

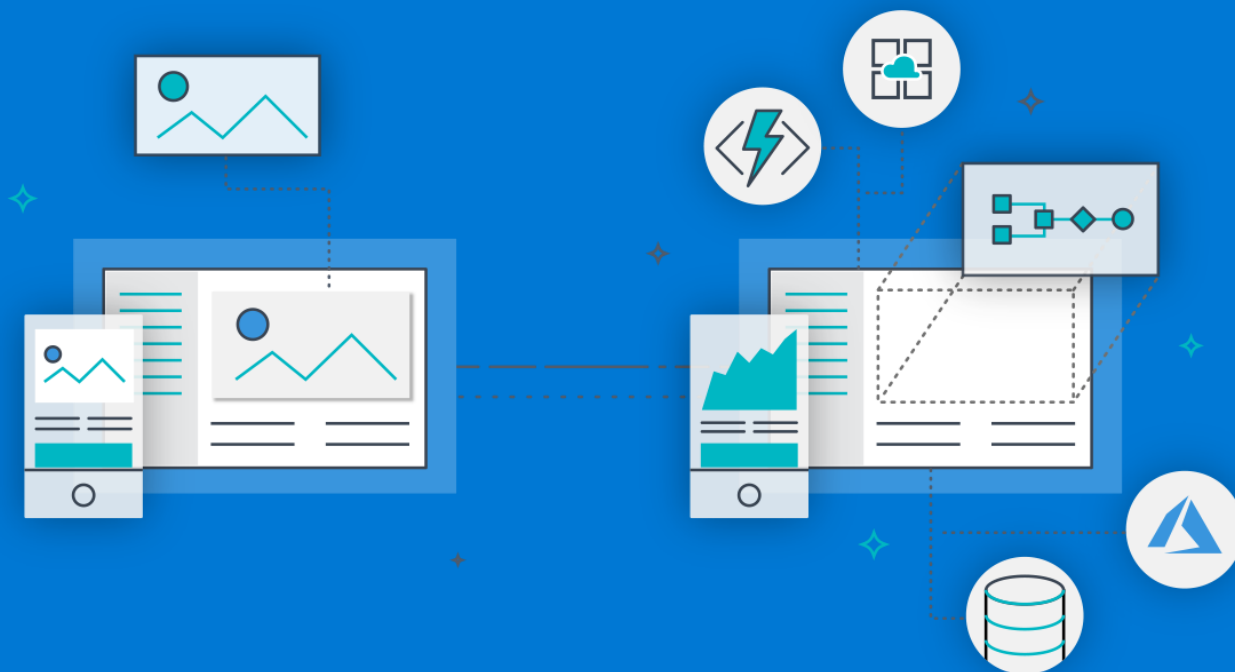


App in a Day

Business Application Platform

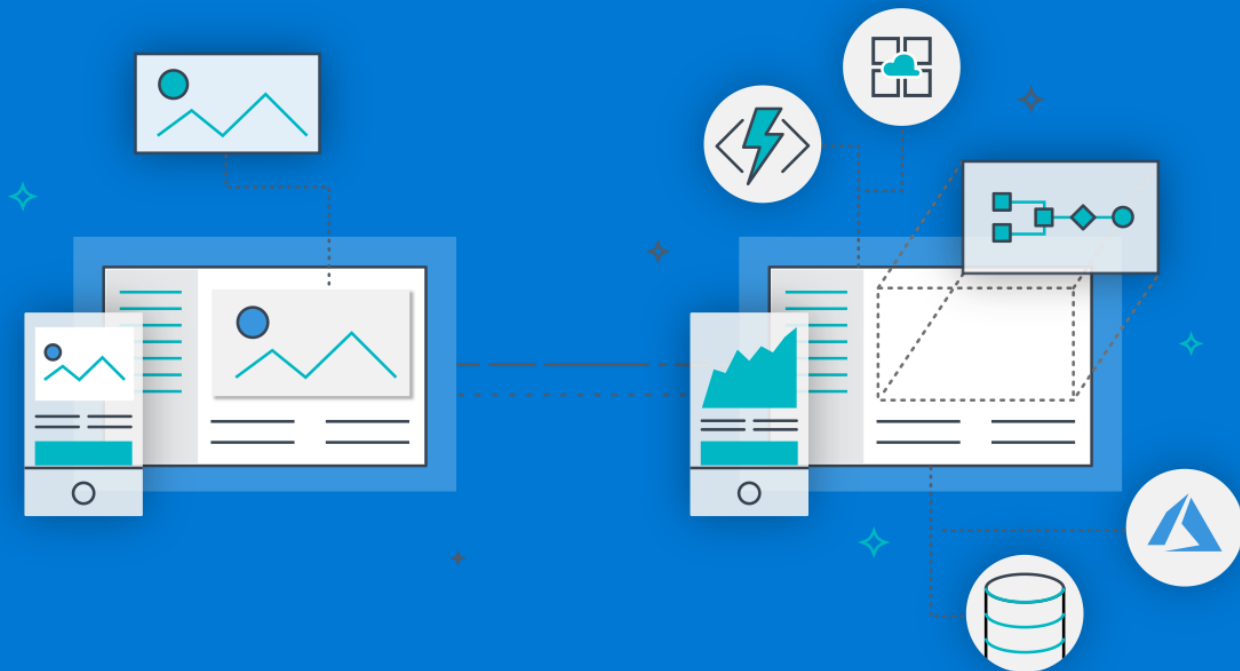
Power Apps, Power Automate
& Common Data Service (CDS)

