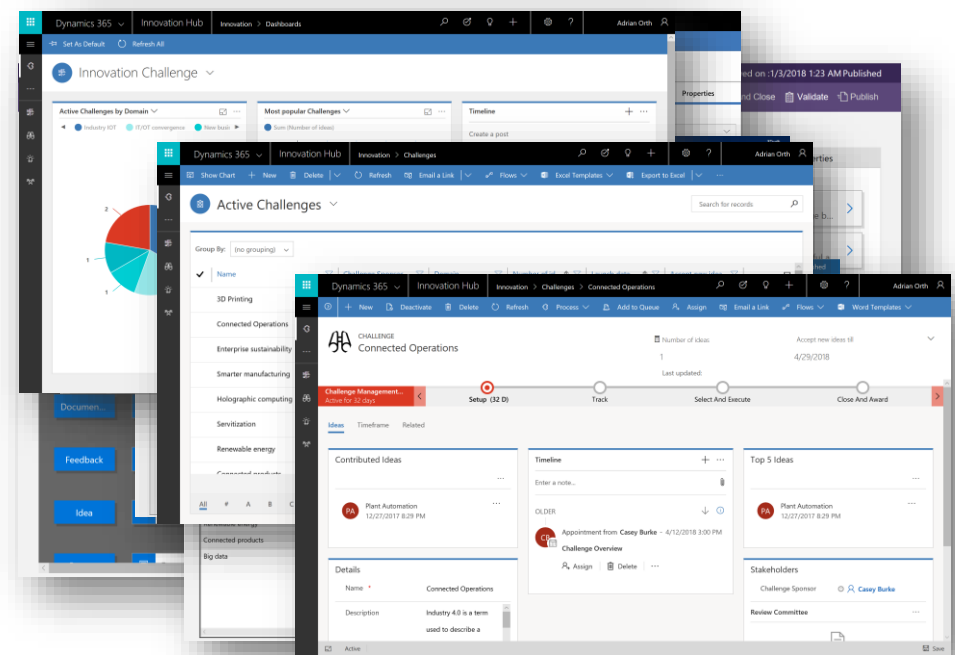
On the right side, there is a configuration panel with the following settings:

- Data:** Data source: CustomGallerySample (Sample data).
- Layout:** Image, title, and subtitle.
- Image2:** SampleImage.
- Subtitle2:** SampleText.
- Title2:** SampleHeading.

Model-driven apps

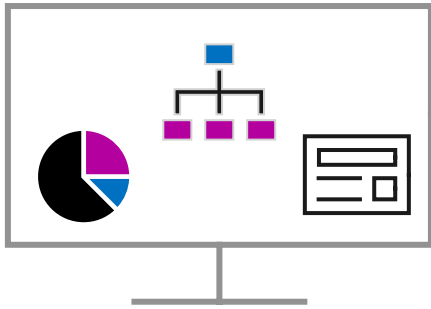


Canvas apps start with user experience, with pixel-perfect control to build highly customized task- and role-based apps that mash up data from 190+ sources

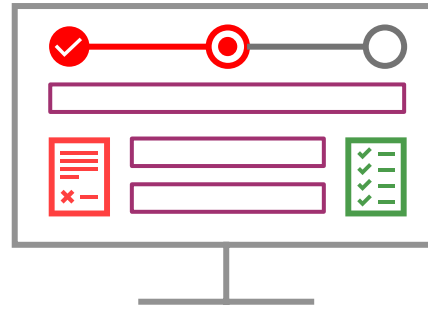


Model-driven apps leverage your data model, relationships, and business processes to automatically generate immersive, responsive applications

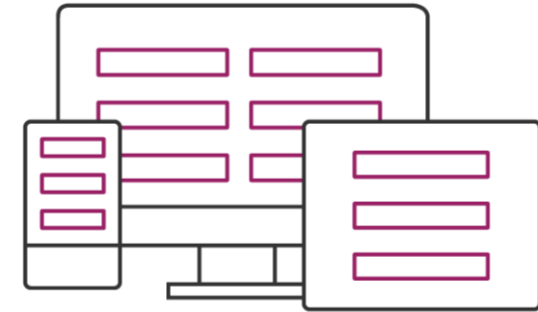
PowerApps Model-driven apps provides a metadata-driven architecture for creating and customizing apps without writing code



Rich component-focused no-code design environments



Easily add Business rules and Business process flows to model your business processes



Complex responsive apps on web and mobile

Component-focused approach to app development

Create apps around forms and processes

A new way of app development using entities, forms and business processes

Design sophisticated entity forms quickly

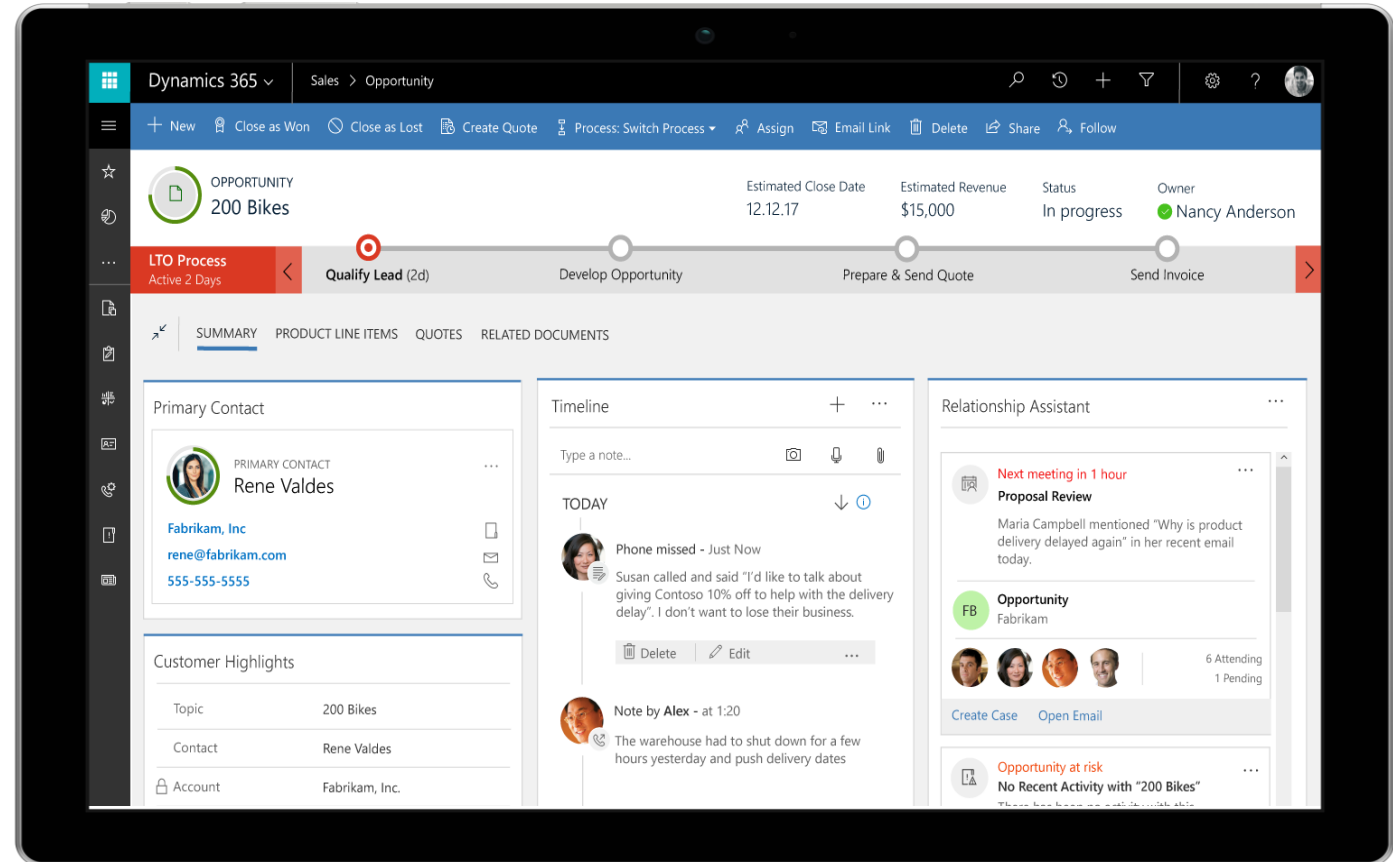
Drag and drop fields and controls in a visual designer. Forms can span multiple columns, multiple steps, and collapsible sections.

