

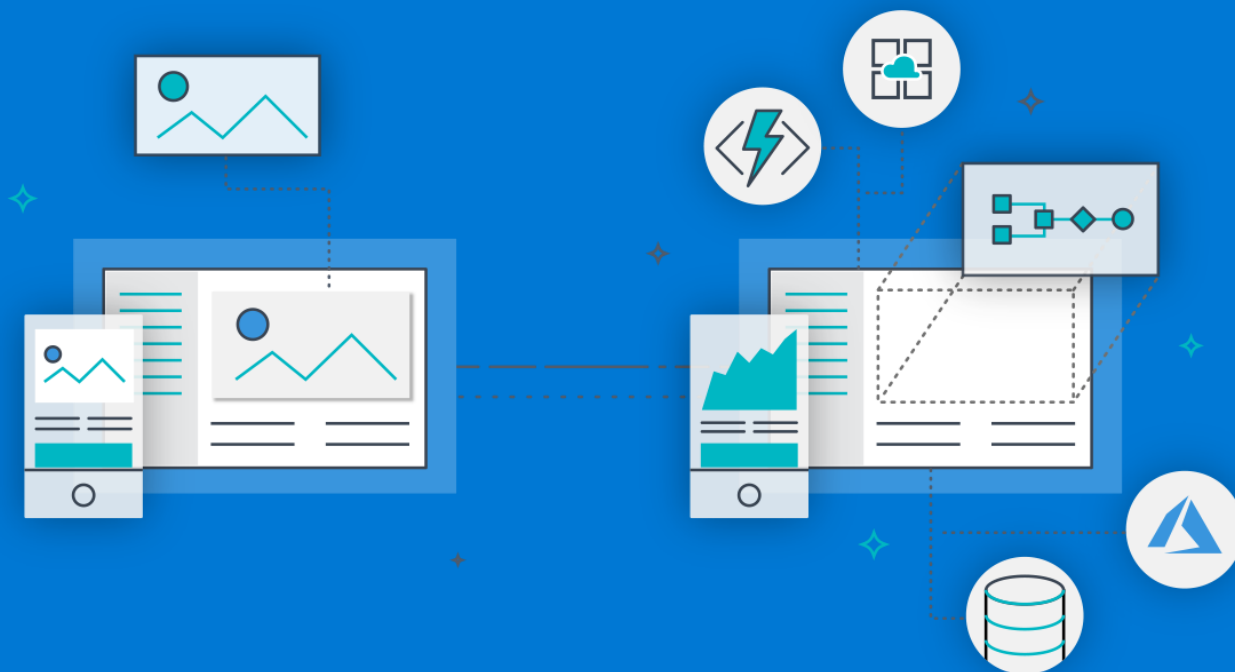


# App in a Day

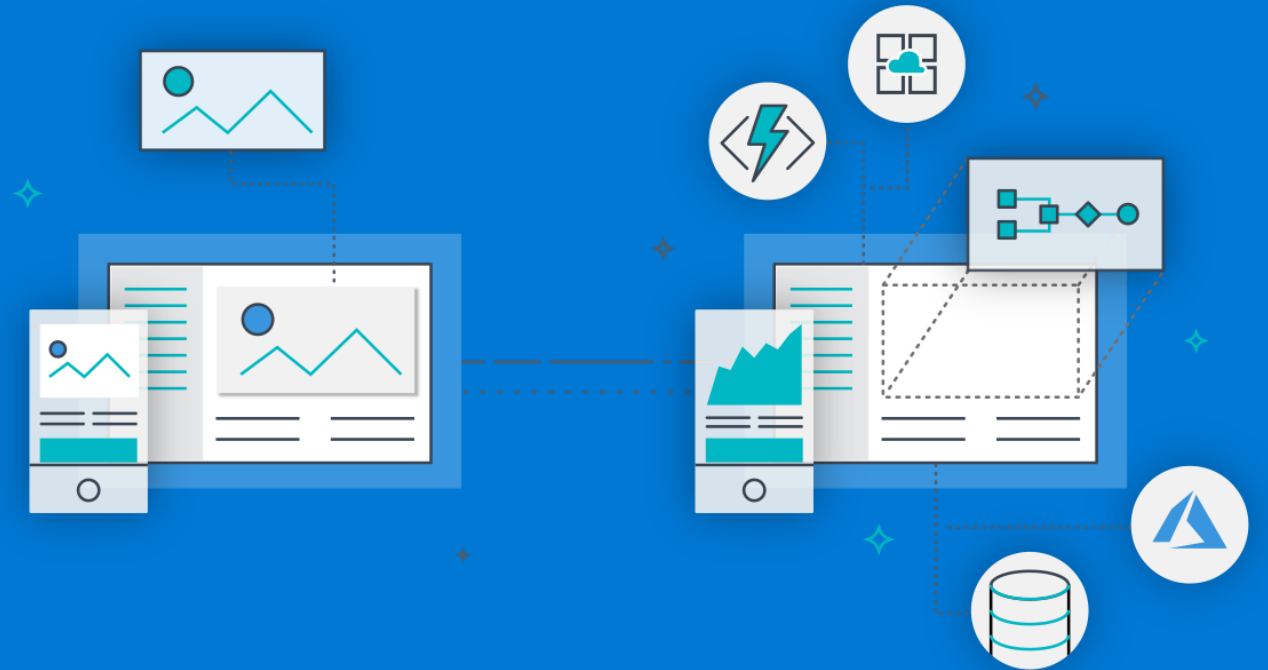
## Business Application Platform

Power Apps, Power Automate  
& Common Data Service (CDS)