Eric Sauv , XRM Vision



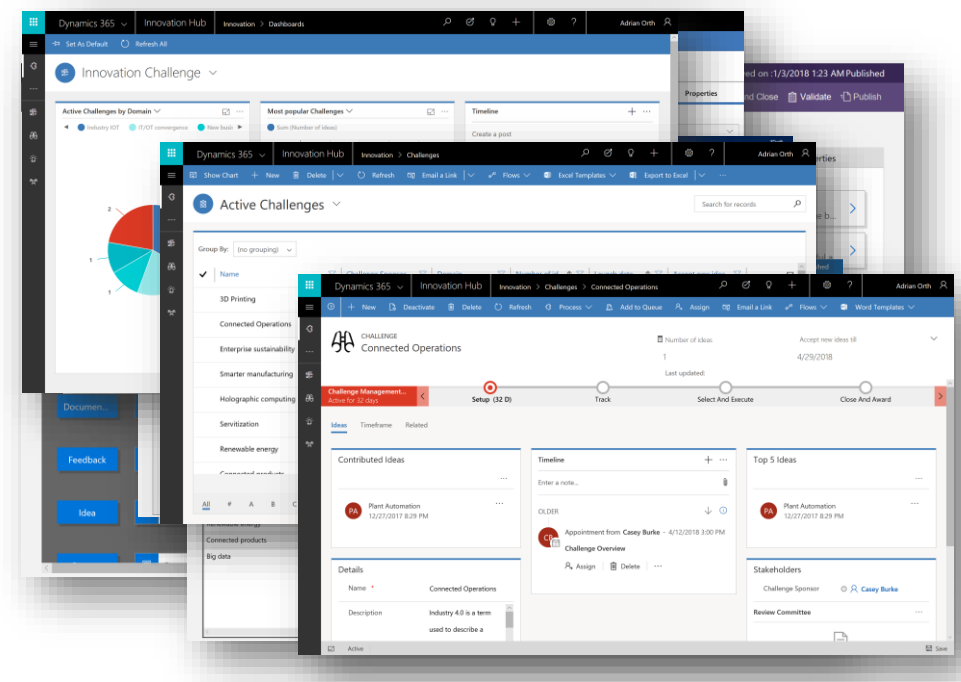
Model-driven apps in Power Apps

Eric Sauv , XRM Vision



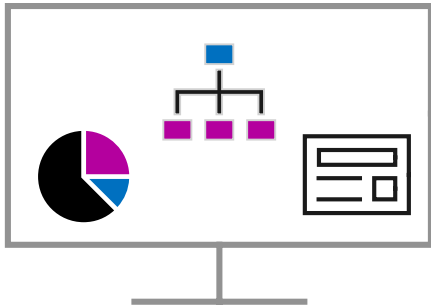


Canvas apps start with user experience, with pixel-perfect control to build highly customized task- and role-based apps that mash up data from 250+ sources

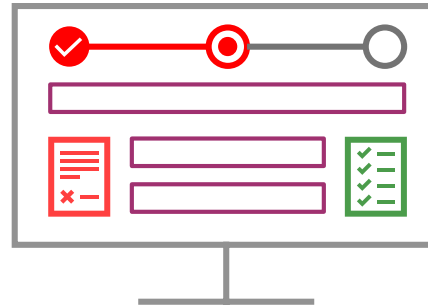


Model-driven apps leverage your data model, relationships, and business processes to automatically generate immersive, responsive applications

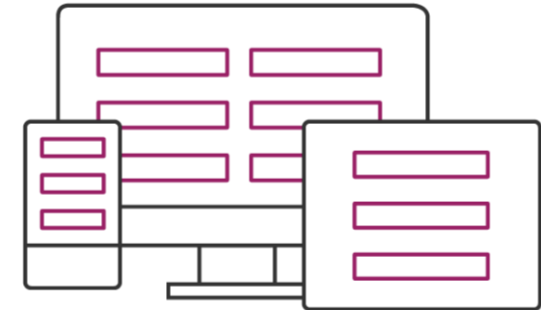
Power Apps Model-driven apps provides a metadata-driven architecture for creating and customizing apps without writing code



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

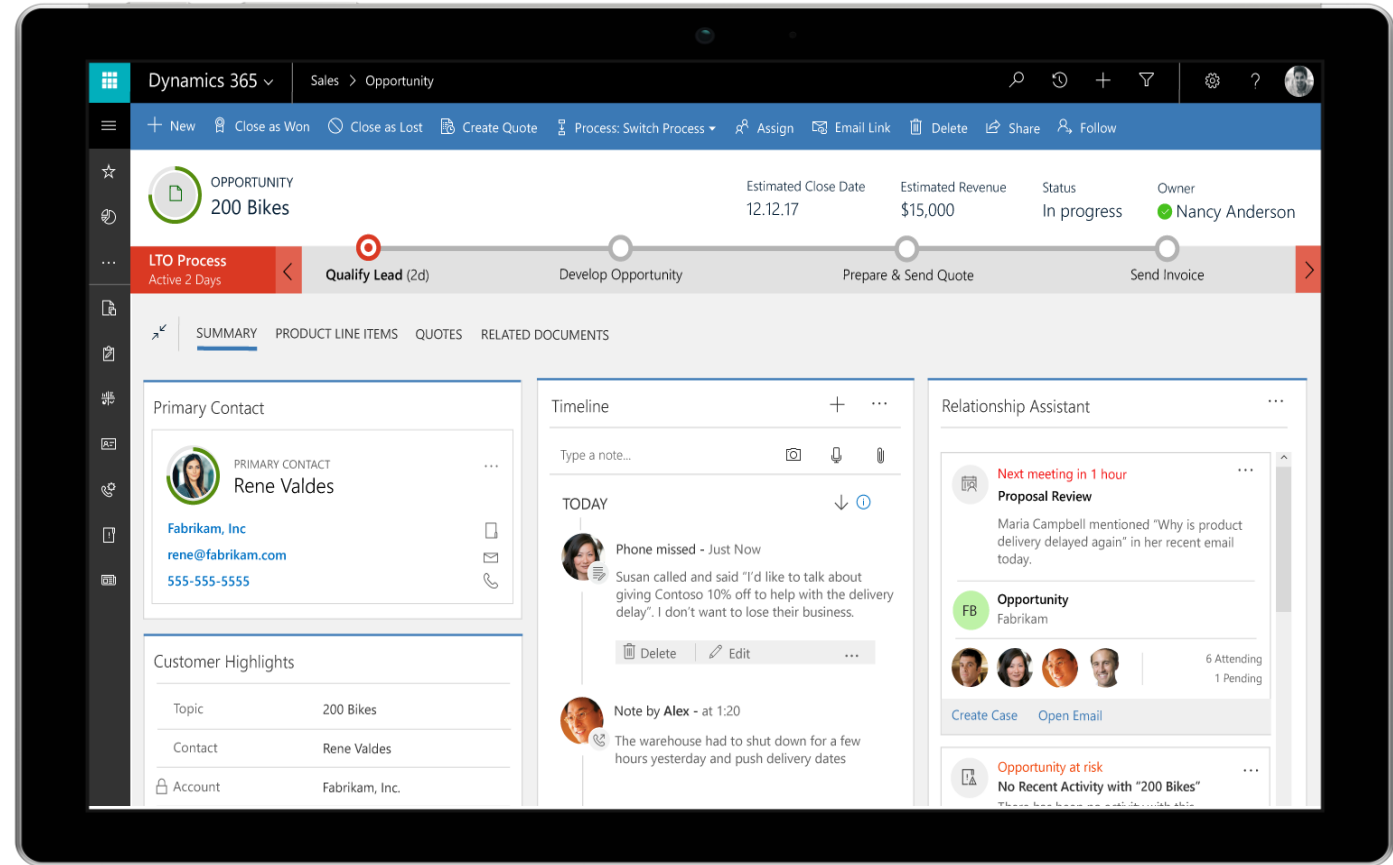
Drag and drop fields and controls in a visual designer. Forms can span multiple columns, multiple steps, and collapsible sections.