Rich, responsive client experiences

Responsive UI automatically reflows across devices based on the space available.

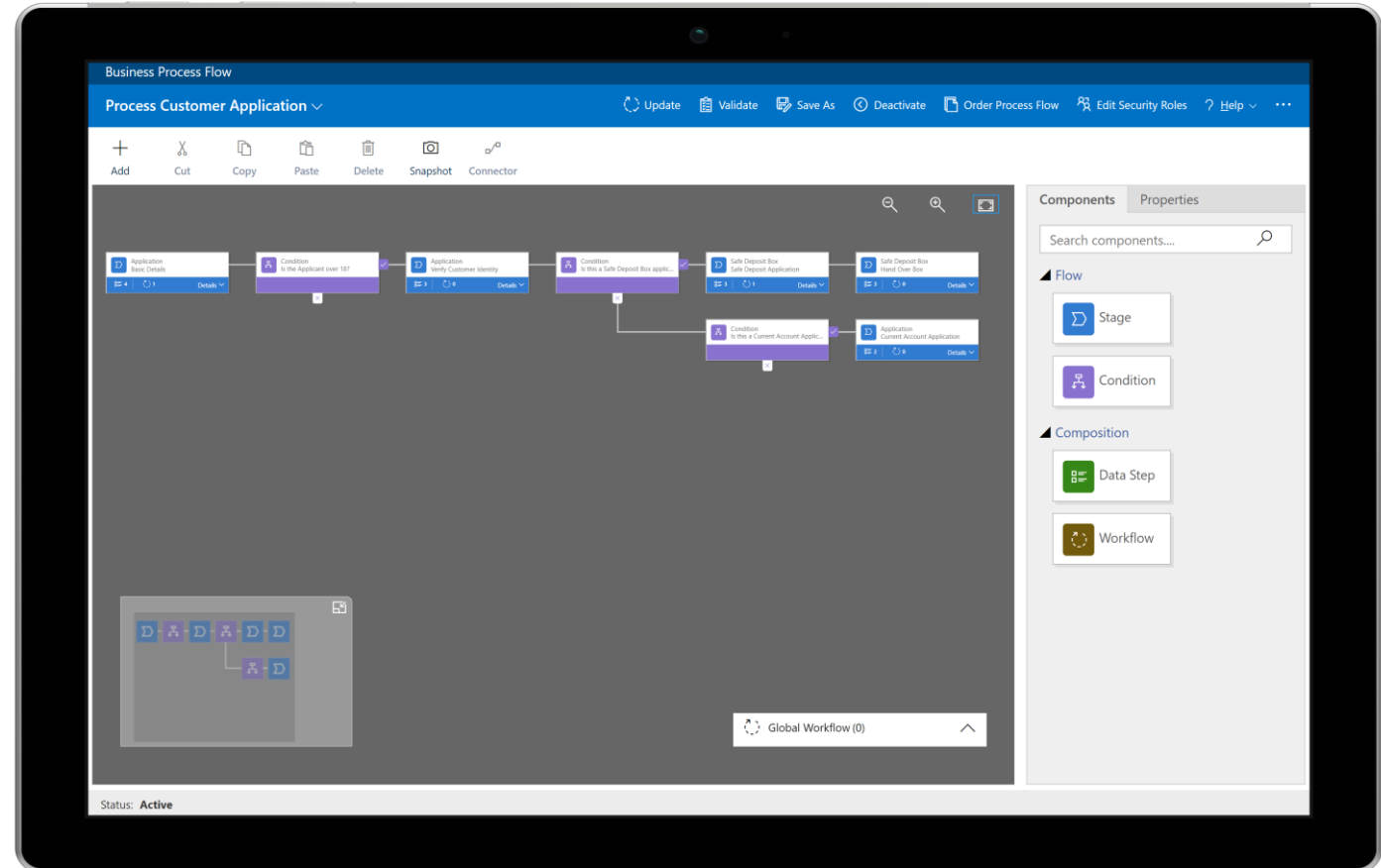
Enables easy reuse across multiple apps

Easily share forms, dashboards, flows, and more across multiple apps



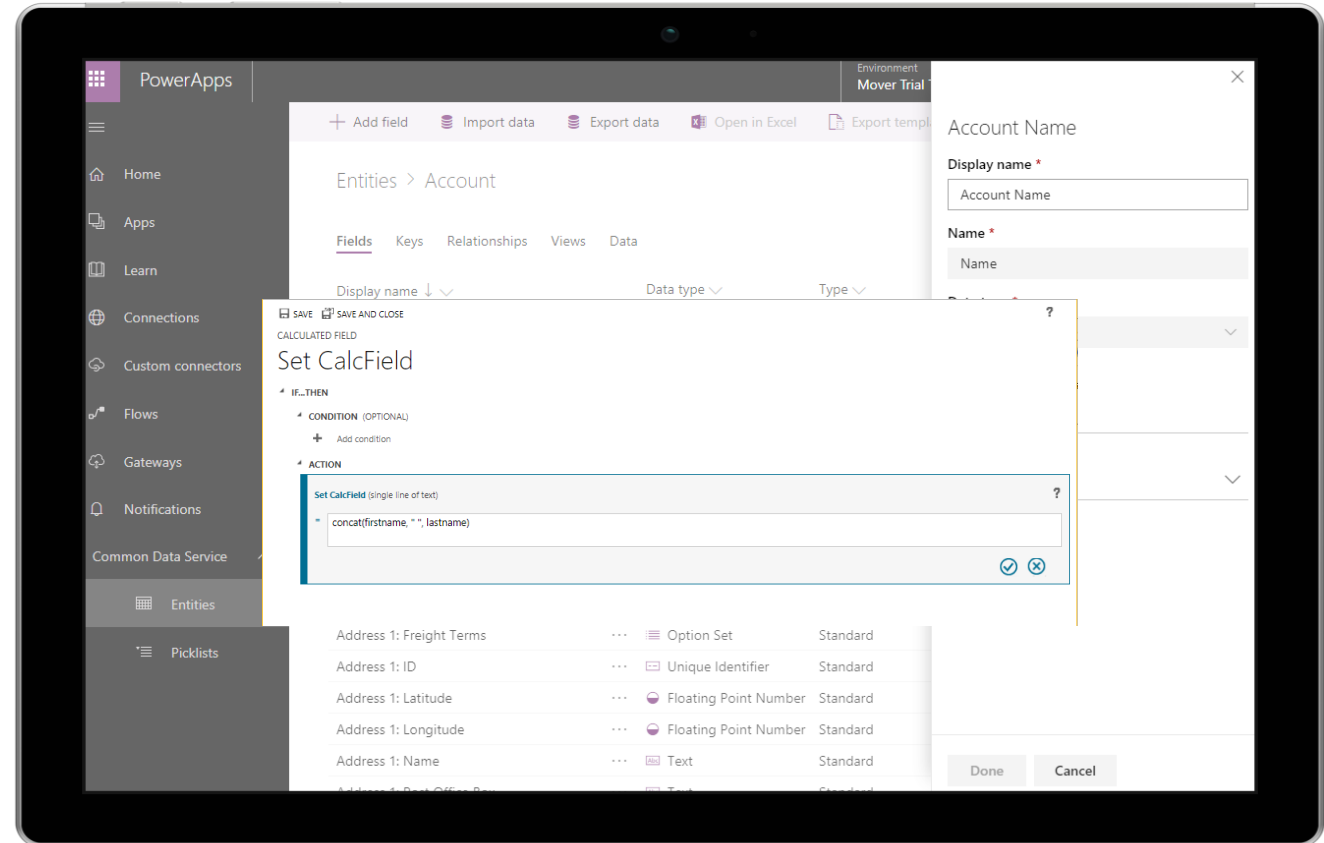
Business Process Flow

- Visual indicators that tell users where they are in the business process
- Reduce the need for training
- Configurable to support common line of business methodologies