Eric Sauv , XRM Vision

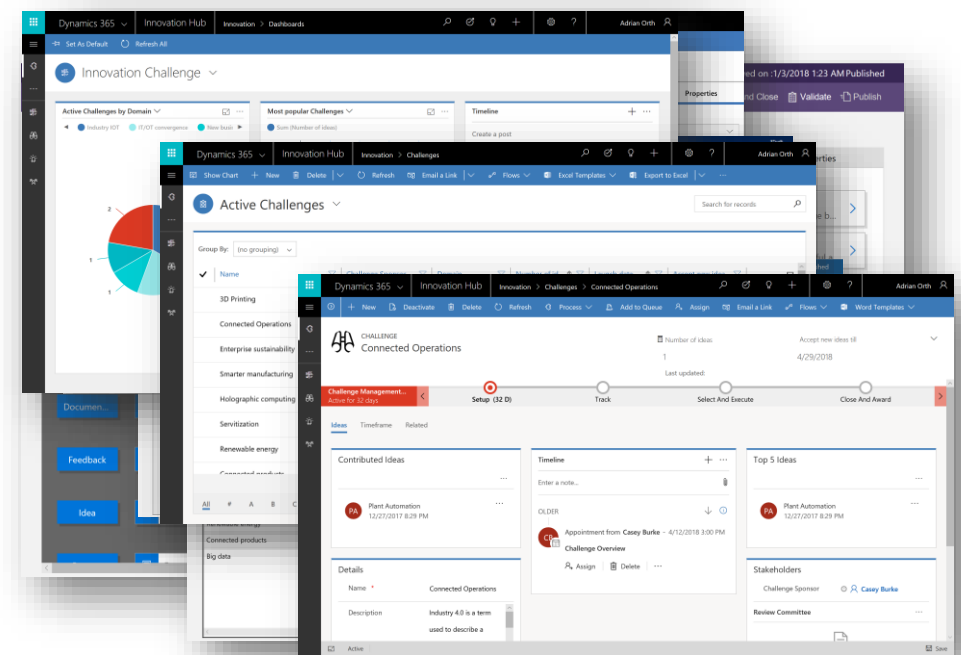


# Model-driven apps in Power Apps



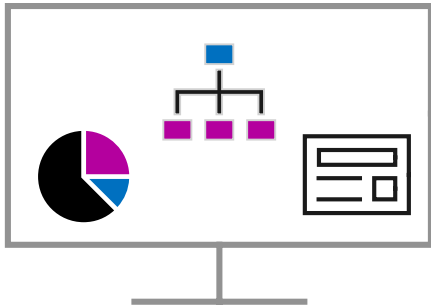


**Canvas apps** start with user experience, with pixel-perfect control to build highly customized task- and role-based apps that mash up data from 250+ sources

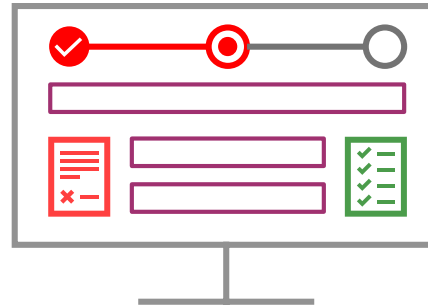


**Model-driven apps** leverage your data model, relationships, and business processes to automatically generate immersive, responsive applications

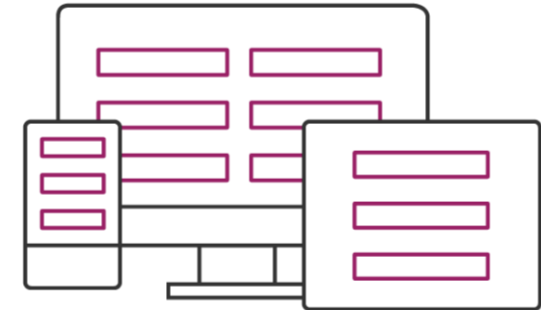
**Power Apps Model-driven apps** provides a metadata-driven architecture for creating and customizing apps without writing code



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

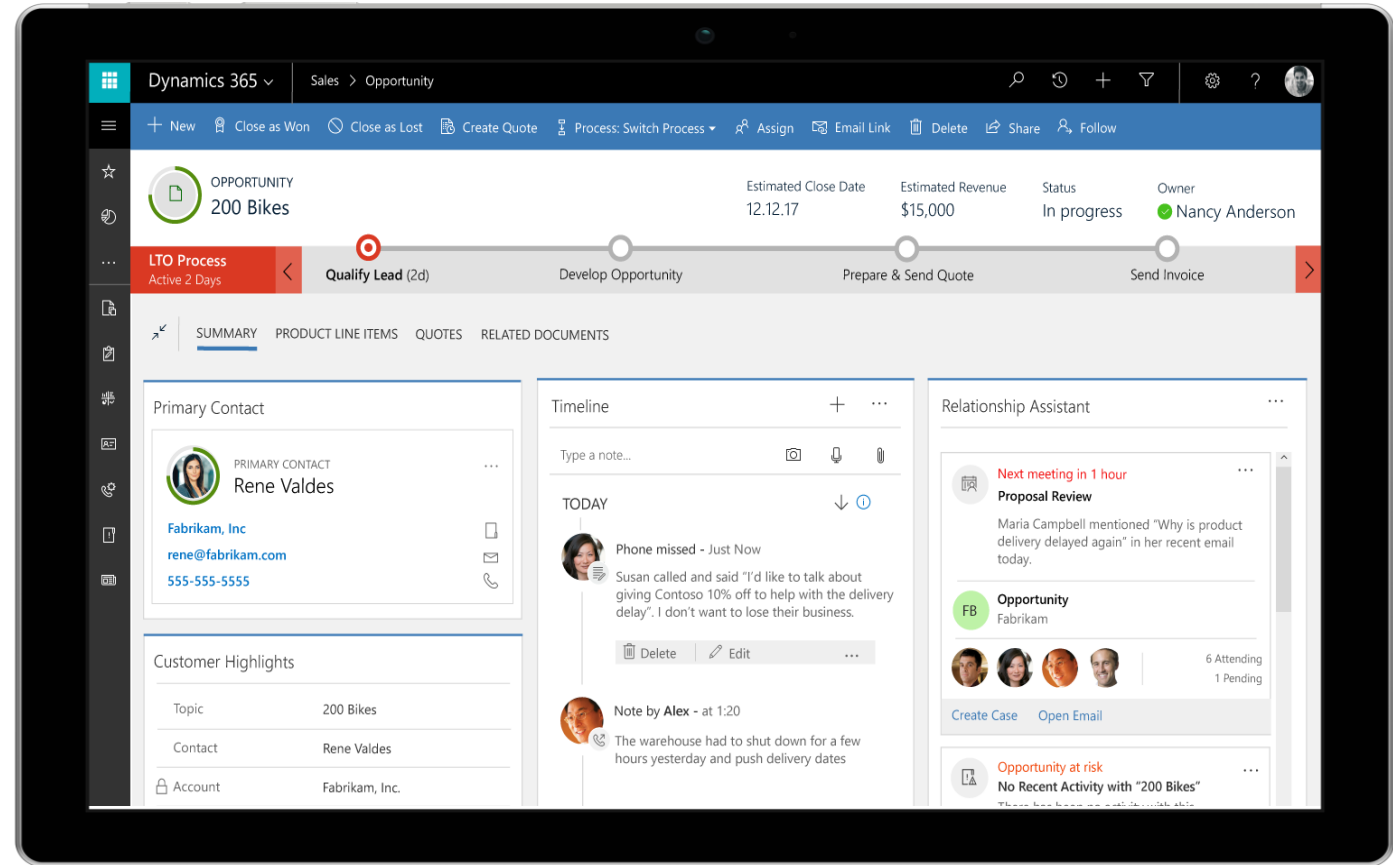
Drag and drop fields and controls in a visual designer. Forms can span multiple columns, multiple steps, and collapsible sections.