Rich, responsive client experiences

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

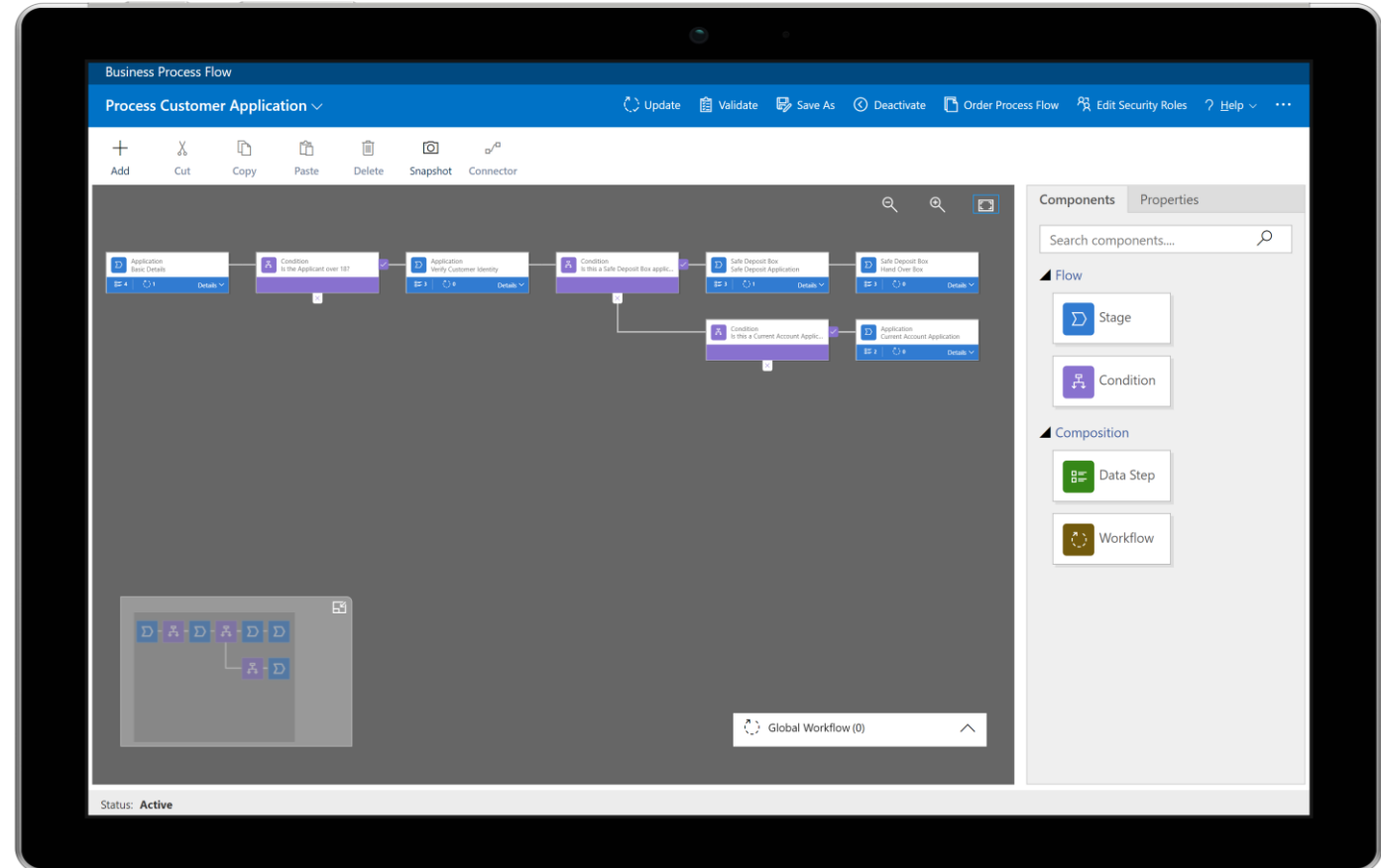
Enables easy reuse across multiple apps

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



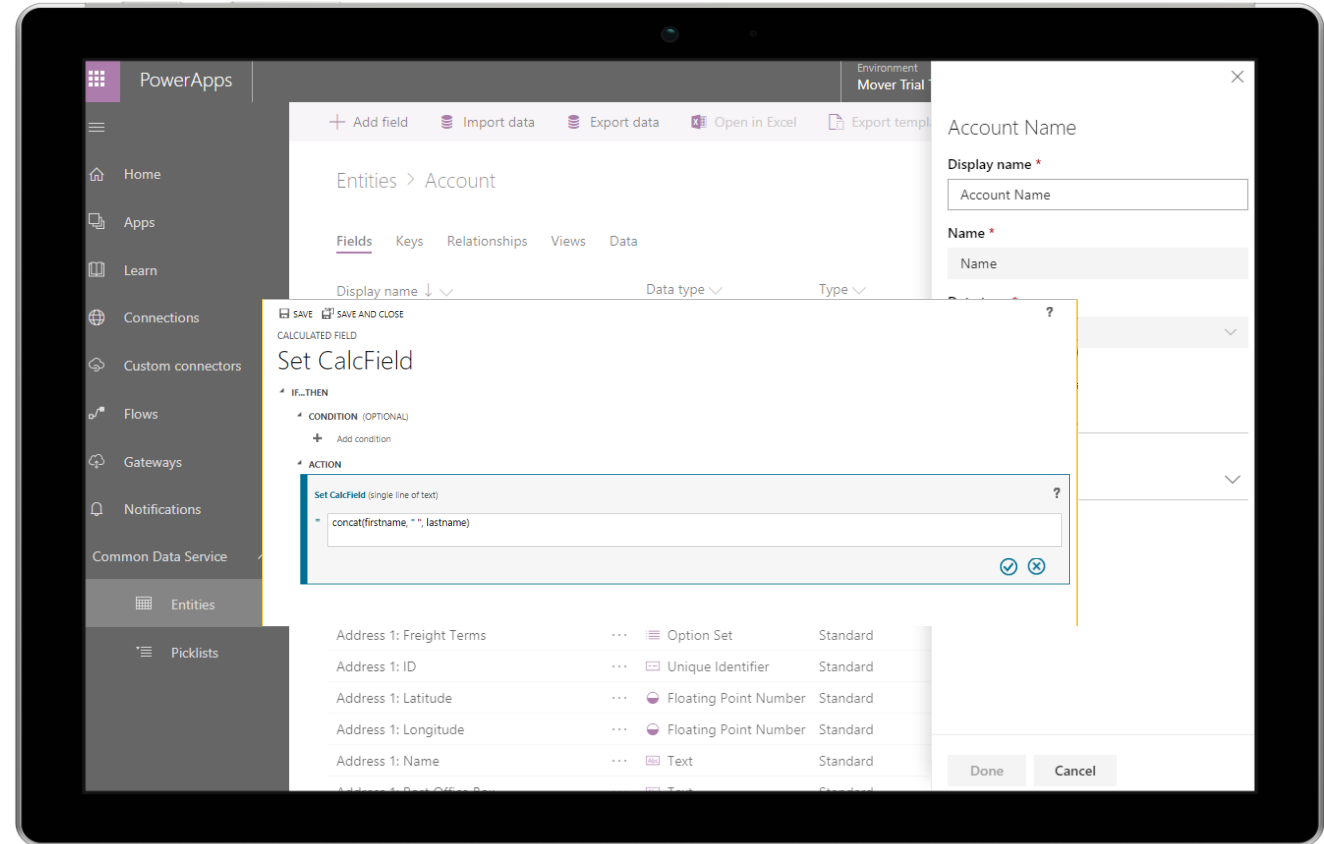
Business Process Flow

- 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

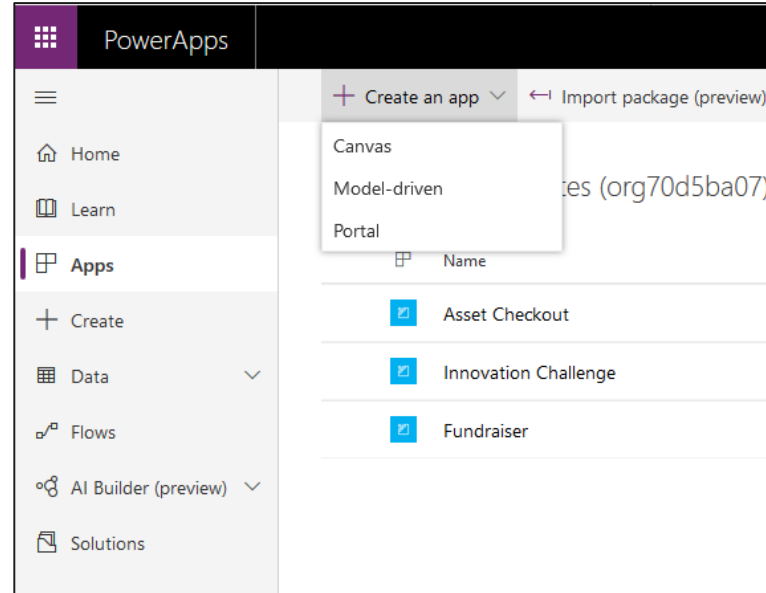
Solutions				
Name		Installed on ↓	Managed externally?	Version
Analysis Demo	...	11/30/2018	No	1.0
Repro89436486			No	1.0
PowerApps Checker			Yes	1.0.0.40
Field Service			Yes	7.5.4.51
Field Service UCI App Module			Yes	7.5.4.51
Field Service App Module			Yes	7.5.4.51
Field Service			Yes	7.5.4.51
Field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

PowerApps

Environment
AIAD Updates (org70d5ba07)

+

 Add field

Edit data in Excel

Get data

Export data

Settings

All Search

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_dosechallenge	Two Options	Managed	✓		✓
Close Challenge to new Ideas	sample_dosechallengegetonewideas	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)	createdonbehalfby	Lookup	Standard	✓		✓
Created On	createdon	Date and Time	Standard	✓		✓
Description	sample_description	Multiline Text	Managed	✓		✓

Configurable your fields with data types