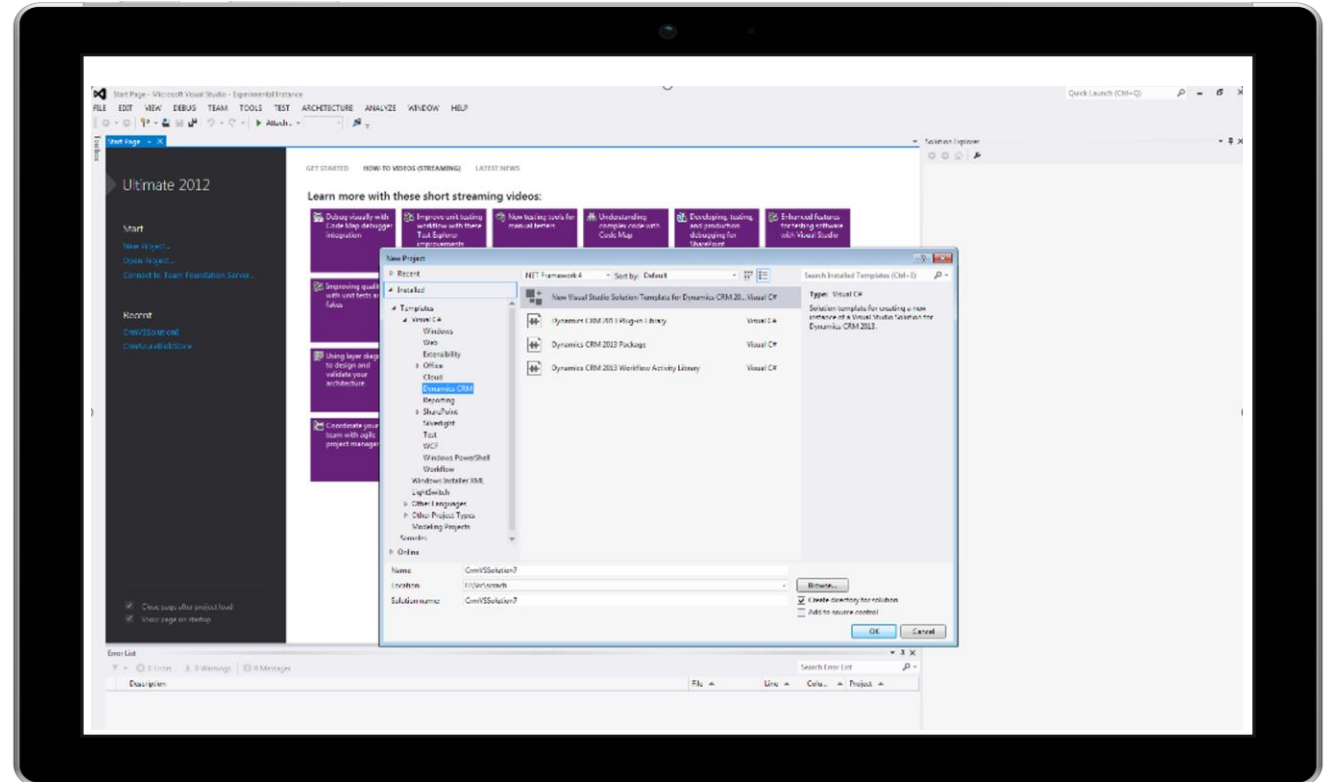
Server Side Logic

- Server-side logic bound to entities, works across all apps
- Create calculated and roll up fields
- Easily create validation and set field defaults
- Update related entities with synchronous workflows



Developer Capabilities

- Robust solution framework for application install and updates
- Visual Studio integrated developer toolkit
- Odata web API
- .Net SDK
- Sandbox instances for ALM operations



Canvas apps and Model-driven apps are complementary to each other

Canvas Apps	Model Driven Apps
Start with the User Experience or Data	Start with the Data Model (schema)
Build visually appealing, pixel-perfect apps	Component-driven approach to app building
Use concepts like screens, controls, formulae, connections	Use components like site maps, entities, forms, views, charts, dashboards, business process flows
Separate mobile and tablet app creation experiences	Responsive web & mobile apps out of the box
Create mash-up apps using data from multiple data sources using the 200+ connectors or custom connectors	Create apps using entities and virtual-entities in CDS for Apps
Use any PowerApps license (Office 365/P1-P2 or Dynamics 365)	Only PowerApps Plan 2 or Dynamics 365 Enterprise license
Great for building task-focused apps for a specific personas	Great for back-office scenarios involving complex business processes
Security and access for the data is managed on the data-source chosen	Add role-based security and row-level security to your data
Use entities stored in CDS for Apps through CDS connector (P1/P2 required)	Use Business Process Flows, code add-ins & real-time workflows

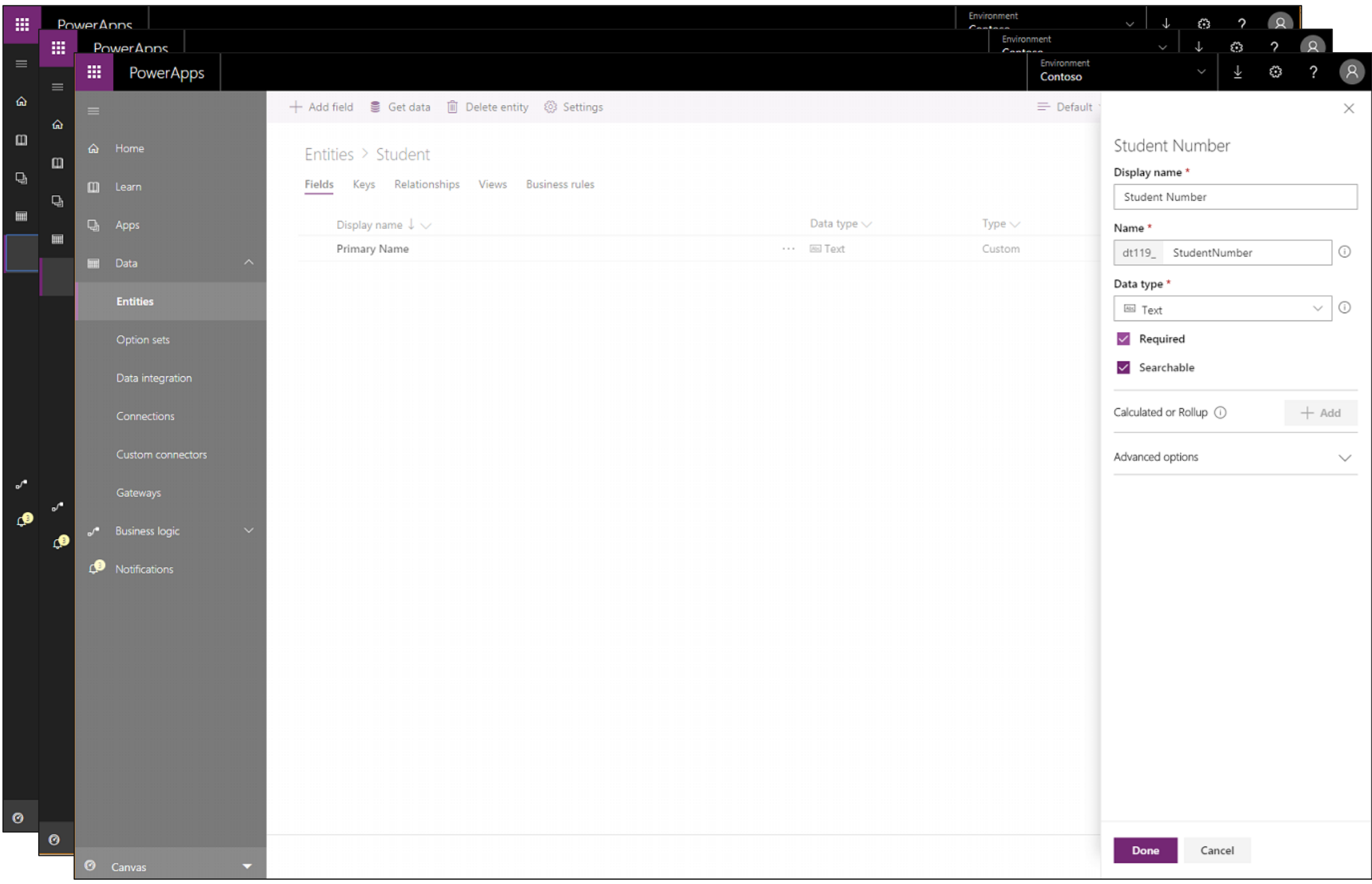
PowerApps Maker Portal [\[https://web.powerapps.com/\]](https://web.powerapps.com/)

