

App in a Day

Microsoft Power Platform

Power Apps

Power Automate

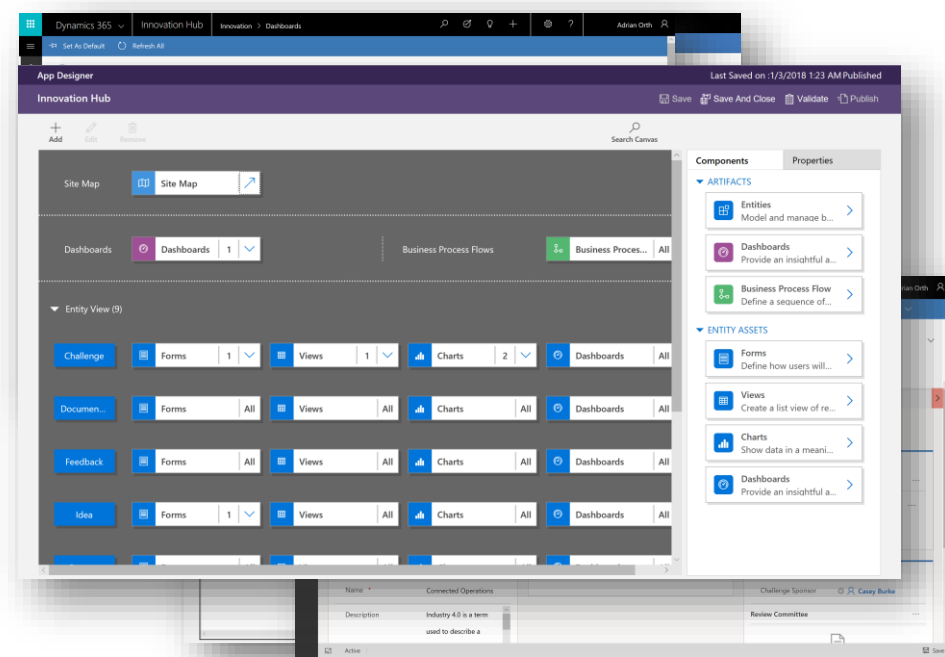
Microsoft Dataverse

February 2021

Module 3: Power Apps Model-driven Apps

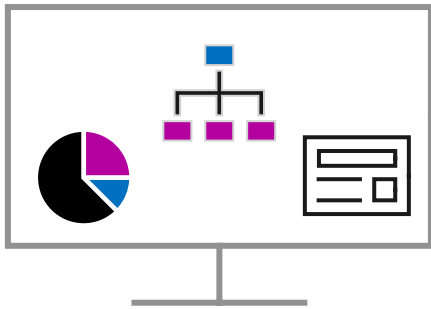


Canvas apps start with user experience, with pixel-perfect control to build highly customized task- and role-based apps that mash up data from 300+ sources

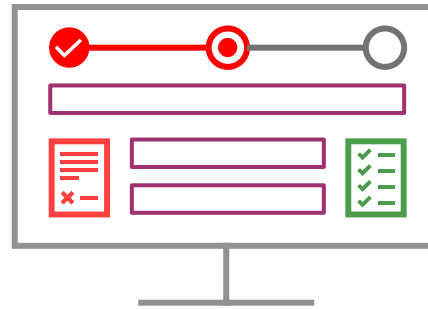


Model-driven apps leverage your data model, relationships, and business processes to automatically generate immersive, responsive applications

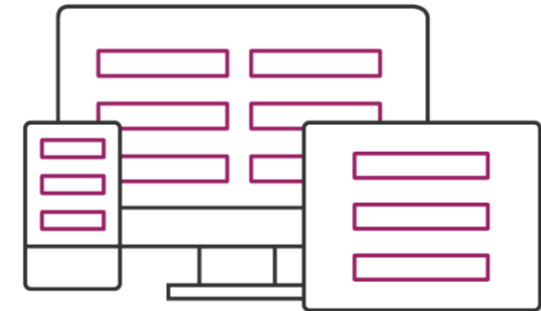
Power Apps Model-driven apps provides a metadata-driven architecture for creating and customizing apps without writing code



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 way of app development using tables, forms and business processes.