The screenshot shows a configuration window titled "Challenge Code" with a close button (X) in the top right corner. On the left is a scrollable list of data types, and on the right are the configuration options for the selected "Text" type.

Data Type List (Left):

- Text (selected)
- Text Area
- Email
- URL
- Ticker Symbol
- Phone
- Autonumber
- Whole Number
 - Whole Number
 - Duration
 - Timezone
 - Language
- Date Time
 - Date and Time
 - Date Only
- Currency
- Customer
- Decimal Number
- Floating Point Number
- Image
- Lookup
- Multi Select Option Set
- Multiline Text
- Option Set
- Two Options

Configuration Options (Right):

- Display name ***: Challenge Code
- Name ***: crf71_ ChallengeCode
- Data type ***: Text
- ☐ Required
- ☒ Searchable
- Calculated or Rollup**: + Add
- Advanced options** (expanded):
 - Description**: (empty text area)
 - Max length ***: 100
 - IME mode**: Auto
- Buttons**: Done, Cancel

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 buttons for "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 several sections. At the top left, there is a "Site Map" section with a "Site Map" button. Below this, there is a "Dashboards" section with a "Dashboards" button and a dropdown menu showing "1". To the right of the "Dashboards" section is a "Business Process Flows" section with a "Business Proces..." button and a dropdown menu showing "All".