## Rich, responsive client experiences

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

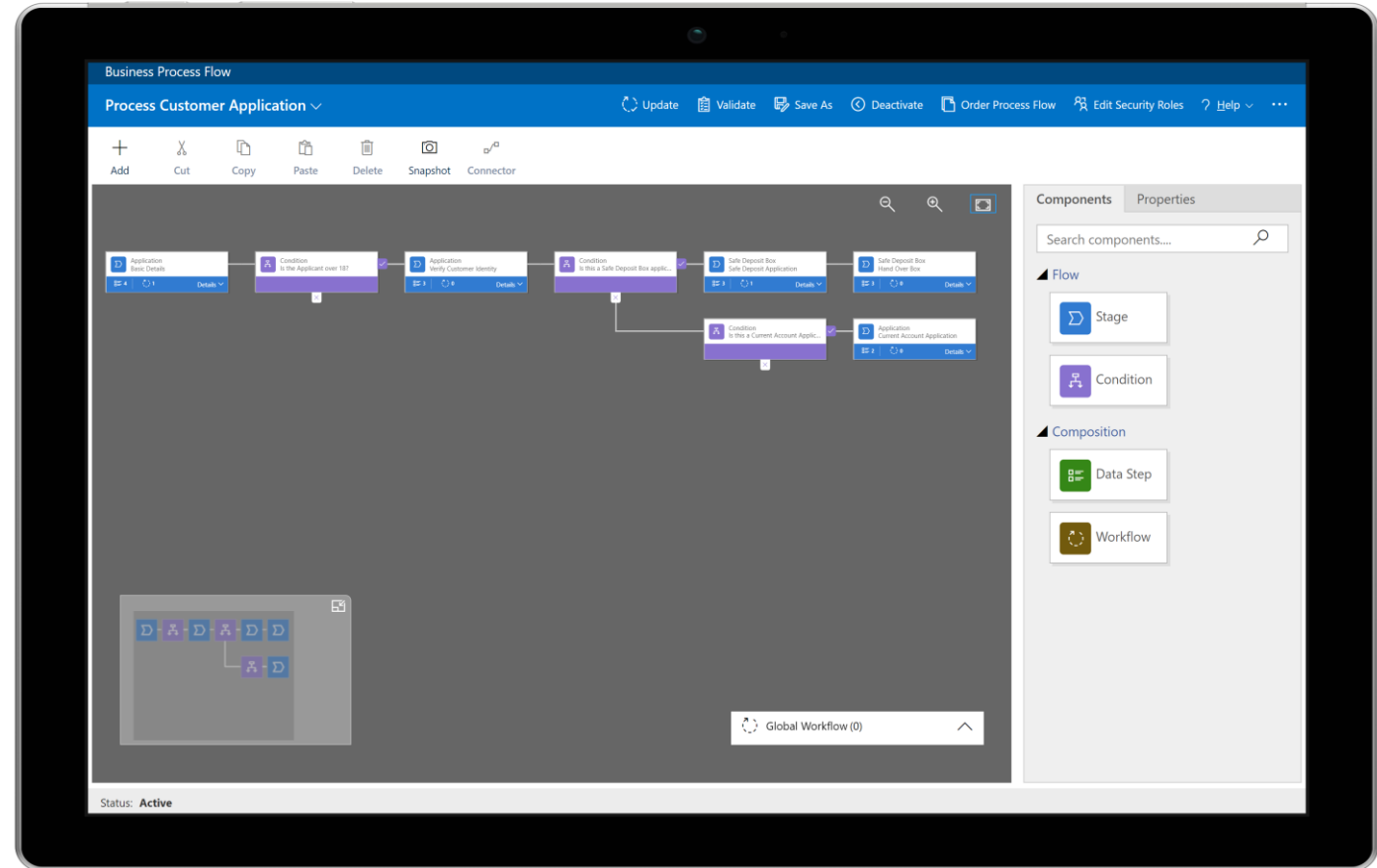
## Enables easy reuse across multiple apps