Design sophisticated table forms quickly

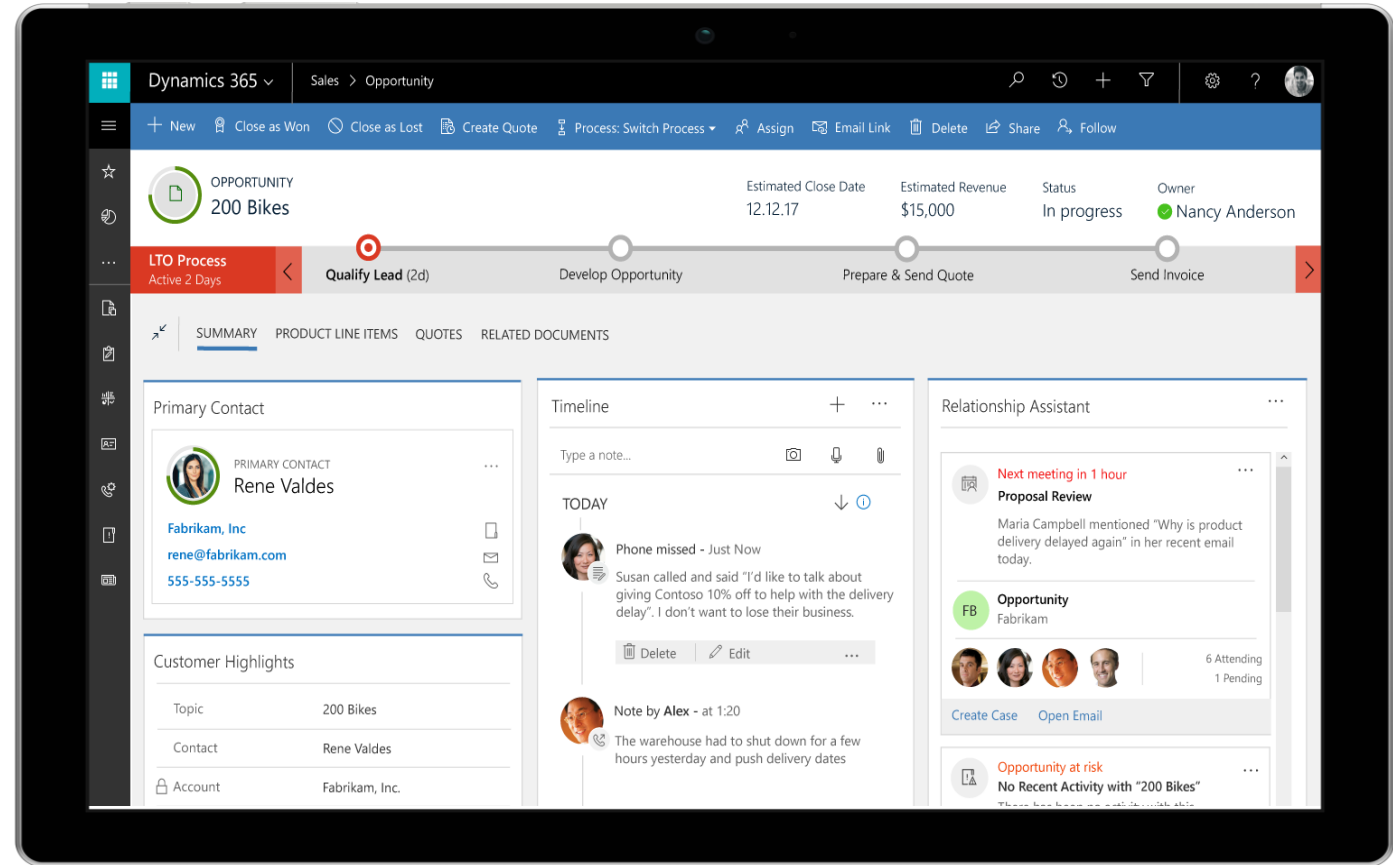
Drag and drop fields and controls in a visual designer. Forms can span multiple columns, multiple steps, and collapsible sections.