The central area of the workspace is titled "Entity View (9)" and contains a grid of 18 items arranged in 6 rows and 3 columns. Each item consists of a blue button with a label and a white box with a label, a dropdown menu, and a "All" button. The items are:

Challenge	Forms	1	Views	1	Charts	2	Dashboards	All
Document...	Forms	All	Views	All	Charts	All	Dashboards	All
Feedback	Forms	All	Views	All	Charts	All	Dashboards	All
Idea	Forms	1	Views	All	Charts	All	Dashboards	All
Process	Forms	All	Views	All	Charts	All	Dashboards	All
SharePoin...	Forms	All	Views	All	Charts	All	Dashboards	All

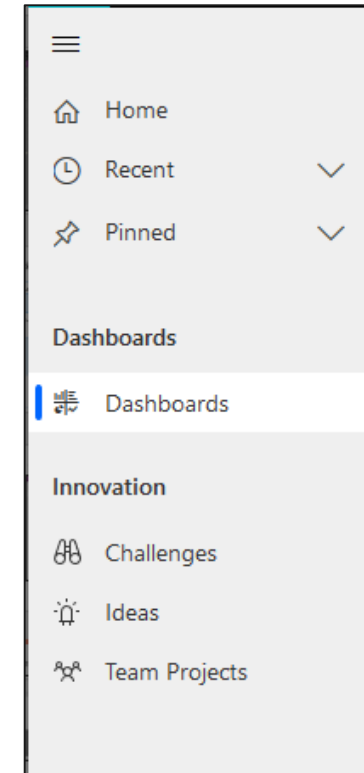
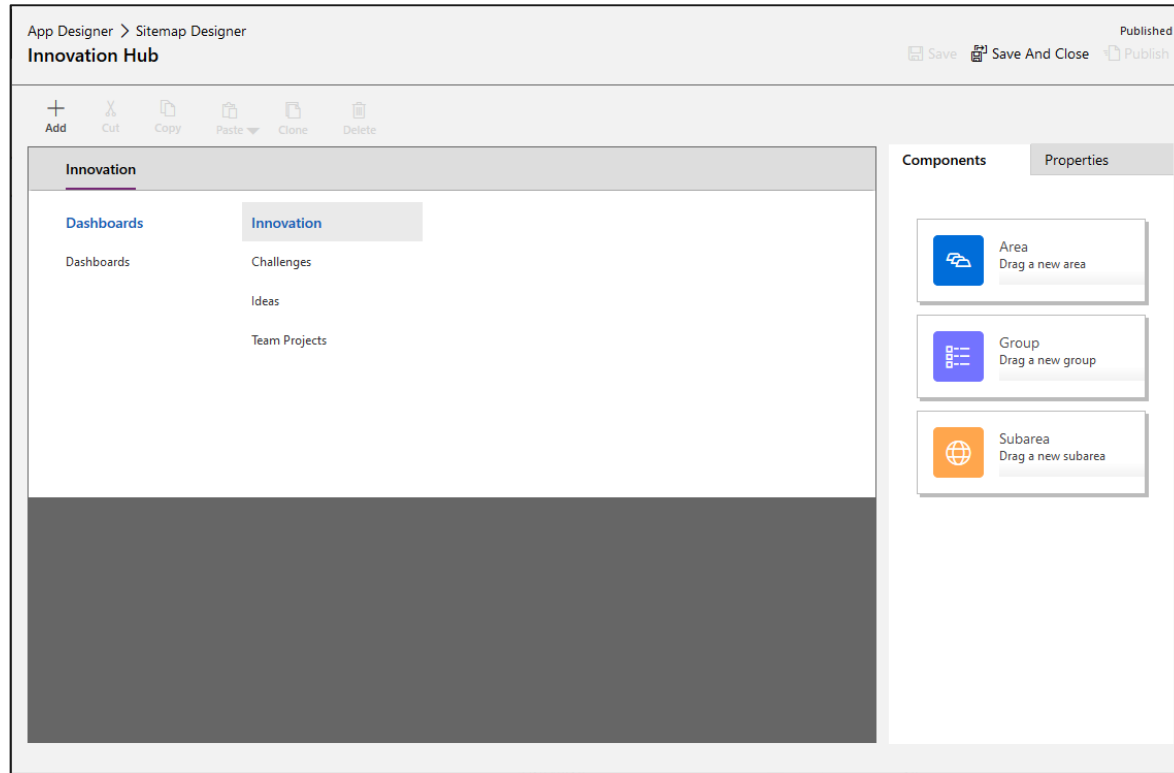
On the right side of the workspace, there is a "Components" panel with two tabs: "Components" and "Properties". The "Components" tab is active and shows a list of components under the "ARTIFACTS" and "ENTITY ASSETS" sections. The "ARTIFACTS" section includes:

- Entities**: Model and manage business data.
- Dashboards**: Provide an insightful and graphical overview of bus...
- Business Process Flow**: Define a sequence of steps required to complete a ...

The "ENTITY ASSETS" section 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...
- Dashboards**: Provide an insightful and graphical overview of bus...

Sitemap designer



Form designer

←

+ Add Field

+ Add Component

↶ Undo

↷ Redo

✂ Cut

📄 Paste | ▾

🗑 Delete

Switch to classic

≡

Fields

×

Account

Search

Default ▾

+ 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.

Save

▼

Publish

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) ▼	+ Add column
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	

Save | ▼

Publish

My Active Accounts

>

View

Name

My Active Accounts

Description

Sort by ...

↑ Account Name ×

Then sort by ... ▼

Filter by ...