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



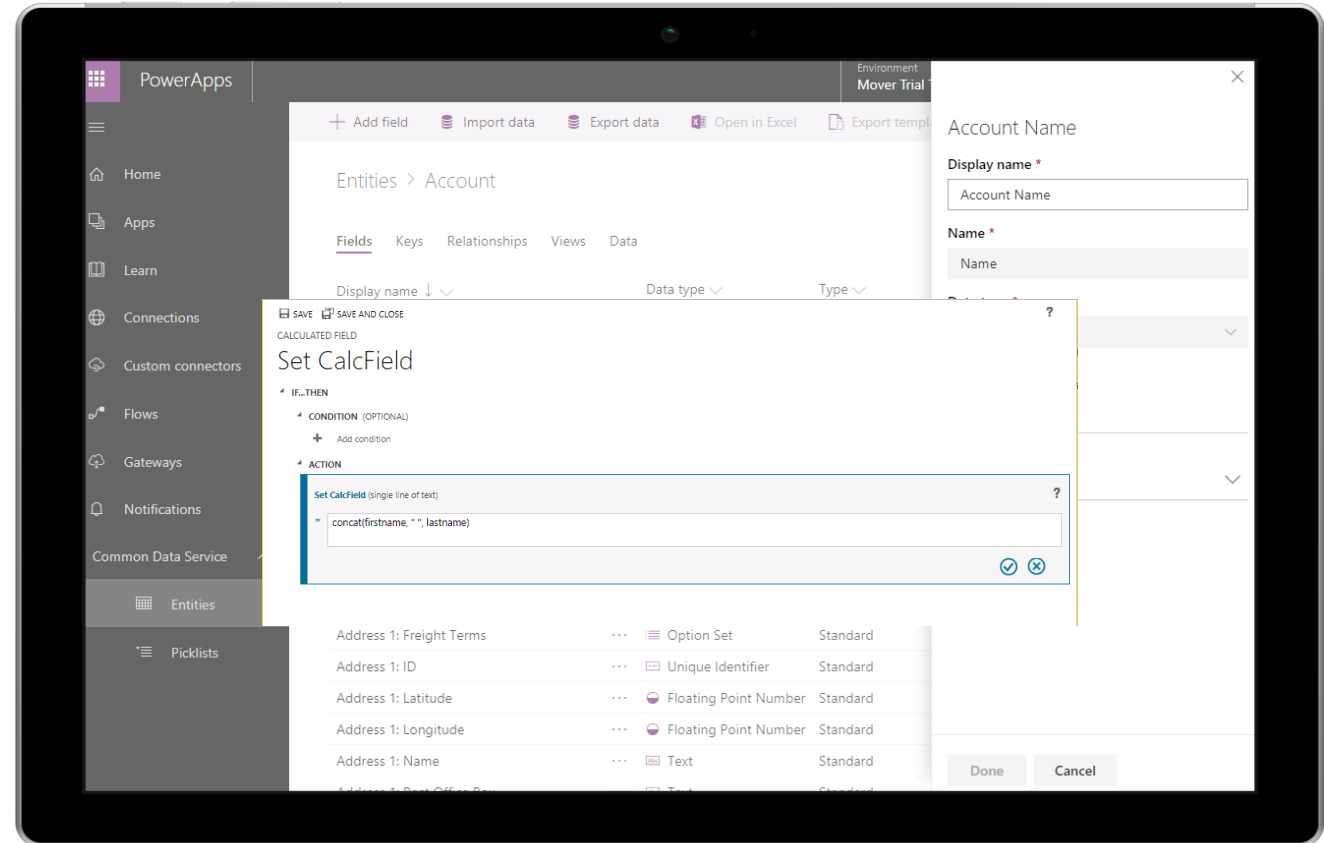
# Business Process Flow

- 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
- Integrated solution checker to identify potential issues and accessibility concerns
- oData web API
- .Net SDK
- Sandbox instances for ALM operations

Solutions				
Name		Installed on ↓	Managed externally?	Version
Analysis Demo	...	11/30/2018	No	1.0
Repro89436486			No	1.0
PowerApps Checker			Yes	1.0.0.40
Field Service			Yes	7.5.4.51
Field Service UCI App Module			Yes	7.5.4.51
Field Service App Module			Yes	7.5.4.51
Field Service			Yes	7.5.4.51
Field Service	...	11/17/2018	yes	7.5.0.60

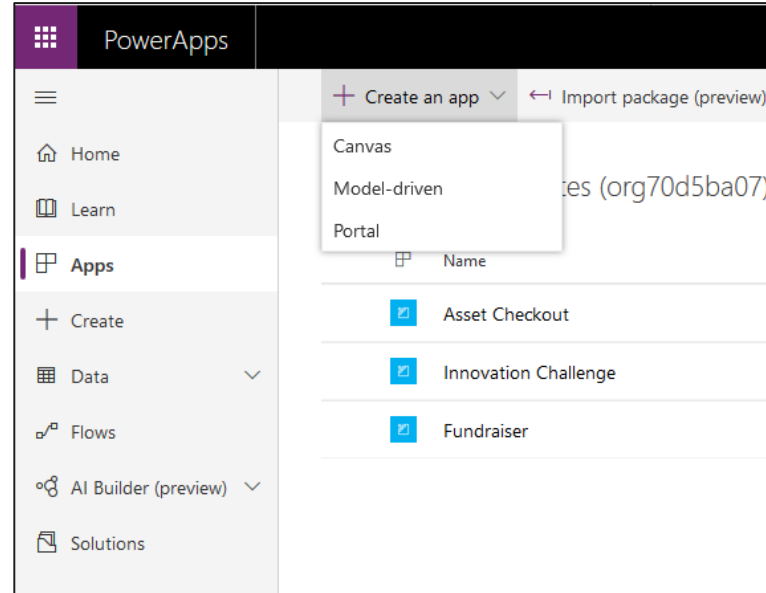
Edit  
Delete  
Export  
Clone  
Show dependencies  
Apply upgrade  
Translations  
Solution checker

Run  
Download last results



# Power Apps Maker Portal [<https://make.powerapps.com/>]

- Create new apps
- Explore sample apps and templates
- Manage and configure your apps



**No apps found**

This is where your apps will live. Create an app to get started. [Learn more](#)

[Explore templates](#)

# Model-driven app components - Data

Component	Description	Designer
<b>Entity</b>	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.	Power Apps entity designer
<b>Field</b>	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.	Power Apps entity designer
<b>Relationship</b>	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.	Power Apps entity designer
<b>Option set field</b>	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.	Power Apps option set designer

# Entities and fields

PowerApps

Environment  
AIAD Updates (org70d5ba07)

+ New entity

Get data

Export data

All

Search

Home

Learn

Apps

Create

Data

Entities

Option Sets

Dataflows

Connections

Custom Connectors

Gateways

Flows

AI Builder (preview)

Solutions

Entities

Entity	Name	Type	Customizable	Tags
Account	account	Standard	✓	Master
Action Card	actioncard	Standard	✓	Standard
Activity	activitypointer	Standard	✓	Standard
Address	customeraddress	Standard	✓	Standard
AI Configuration	msdyn_aiconfiguration	Managed		Managed
AI Form Processing Document	msdyn_aifptrainingdocument	Managed		Managed
AI Model				
AI Object Detection Bounding Box				
AI Object Detection Image				
AI Object Detection Image Mapping				
AI Object Detection Label				
AI Template				
Appointment				
Attachment				
Attribute				
Business Unit				

PowerApps

Environment  
AIAD Updates (org70d5ba07)

+ Add field

Edit data in Excel

Get data

Export data

Settings

All

Search

Home

Learn

Apps

Create

Data

Entities

Option Sets

Dataflows

Connections

Custom Connectors

Gateways

Flows

AI Builder (preview)

Solutions

Entities > Challenge

Fields

Relationships

Business rules

Views

Forms

Dashboards

Charts

Keys

Data

Display name	Name	Data type	Type	Customizable	Required	Searchable
Accept new ideas till	sample_acceptnewideastill	Date Only	Managed	✓		✓
Additional Stakeholders	sample_additionalstakeholders	Two Options	Managed	✓		✓
Announce voting	sample_announcevoting	Two Options	Managed	✓		✓
Awards issued?	sample_awardsissued	Two Options	Managed	✓		✓
Challenge	sample_challengeid	Unique Identifier	Standard	✓	✓	✓
Challenge Sponsor	sample_challengesponsor	Lookup	Managed	✓		✓
Close Challenge	sample_closechallenge	Two Options	Managed	✓		✓
Close Challenge to new Ideas	sample_closechallengegetonewideas	Two Options	Managed	✓		✓
Close Date	sample_closedate	Date Only	Managed	✓		✓
Communicate via	sample_communicatevia	Multi Select Option Set	Managed	✓		✓
Created By	createdby	Lookup	Standard	✓		✓
Created By (Delegate)	createdonbehalfoy	Lookup	Standard	✓		✓
Created On	createdon	Date and Time	Standard	✓		✓
Description	sample_description	Multiline Text	Managed	✓		✓

# Configurable your fields with data types

The screenshot shows the Salesforce Field Configuration interface. On the left, a list of data types is displayed, with 'Text' selected. The main panel on the right is titled 'Challenge Code' and contains the following configuration options:

- Display name \***: Challenge Code
- Name \***: crf71\_ ChallengeCode
- Data type \***: Text
- Required**: ☐
- Searchable**: ☒
- Calculated or Rollup**: ☐ + Add
- Advanced options**: ☐
- Description**: (Empty text area)
- Max length \***: 100
- IME mode**: Auto

At the bottom of the dialog are 'Done' and 'Cancel' buttons.