Rich, responsive client experiences

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

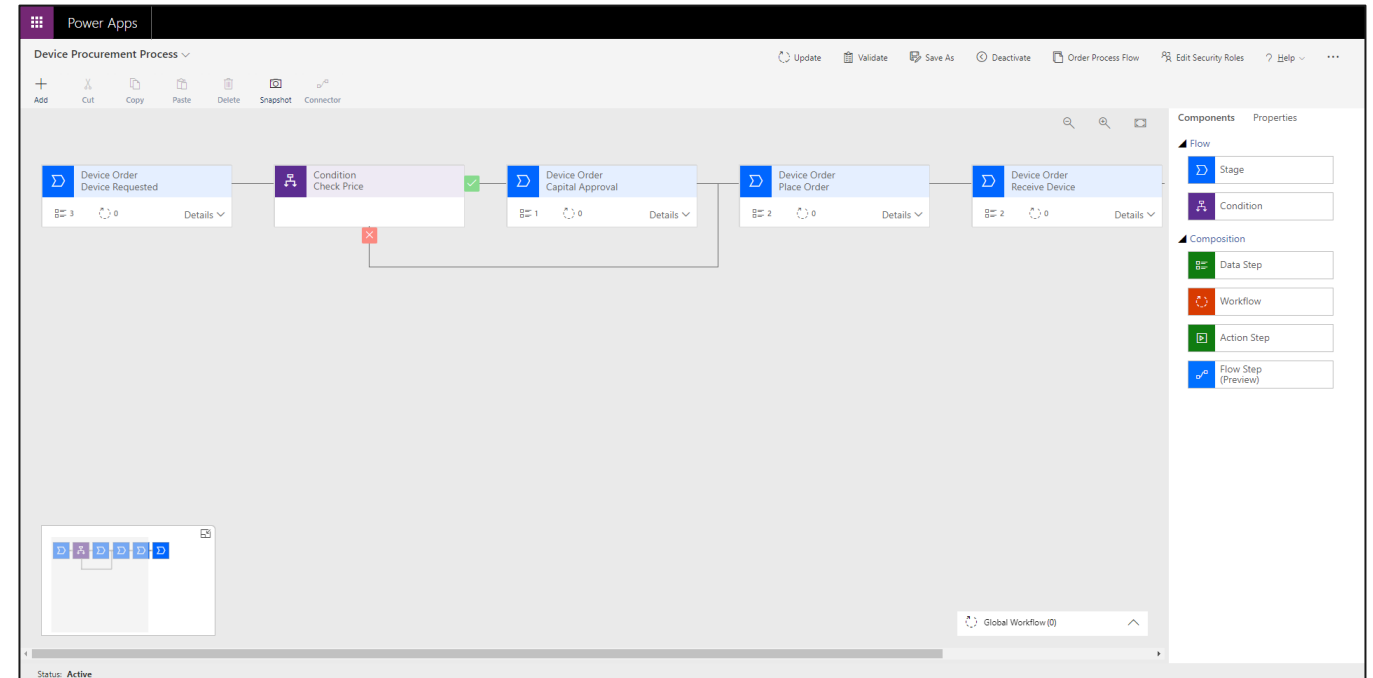
Enables easy reuse across multiple apps

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



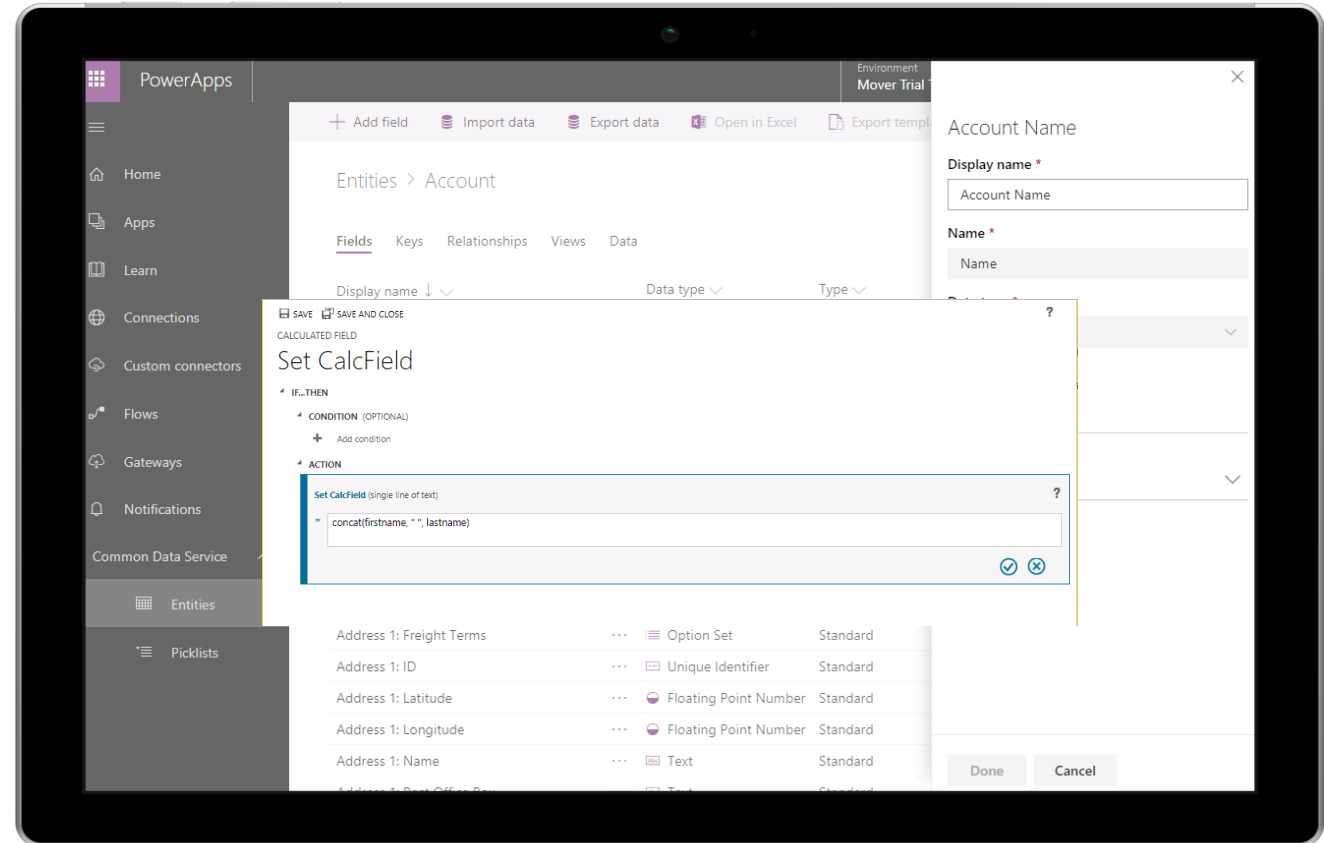
Business Process Flow

- 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 tables, works across all apps
- Create calculated and roll up fields
- Easily create validation and set default values
- Update related tables 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