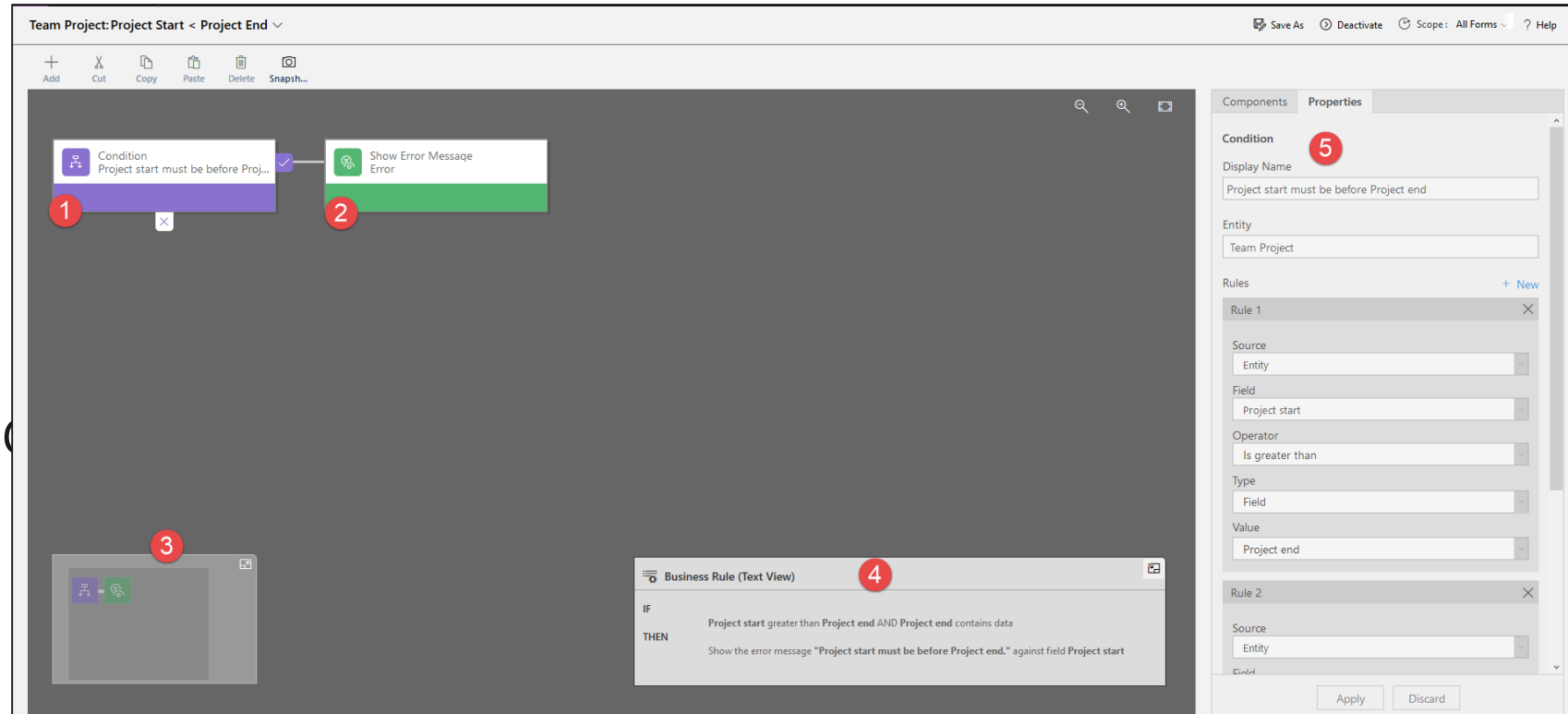
Owner is current user ×

Status is 'Active' ×

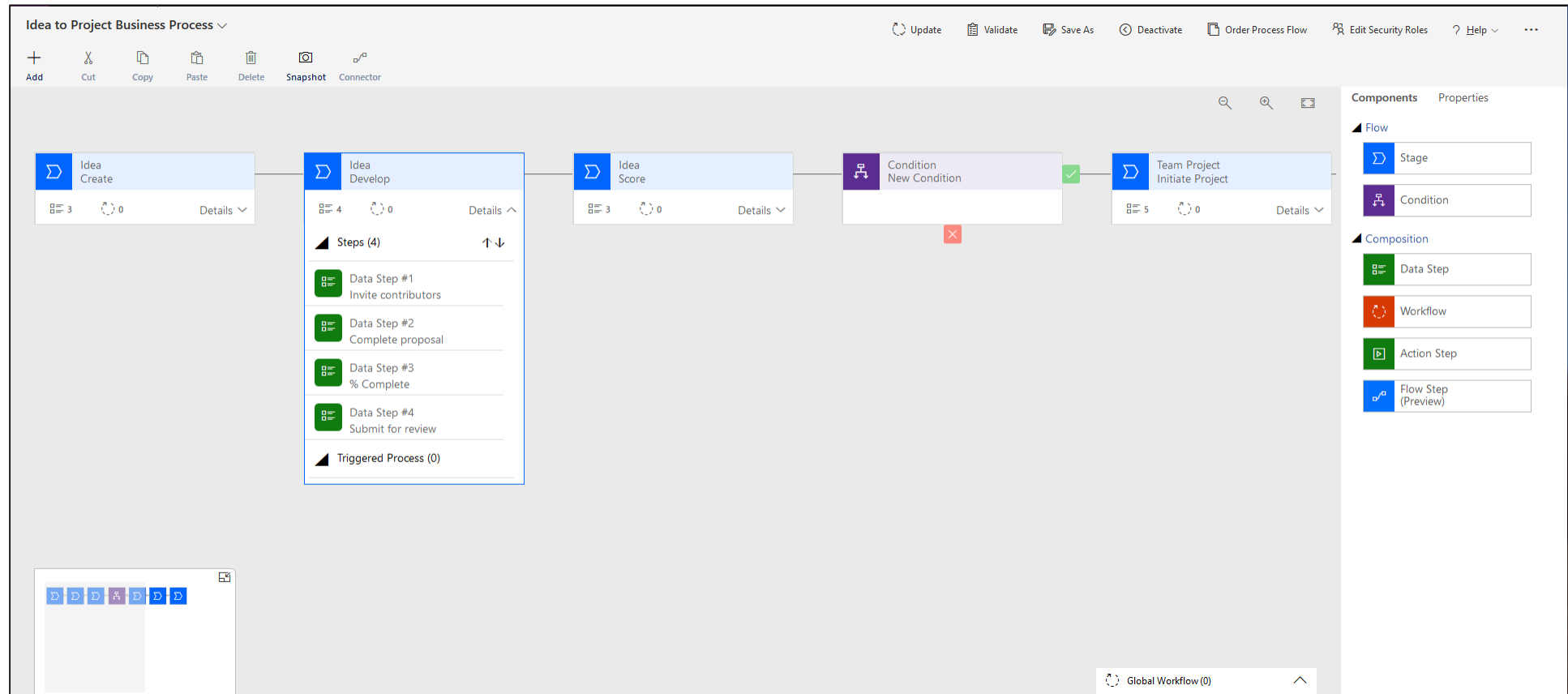
🔍 Edit filters ...