# App designer

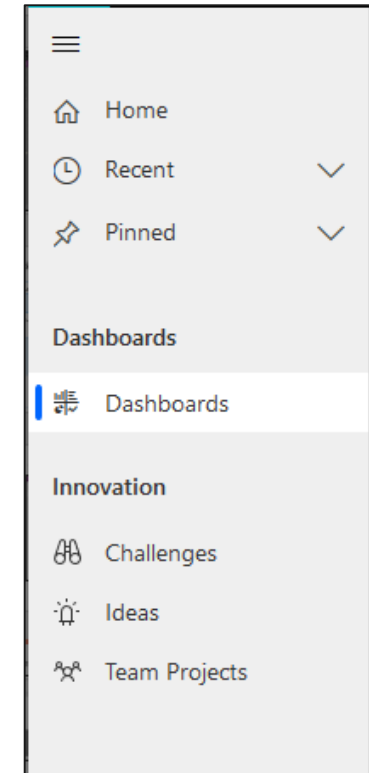
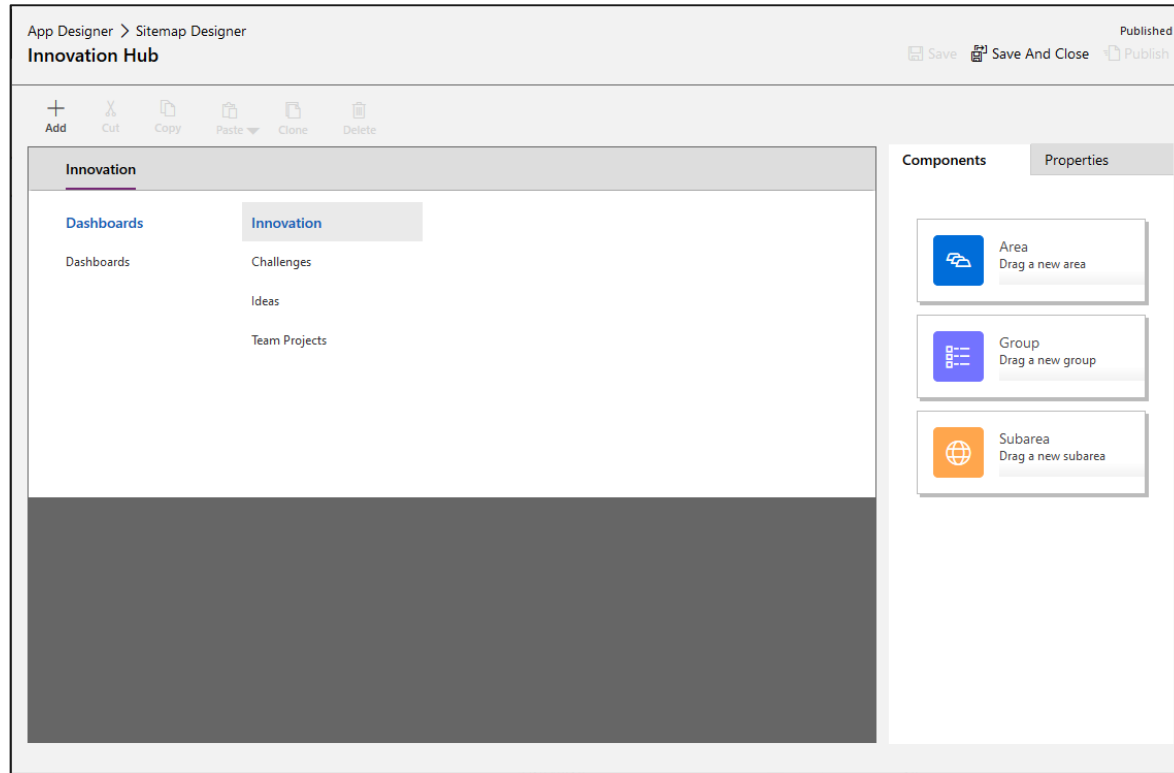
The screenshot displays the Microsoft PowerApps App Designer interface for an application named "Innovation Challenge". The top navigation bar includes the PowerApps logo and the app name. Below this, a secondary bar shows the "App Designer" tab and the "Innovation Challenge" title. On the right side of this bar, there are action buttons: "Save", "Save And Close", "Validate", "Publish", and "Play", along with a timestamp "Last Saved on: 9/15/2019 1:06 PM Published".

The main workspace is divided into three sections: "Site Map", "Dashboards", and "Business Process Flows". The "Site Map" section shows a hierarchical view of the app's structure. The "Dashboards" section shows a list of dashboards, including "Dashboards" (1) and "Business Process Flows" (All). The "Business Process Flows" section shows a list of business process flows, including "Business Process Flows" (All).

The central area of the interface is a grid of app components. The components are organized into a table with columns for "Entity View", "Forms", "Views", "Charts", and "Dashboards". The "Entity View" column lists various entities: "Challenge", "Document...", "Feedback", "Idea", "Process", and "SharePoin...". The "Forms" column shows the number of forms for each entity (e.g., 1 for "Challenge", All for "Document..."). The "Views" column shows the number of views for each entity (e.g., 1 for "Challenge", All for "Document..."). The "Charts" column shows the number of charts for each entity (e.g., 2 for "Challenge", All for "Document..."). The "Dashboards" column shows the number of dashboards for each entity (e.g., All for "Challenge", All for "Document...").

On the right side of the interface, there is a "Components" panel. It contains two tabs: "Components" and "Properties". The "Components" tab is active and shows a list of components under the "ARTIFACTS" and "ENTITY ASSETS" categories. The "ARTIFACTS" category includes "Entities" (Model and manage business data.), "Dashboards" (Provide an insightful and graphical overview of bus...), and "Business Process Flow" (Define a sequence of steps required to complete a ...). The "ENTITY ASSETS" category includes "Forms" (Define how users will see and interact with busines...), "Views" (Create a list view of records for an entity.), "Charts" (Show data in a meaningful and visual representati...), and "Dashboards" (Provide an insightful and graphical overview of bus...).