1. Switch design mode to Model-driven
2. Explore sample apps
3. Create new Model-driven apps

The screenshot displays the PowerApps Maker Portal interface. On the left, a navigation pane lists various options, with 'Model-driven (preview)' selected and marked with a red circle '1'. The main content area features a header 'Start building model-driven apps' and three primary actions: 'Model your data', 'Create business processes', and 'Generate your app'. Below these, a section titled 'Create apps like these' (marked with a red circle '2') showcases three sample apps: 'Fundraiser', 'Innovation Challenge', and 'Asset Checkout'. A 'New app' button (marked with a red circle '3') is located in the top right corner of this section.

Model-driven app components - Data

Component	Description	Designer
Entity	An item with properties that you track, such as a contact or account. Many standard entities are available. You can customize a non-system standard entity (production entity) or create a custom entity from scratch.	PowerApps entity designer
Field	A property that is associated with an entity. A field is defined by a data type, which determines the type of data that can be entered or selected. Examples include text, number, date and time, currency, or lookup (creates a relationship with another entity). Fields typically are used with forms, views, and searches.	PowerApps entity designer
Relationship	Entity relationships define how entities can be related to each other. There are 1:N (one-to-many), N:1 (many-to-one), and N:N (many-to-many) types of relationships . For example, adding a lookup field to an entity creates a new 1:N relationship between the two entities and lets you put that lookup field on a form.	PowerApps entity designer
Option set field	This is a special type of field, which provides the user a set of predetermined options. Each option has a number value and label. When added to a form, this field displays a control for the user to select an option. There are two kinds of option sets; option sets, where the user can only select one option, and multi-select options sets, which allow more than one selection.	PowerApps option set designer



+ Add field Get data Delete entity Settings

Default

Entities > Student

Fields Keys Relationships Views Business rules

Display name ↓	Data type ↓	Type ↓
Primary Name	Text	Custom

Student Number

Display name *

Student Number

Name *

dt119_ StudentNumber ⓘ

Data type *

Text ⓘ

Required

Searchable

Calculated or Rollup ⓘ

+ Add

Advanced options

▼

Done Cancel

Model-driven app components - UI

Component	Description	Designer
App	Determines the application fundamentals such as components, properties, client type, and URL for your app.	App designer
Site map	Specifies the navigation for your app.	Site map designer
Form	A set of data-entry fields for a given entity that matches the items that your organization tracks for the entity. For example, a set of data-entry fields that where user's input relevant information to track a customer's previous orders along with specific requested reorder dates.	Form designer
View	Views define how a list of records for a specific entity is displayed in your application. A view defines the columns to display, width of each column, sort behavior, and the default filters.	View designer

+ Add Edit Remove

Search Canvas

Site Map **Site Map**

Dashboards **Dashboards** All

Entity View (2)

Account **Forms** 2

Contact **Forms** All

Form: Account - Microsoft Edge

https://crm3online2.crm.dynamics.com/main.aspx?appSolutionId={fd140aaf-4df4-11dd-bd17-0019b9312238}&etc=1&extraqs=formtype%3D...

Microsoft | Dynamics 365

Matt Peart CRM3Online2

FILE HOME INSERT

Save Save As Save and Close Publish Change Properties Remove Undo Redo Body Footer Navigation Business Rules Form Properties Preview Form Enable Security Roles Show Dependencies Managed Properties Merge Forms Upgrade

Solution: Default Solution

Form: **Account**

Header

Annual Revenue	Number of Employees	Owner*
Annual Revenue	Number of Employees	Owner

Summary

ACCOUNT INFORMATION	SOCIAL PANE	Assistant
Account Name*		Assistant
Phone Main Phone		
Fax Fax		
Website Website		
Parent Account Parent Account		
Ticker Symbol Ticker Symbol		
Annual Revenue Annual Revenue		Healthwidget

Field Explorer

Filter: All Fields

Only show unused fields

- Account Number
- Account Rating
- Address 1: Address Type
- Address 1: City
- Address 1: Country/Region
- Address 1: County
- Address 1: Fax
- Address 1: Latitude
- Address 1: Longitude
- Address 1: Name
- Address 1: Post Office Box
- Address 1: Primary Contact Name
- Address 1: State/Province
- Address 1: Street 1
- Address 1: Street 2

New Field

Components Properties

ARTIFACTS

- Entities Model and manage business data.
- Dashboards Provide an insightful and graphic...
- Business Process Flow Define a sequence of steps requir...

ENTITY ASSETS

- Forms Define how users will see and int...
- Views Create a list view of records for a...
- Charts Show data in a meaningful and vi...
- Dashboards Provide an insightful and graphic...

Model-driven app components - Logic

Type of logic	Description	Designer
Business process flow	An online process that walks users through a standard business process. For example, use a business process flow if you want everyone to handle customer service requests the same way, or to require staff to gain approval for an invoice before submitting an order.	Business process flow designer
Workflow	Workflows automate business processes without a user interface. Designers use workflows to initiate automation that doesn't require any user interaction.	Workflow designer
Actions	Actions are a type of process that let you manually invoke actions, including custom actions, directly from a workflow.	Process designer
Business rule	Used to apply rule or recommendation logic to a form, such as to set field requirements, hide fields, or validate data. App designers use a simple interface to implement and maintain fast-changing and commonly used rules.	Business rule designer
Flow	Flow is a cloud-based service that lets you create automated workflows between apps and services to get notifications, synchronize files, collect data, and more.	Microsoft Flow

Information

- Common
- Information
- Audit History
- Process Sessions
- Process Sessions

General Administration System

Hide Process Properties

Process Name:
Activate As:

- Workflow Rules
- Run in parallel to the previous workflow
 - As an on-demand process
 - As a utility process

- Workflow Arch. Options
- Automatically delete completed workflow process instances

Entity:
Category:

Scope:

- Options for the Workflow Process
- Run in parallel
 - Forward on success
 - Forward on failure
 - Forward on error

Process: Sample action

Information

Process: Sample action

- Common
- Information
- Audit History
- Process Sessions
- Process Sessions

General Administration Notes

Hide Process Properties

Process Name:
Unique Name:
Activate As:

Entity:
Category:
Enable rollback:

Workflow Log

- Keep logs for My Business Process Flow

Hide Process A

Details

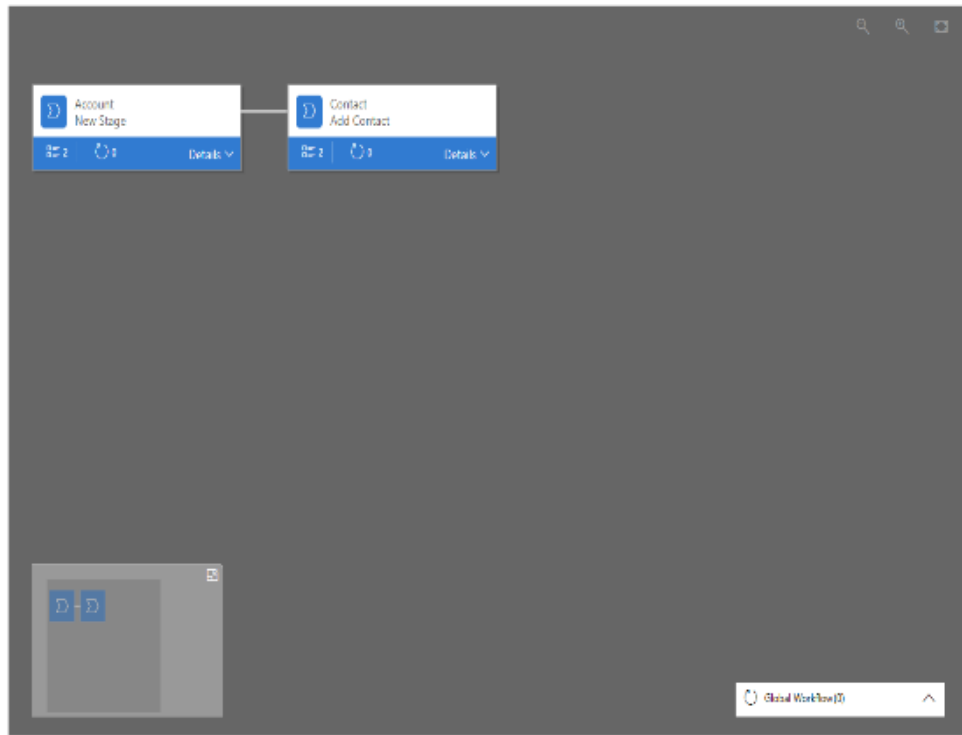
- Add
- Out
- Copy
- Paste
- Delete
- Snapshot
- Connector

Name:

Add Step

Select this

Working on solution: Default Solution



Components Properties

Search components...

Flow

- Stage
- Condition

Composition

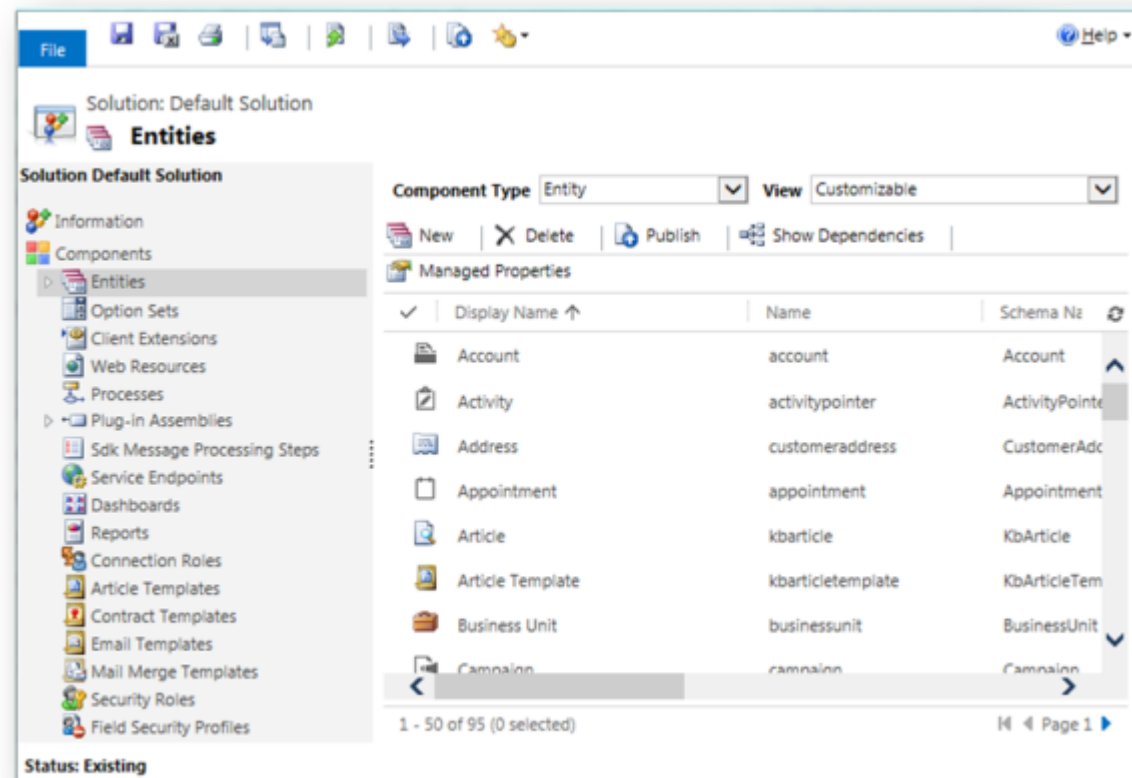
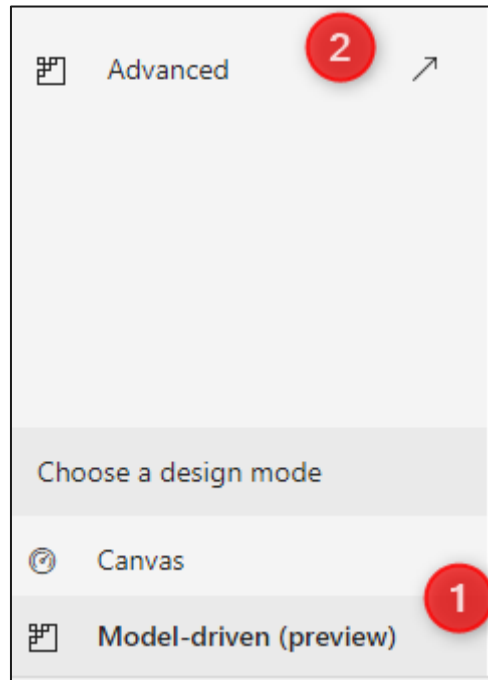
- Step
- Workflow

Model-driven app components - Visualizations

Component	Description	Designer
Chart	A single graphic visualization that can be displayed within a view, on a form, or be added to a dashboard.	Chart designer
Dashboard	Functions as a palate for one or more graphic visualizations that provide an overview of actionable business data.	Dashboard designer
Embedded Power BI	Add embedded Power BI tiles and dashboards to your app. Power BI is a cloud-based service that provides business intelligence insight.	Combination of chart designer, dashboard designer, and Power BI

Advanced Model-driven app making

1. To open solution explorer, select **Model-driven** on the left pane of PowerApps
2. Then select the **Advanced** tab.



Model-driven sample apps

In order to play or edit model-driven sample apps, the apps must first be provisioned in a Common Data Service database. First create a trial environment and database and be sure to check **Include sample apps and data**.

Create a database for this environment ?
Choose the currency and language your data should use.