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

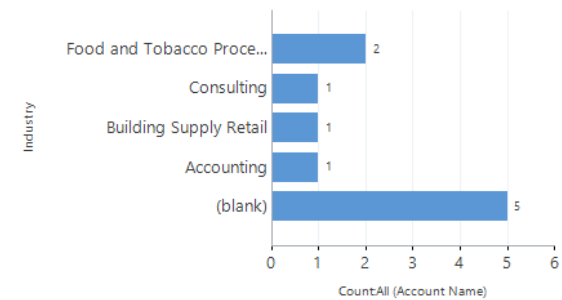
Name: * Sample dashboard

Section

Chart

Accounts by Industry

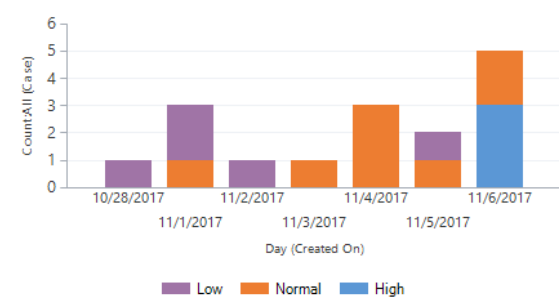
Active Accounts



Chart

Cases By Priority (Per Day)

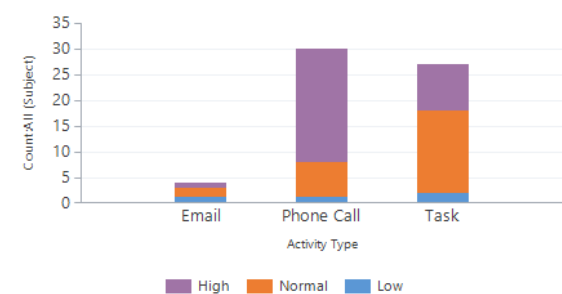
Active Cases



Chart

Activities by Type and Priority

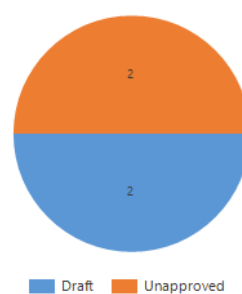
All Activities



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.