# Sitemap designer



# Form designer

**Fields**

**Account**

+ New field

Show only 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
- Address 1: Street 3
- Address 1: Telephone 2

---

**ACCOUNT**

New Account

Annual Revenue --- Number of Employees --- Owner Julie Yack

**Summary Details**

**ACCOUNT INFORMATION**

Account Name	*	---
Phone		---
Fax		---
Website		---
Parent Account		---
Ticker Symbol		---

**ADDRESS**

---
---
---
---
---
---
---

Map is disabled for this organization.

**Timeline**

This record hasn't been created yet. To view this record, save it to your timeline.

**Primary Contact**

---

Email ---  
Business ---

**CONTACTS**

No data available.

**Account Form**

**Entity**  
Account

**Title**  
Account

**Description**  
Updated default Account form.

**Max Width (pixels)**  
1,920

Show image

# View designer

←

+ Add column

↶ Undo

↷ Redo

Switch to classic

≡

Fields

Account

Related

Search

Default

+ New field

✓ Show only unused fields

(Deprecated) Process Stage

Account Number

Account Rating

Address 1

Address 1: Address Type

Address 1: Country/Region

Address 1: County

Address 1: Fax

Address 1: Freight Terms

Address 1: Latitude

Address 1: Longitude

Address 1: Name

Address 1: Post Office Box

Address 1: Primary Contact Name

Account Name ↑	Main Phone	Address 1: City	Primary Contact	Email (Primary Contact)
A. Datum Corporation (sample)	555-0158	Redmond	Rene Valdes (sample)	someone_i@example.com
Adventure Works (sample)	555-0152	Santa Cruz	Nancy Anderson (sample)	someone_c@example.com
Alpine Ski House (sample)	555-0157	Missoula	Paul Cannon (sample)	someone_h@example.com
Blue Yonder Airlines (sample)	555-0154	Los Angeles	Sidney Higa (sample)	someone_e@example.com
City Power & Light (sample)	555-0155	Redmond	Scott Konersmann (sample)	someone_f@example.com
Coho Winery (sample)	555-0159	Phoenix	Jim Glynn (sample)	someone_j@example.com
Contoso Pharmaceuticals (sample)	555-0156	Redmond	Robert Lyon (sample)	someone_g@example.com
Fabrikam, Inc. (sample)	555-0153	Lynnwood	Maria Campbell (sample)	someone_d@example.com
Fourth Coffee (sample)	555-0150	Renton	Yvonne McKay (sample)	someone_a@example.com
Litware, Inc. (sample)	555-0151	Dallas	Susanna Stubberod (sample)	someone_b@example.com

+ Add column

Save | Publish

My Active Accounts

View

Name

My Active Accounts

Description

Sort by ...

↑ Account Name

Then sort by ...

Filter by ...

Owner is current user

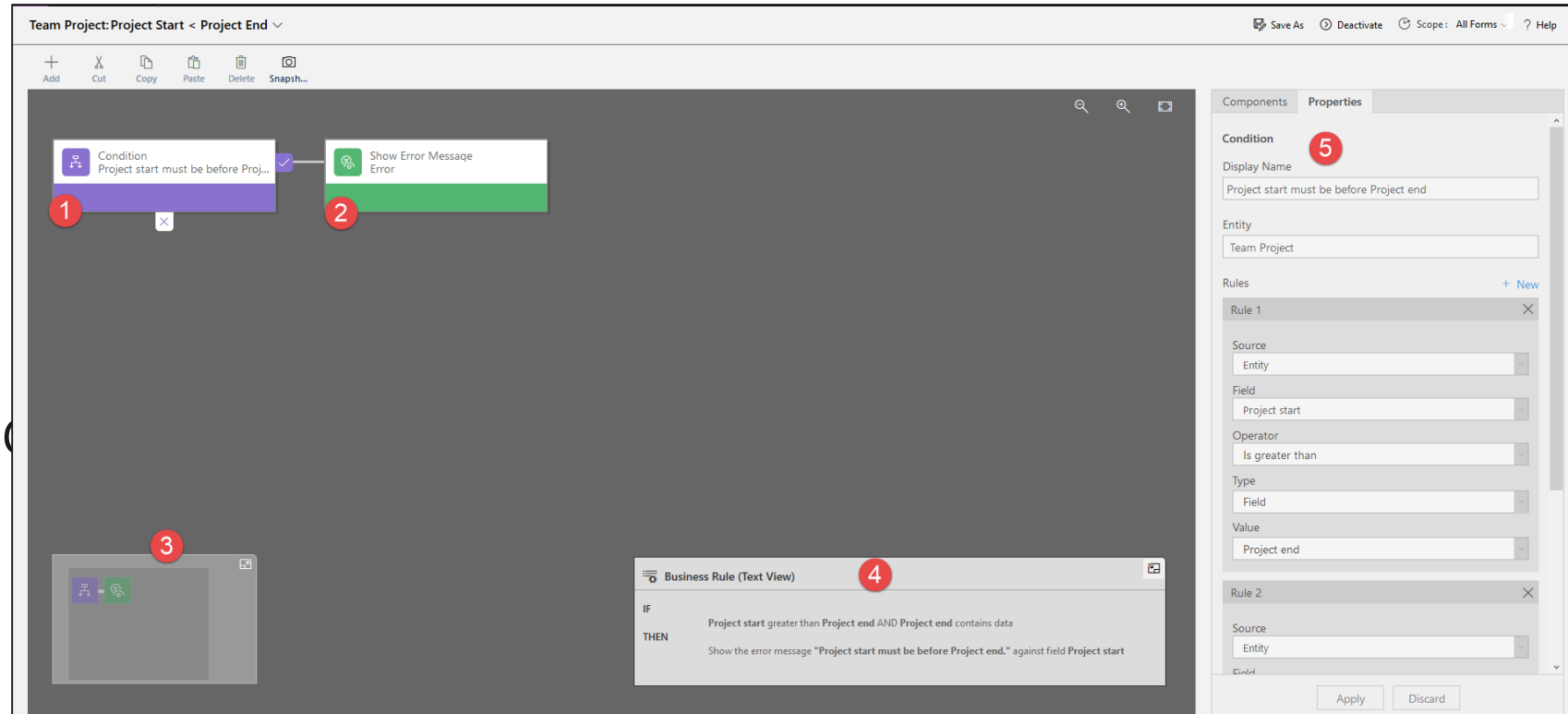
Status is 'Active'

Edit filters ...