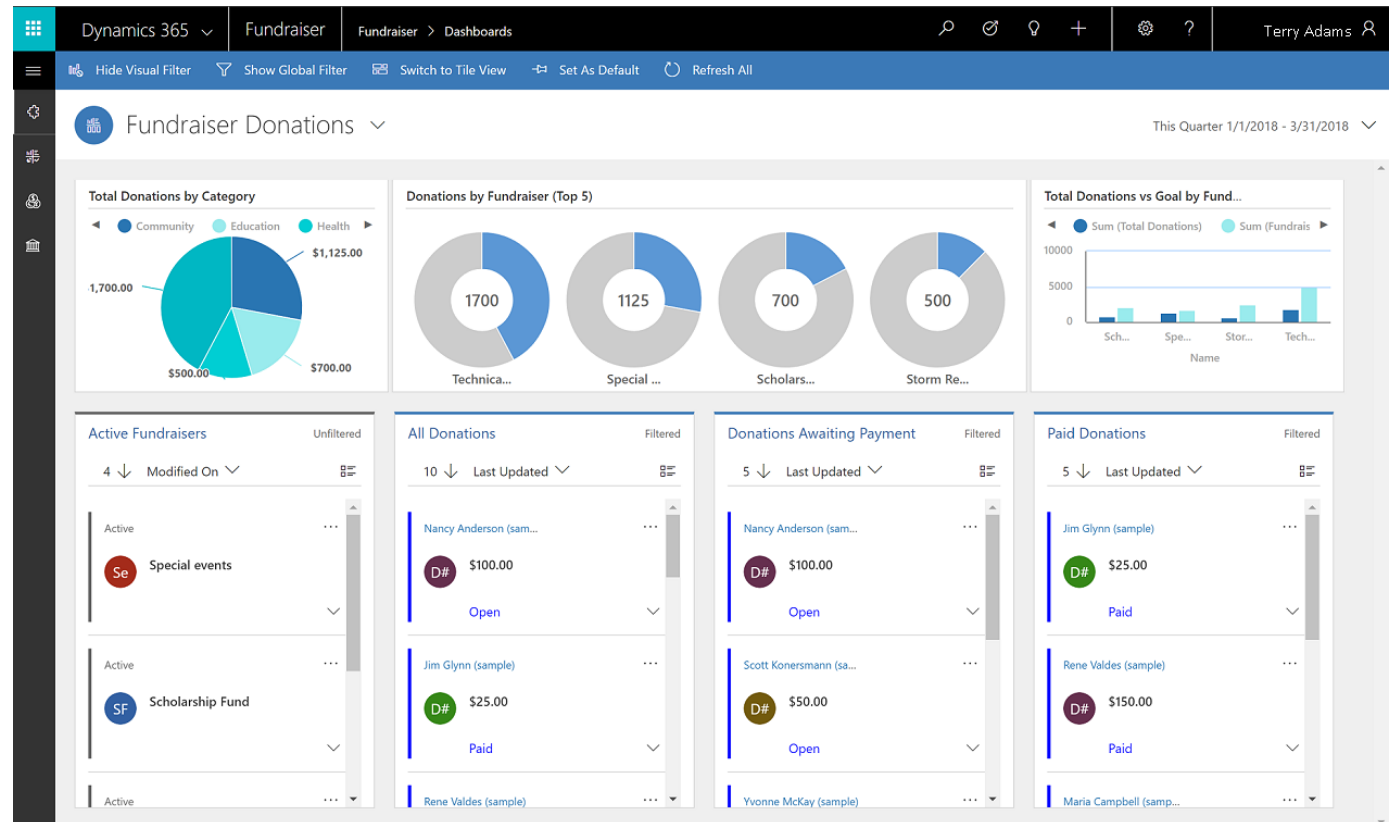
Currency ?
USD

Language ?
English

Include sample apps and data

By choosing **Create my database**, you agree Microsoft can use entity and field names that you create (but not content in the database tables) to help improve our common data model. These names may be stored in our diagnostic systems and copied across regions. [Learn more](#)