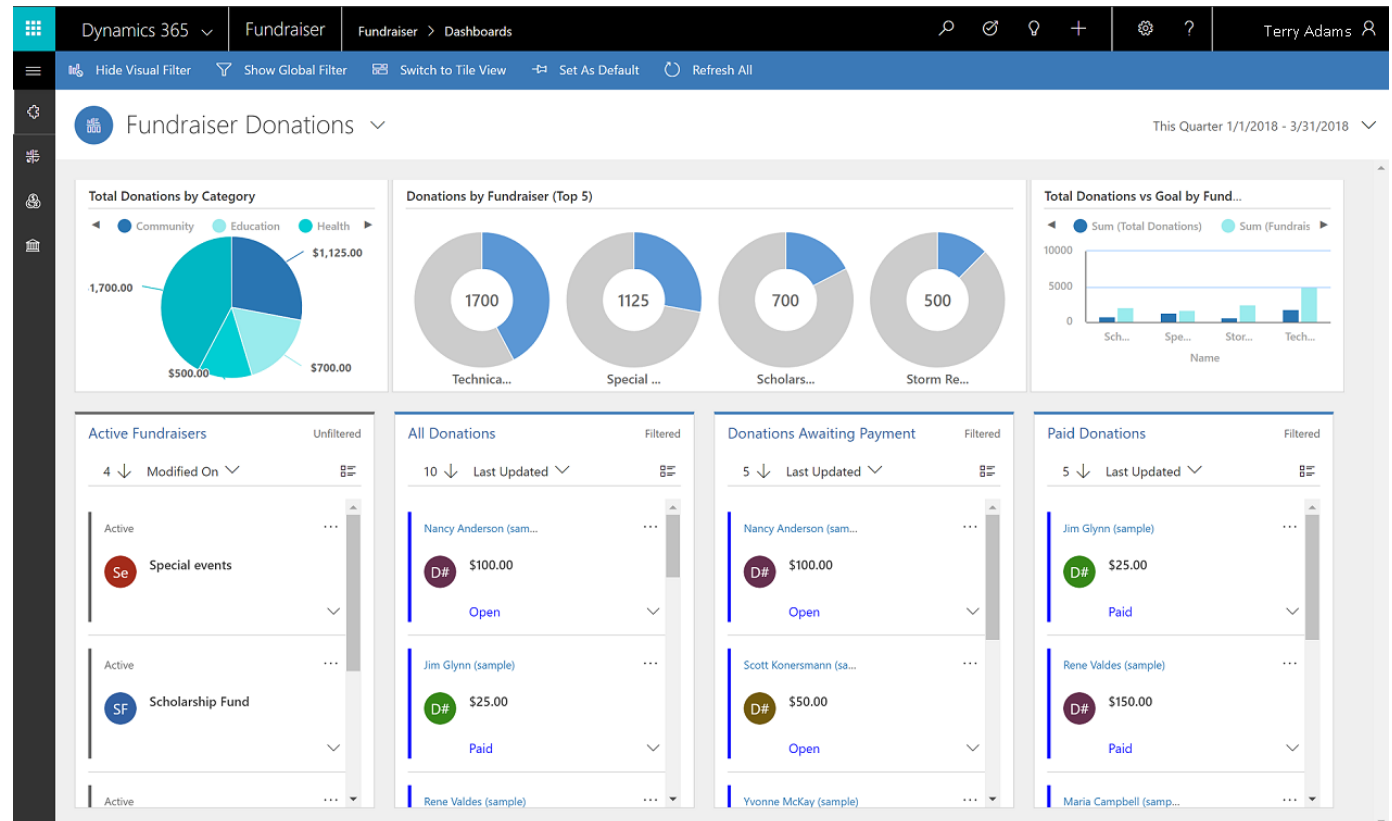
Currency ?
USD

Language ?
English

☒ Include sample apps and data

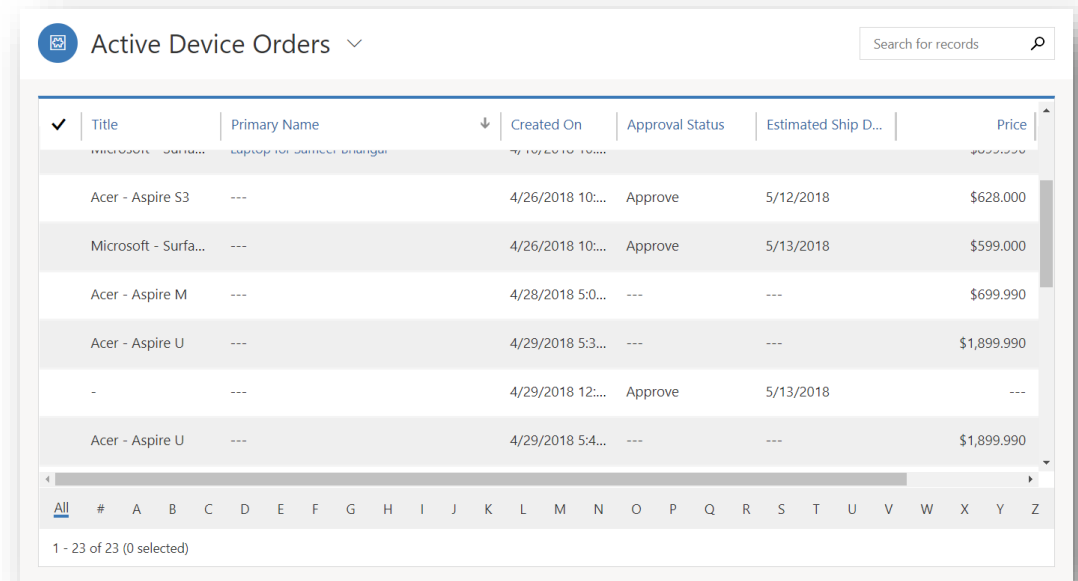
By choosing **Create my database**, you agree Microsoft can use entity and field names that you create (but not content in the database tables) to help improve our common data model. These names may be stored in our diagnostic systems and copied across regions. [Learn more](#)

Cancel Create database



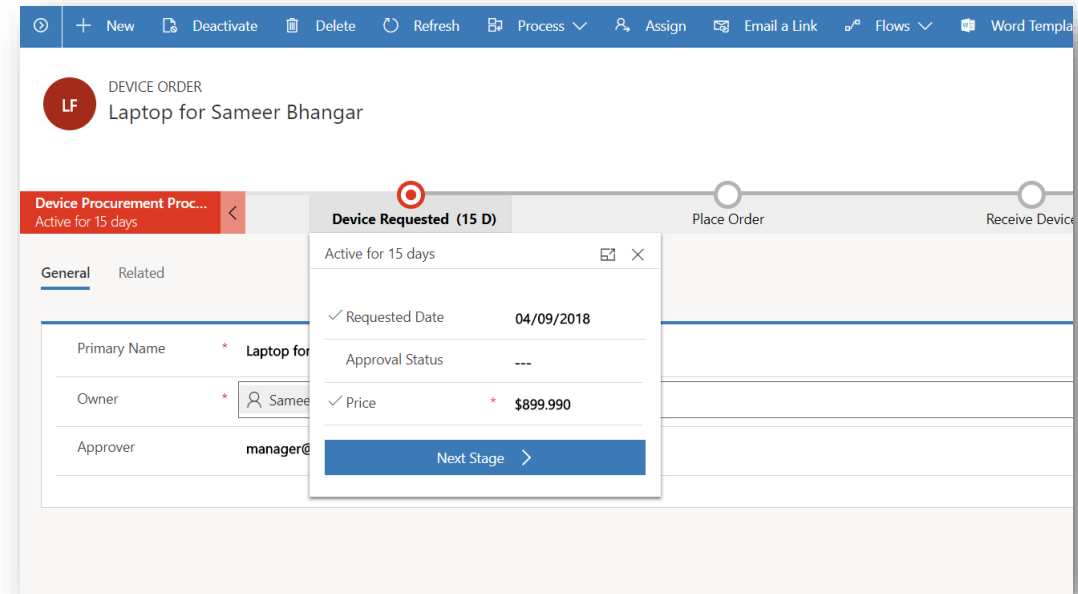
Lab objectives

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



A screenshot of a Microsoft Dynamics 365 model-driven app interface showing a table titled 'Active Device Orders'. The table has columns for Title, Primary Name, Created On, Approval Status, Estimated Ship D..., and Price. The data rows show various laptop orders with their respective dates, statuses, and prices. A search bar is located at the top right, and a pagination bar at the bottom indicates '1 - 23 of 23 (0 selected)'.

✓	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



A screenshot of a Microsoft Dynamics 365 model-driven app interface showing a form titled 'DEVICE ORDER' for 'Laptop for Sameer Bhargar'. The form is in the 'Device Requested (15 D)' stage of a business process flow. A pop-up window displays the 'General' tab with fields for Requested Date (04/09/2018), Approval Status (---), and Price (\$899.990). The form also includes a 'Next Stage' button.

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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