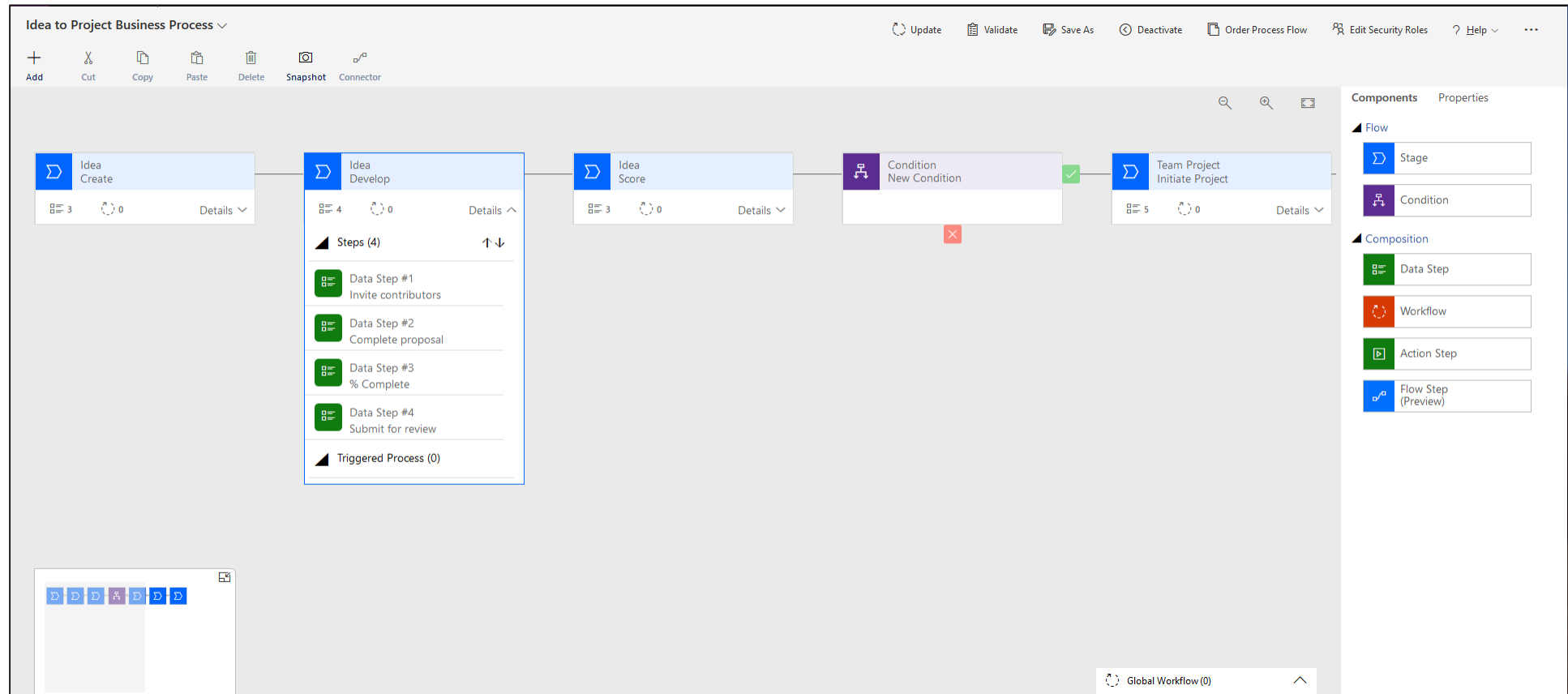


# Business Rule designer

1. Condition (if this)
2. Action (do this)
3. Visualize
4. See the "code"
5. Define the rules and add more components



# Business Process Flow designer



Solution: Default Solution

## Dashboard : Sample dashboard

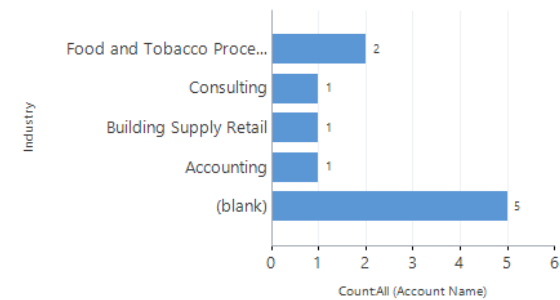
Name: \* Sample dashboard

Section

Chart

Accounts by Industry

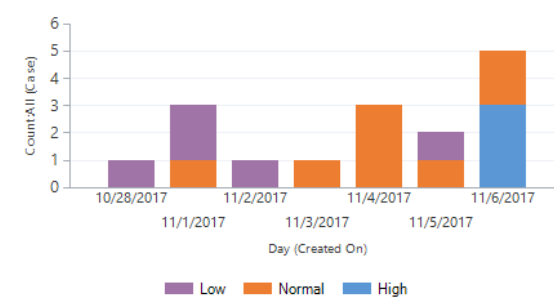
Active Accounts



Chart

Cases By Priority (Per Day)