Cancel Create database



Power Automate

Power Automate is Designed For Everyone

Power Automate is the
automation service for
everyone in your
organization



End Users



Experienced
Developers



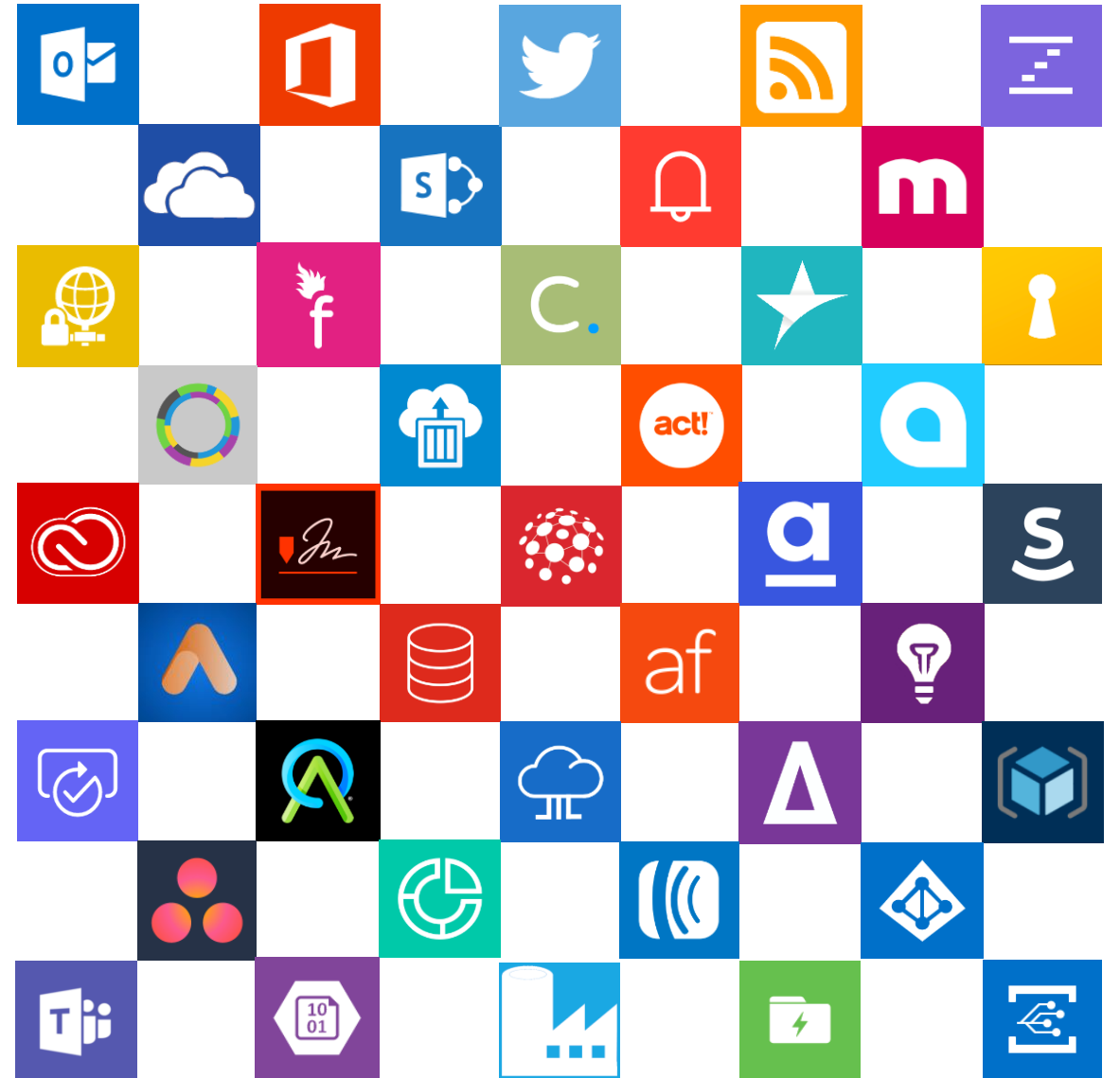
IT/Admins

Low code

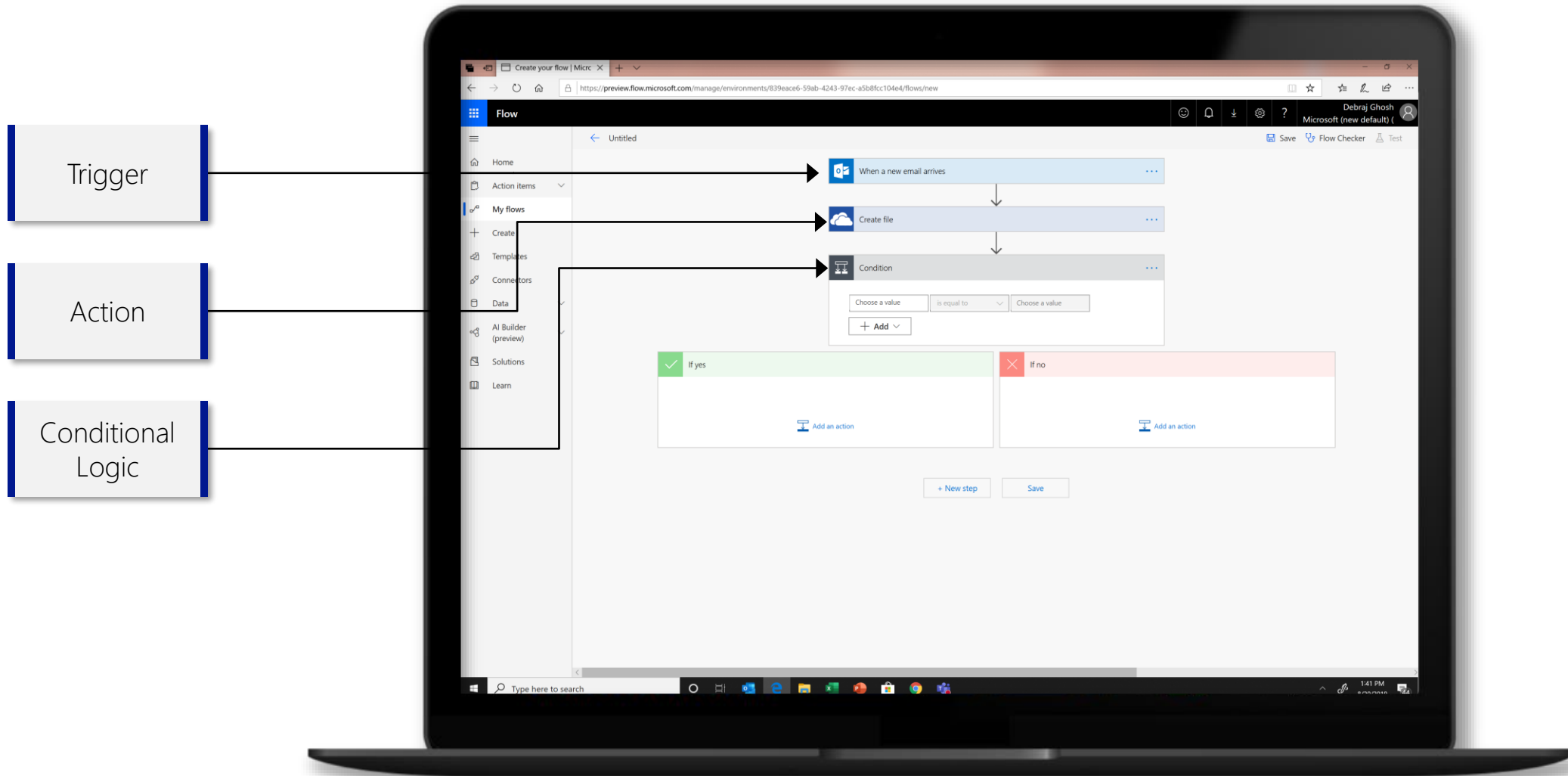
- Lower barrier to entry – User interface guides experience
- Speed - Faster iteration by drag-and-drop
- Debuggability - Ability to see full execution history
- Documentation – Easier for other people to pick it up

300+ connected experiences

Connect to more than 300+ 1st and 3rd party services with built-in connectors for everything from Adobe to Zendesk to on-premises solutions



The Basic Power Automate UI



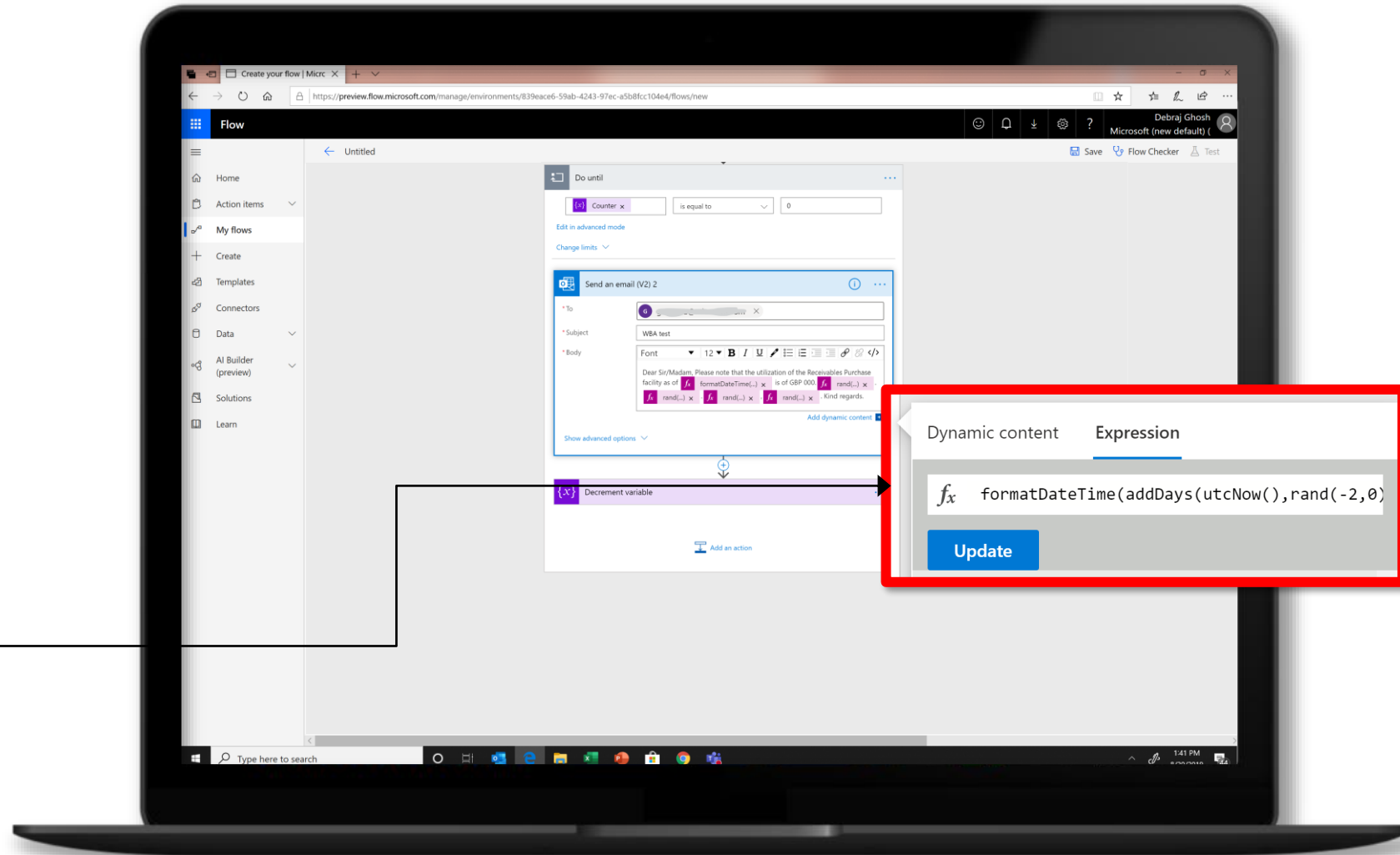
The Basic Power Automate UI

Trigger

Action

Conditional
Logic

Expressions
(Excel-like formulas)



AI Builder

Bridging automation between the old and new

Power Automate bridges the gap
across on-premises and the
cloud




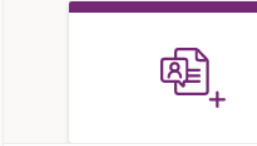


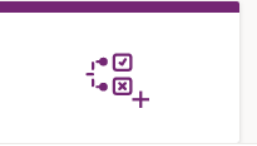
AI Builder

- Home
- Learn
- Apps
- Create
- Data
- Flows
- AI Builder
- Build**
- Models
- Solutions








Enhance your business with AI

Add intelligence to your business. Create tailored AI models to automate processes and find insights. [Learn more](#)

Refine a model for your business needs

 <p>Category Classification (preview) Categorize text by its meaning so it's easier to analyze.</p>	 <p>Entity Extraction (preview) Recognize specific information about your business from data.</p>	 <p>Form Processing Read and save information from standard documents.</p>	 <p>Object Detection Recognize and count things in images.</p>	 <p>Prediction Predict whether something will happen.</p>
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Get straight to productivity

 <p>Business Card Reader Automatically process business card information</p>	 <p>Category Classification (preview) Categorize text by its meaning so it's easier to analyze</p>	 <p>Entity Extraction (preview) Extract entities and their types from text</p>	 <p>Key Phrase Extraction Extract the key talking points from text</p>	 <p>Language Detection Identify the language being used in text</p>
 <p>Sentiment Analysis Analyze positive/negative sentiment in text</p>	 <p>Text Recognition Automatically process text from images</p>			

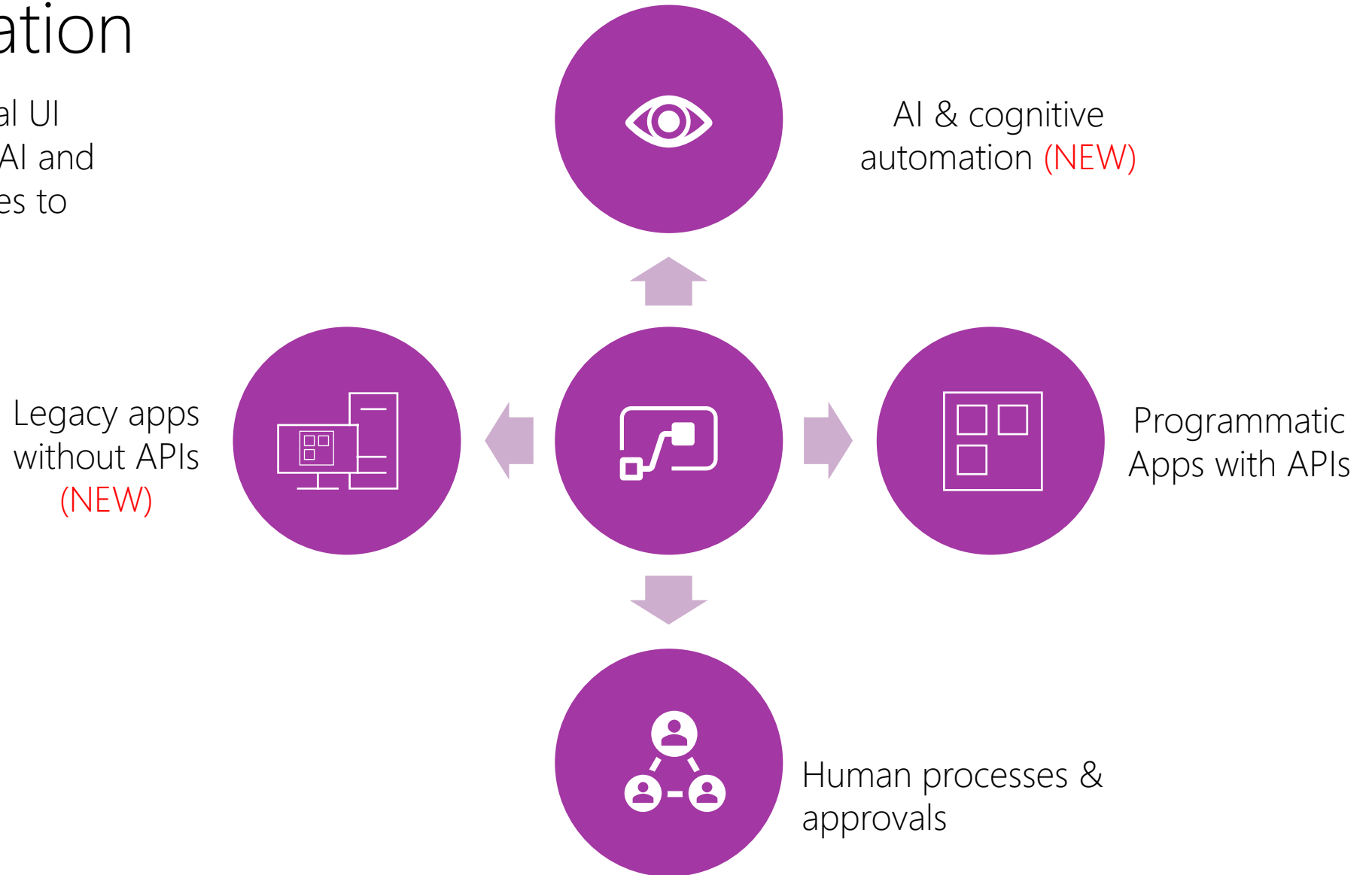
Bridging automation between the old and new

Power Automate bridges the gap
across on-premises and the
cloud



Hyper automation

RPA shifts beyond traditional UI automation to incorporate AI and other advanced technologies to cover the full automation spectrum



AI Builder

Select all fields

Save and close Done

4567 Main St Buffalo
NY 90852
http://www.contoso.com/
555-0123

INVOICE

785438

Bill To:
Fabrikam, Inc.
345 North St
NY 98052
http://www.fabrikam.com/
555-0145

Date: Dec 15, 2017

Due Date: Dec 31, 2017

Balance due: \$60.76

Item	Quantity	Rate	Amount
Monthly service fee	01	\$40.00	\$40.00
Guarantee monthly fee	01	\$6.00	\$6.00
Add-on services	01	\$4.40	\$4.40

Subtotal: \$50.40

Tax (2%): \$1.01

Shipping: \$5.99

Total: \$57.40

Select fields

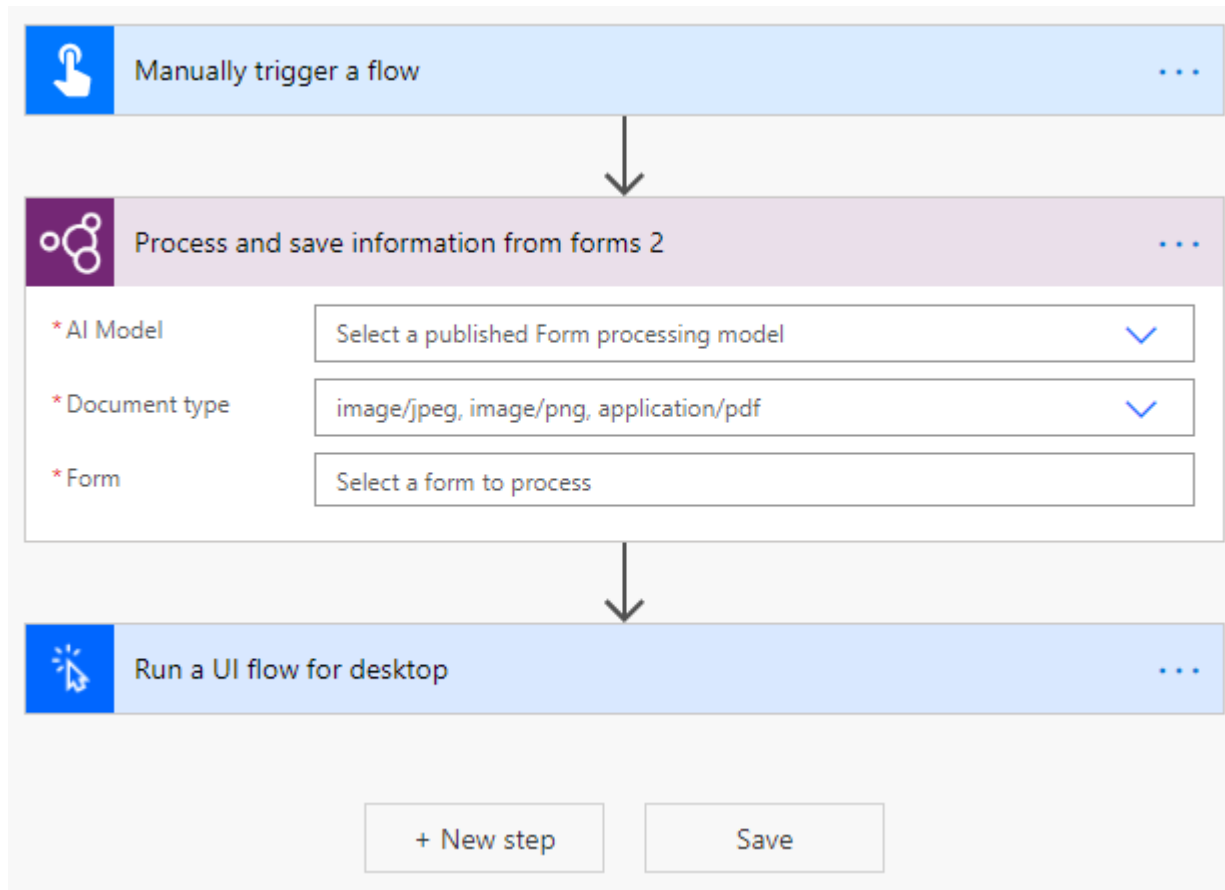


No fields selected

Click on a field to confirm its selection, or click and drag to add a new one. Adding tables is not supported.

[Learn more](#)

AI Builder



Labs



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