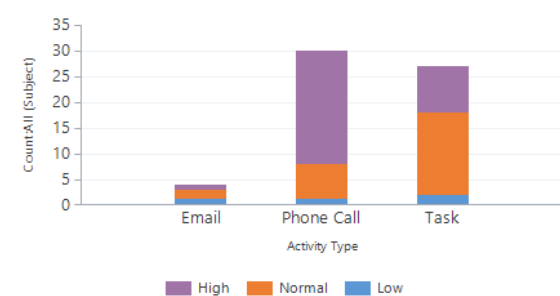
Active Cases



Chart

Activities by Type and Priority

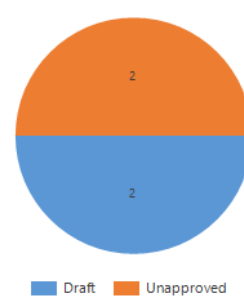
All Activities



Chart

Articles By Status

All Articles



# Model-driven sample apps

In order to explore 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

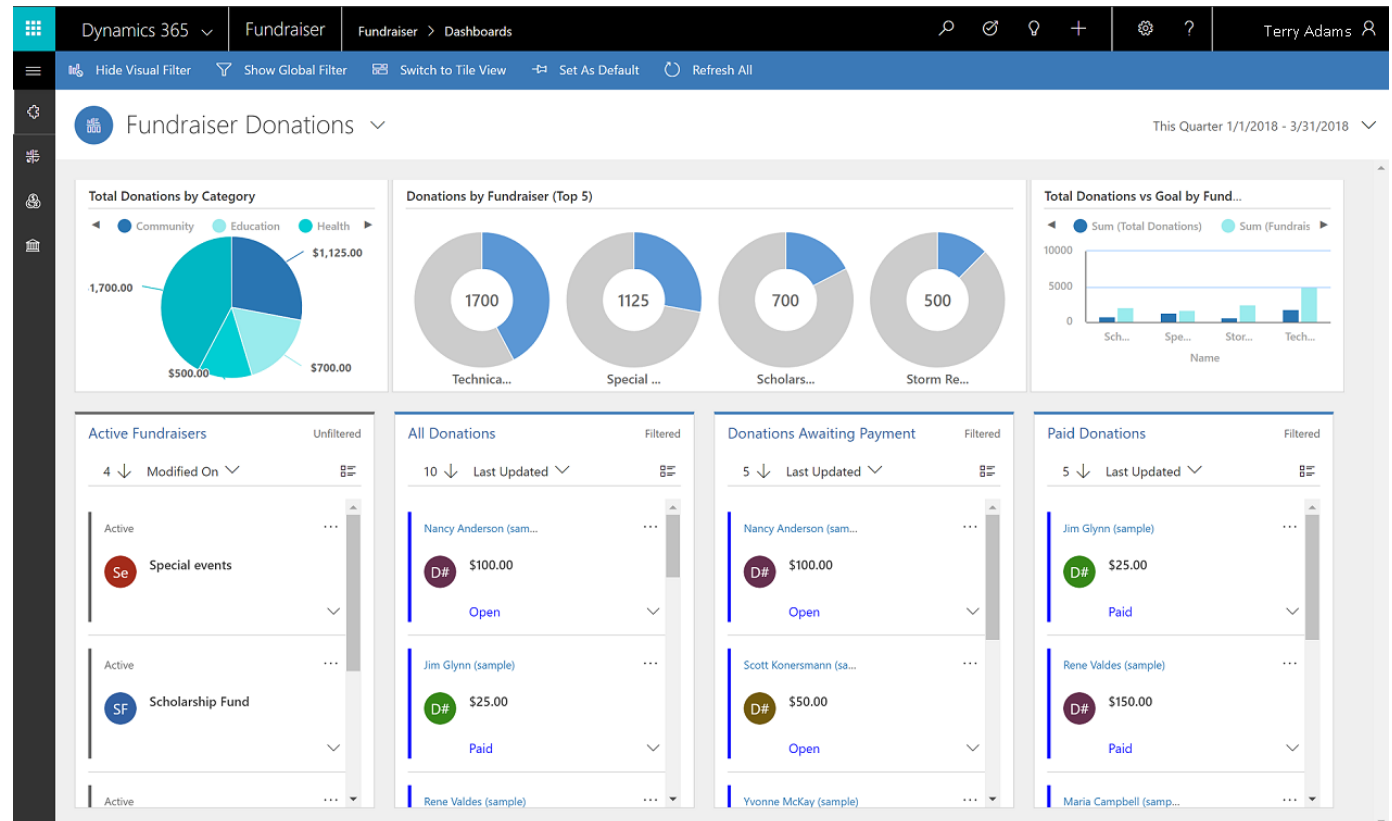
Language ?

English

☒ Include sample apps and data

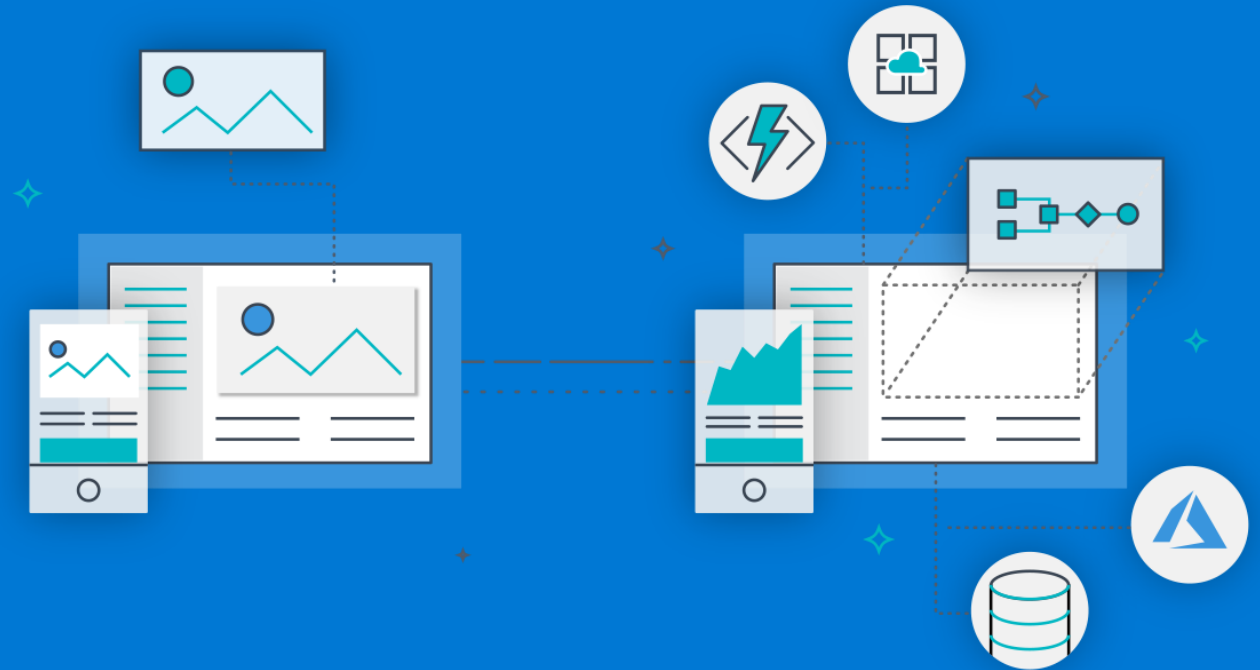
By choosing **Create my database**, you agree Microsoft can use entity and field names that you create (but not content in the database tables) to help improve our common data model. These names may be stored in our diagnostic systems and copied across regions. [Learn more](#)

Cancel Create database



# Hands-on-lab

# Module 3: Power Apps Model-driven App



# Lab objectives

- Create a standalone Model-driven app
- Customize a form for the Model-driven app
- Create a Business Process Flow

✓	Title	Primary Name	Created On	Approval Status	Estimated Ship D...	Price
	Acer - Aspire S3	---	4/26/2018 10:...	Approve	5/12/2018	\$628.000
	Microsoft - Surfa...	---	4/26/2018 10:...	Approve	5/13/2018	\$599.000
	Acer - Aspire M	---	4/28/2018 5:0...	---	---	\$699.990
	Acer - Aspire U	---	4/29/2018 5:3...	---	---	\$1,899.990
	-	---	4/29/2018 12:...	Approve	5/13/2018	---
	Acer - Aspire U	---	4/29/2018 5:4...	---	---	\$1,899.990

DEVICE ORDER  
Laptop for Sameer Bhargar

Device Procurement Proc... Active for 15 days

Device Requested (15 D)

Active for 15 days

✓ Requested Date 04/09/2018

Approval Status ---

✓ Price \* \$899.990

Next Stage >



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