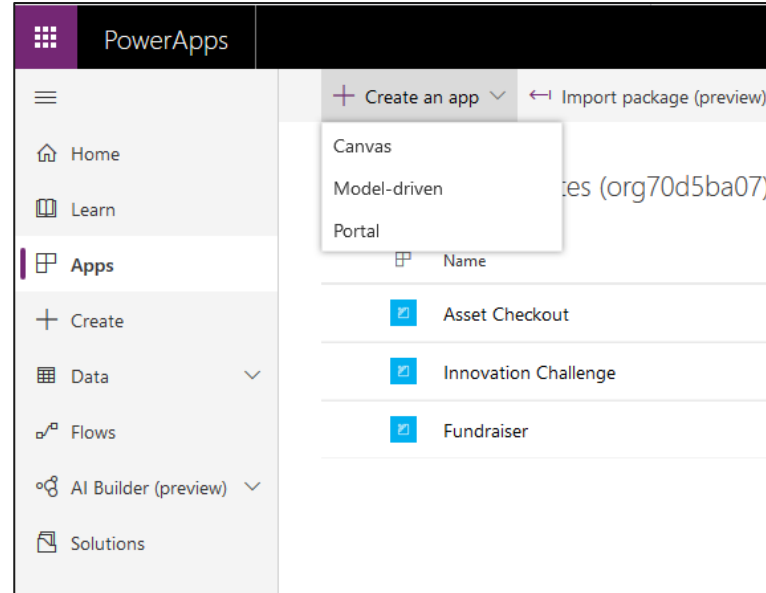
Solutions				
Name		Installed on ↓	Managed externally?	Version
Analysis Demo	...	11/30/2018	No	1.0
Repro89436486			No	1.0
PowerApps Checker			Yes	1.0.0.40
Field Service			Yes	7.5.4.51
Field Service UCI App Module			Yes	7.5.4.51
Field Service App Module			Yes	7.5.4.51
Field Service			Yes	7.5.4.51
Field 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
Table	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 table (production table) or create a custom table from scratch.
Column	A property that is associated with a table. A column 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 table). Columns typically are used with forms, views, and searches.
Relationship	Table relationships define how tables 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 a table creates a new 1:N relationship between the two tables and lets you put that lookup on a form.
Choices	This is a special type of column, which provides the user a set of predetermined options. Each option has a number value and label. When added to a form, this column displays a control for the user to select an option. There are two kinds of choices; choices, where the user can only select one option; and multi-select choices, which allow more than one selection.

Tables and columns

Tables

Table ↑ ▾

Account
Activity
Address
Appointment
Attachment
Business Unit
Contact
Currency
Email
Email Template
Fax
Feedback
Letter
Mailbox

Tables > Account

Columns Relationships Business rules Views Forms Dashboards Charts Keys Data

Display name ↑ ▾	Name ▾	Data type ▾	Type ▾	Customizable ▾	Required ▾	Searchable ▾
Account	accountid	Unique Identifier	Standard	✓	Required	✓
Account Name <small>Primary Name Column</small>	name	Text	Managed	✓	Required	✓
Account Number	accountnumber	Text	Managed	✓	Optional	✓
Account Rating	accountratingcode	Choice	Managed	✓	Optional	
Address 1	address1_composite	Multiline Text	Managed	✓	Optional	✓
Address 1: Address Type	address1_addresstypecode	Choice	Managed	✓	Optional	✓
Address 1: City	address1_city	Text	Managed	✓	Optional	✓
Address 1: Country/Region	address1_country	Text	Managed	✓	Optional	✓
Address 1: County	address1_county	Text	Managed	✓	Optional	✓
Address 1: Fax	address1_fax	Text	Managed	✓	Optional	✓
Address 1: Freight Terms	address1_freighttermscode	Choice	Managed	✓	Optional	✓
Address 1: ID	address1_addressid	Unique Identifier	Standard		Optional	
Address 1: Latitude	address1_latitude	Floating Point Number	Managed	✓	Optional	✓
Address 1: Longitude	address1_longitude	Floating Point Number	Managed	✓	Optional	✓
Address 1: Name	address1_name	Text	Managed	✓	Optional	✓
Address 1: Post Office Box	address1_postofficebox	Text	Managed	✓	Optional	✓
Address 1: Primary Contact Name	address1_primarycontactname	Text	Managed	✓	Optional	✓
Address 1: Shipping Method	address1_shippingmethodcode	Choice	Managed	✓	Optional	✓
Address 1: State/Province	address1_stateorprovince	Text	Managed	✓	Optional	✓
Address 1: Street 1	address1_line1	Text	Managed	✓	Optional	✓
Address 1: Street 2	address1_line2	Text	Managed	✓	Optional	✓
Address 1: Street 3	address1_line3	Text	Managed	✓	Optional	✓

Configurable your columns with data types

The screenshot shows a configuration window titled "Challenge Code" with a close button (X) in the top right corner. The window is divided into two main sections. On the left is a vertical list of data types, grouped by icons: Text (Text, 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, and Two Options. The "Text" data type is currently selected. On the right is the configuration area for the selected "Text" type. It includes a "Display name" field with the value "Challenge Code", a "Name" field with the value "crf71_ChallengeCode", a "Data type" dropdown menu set to "Text", and two checkboxes: "Required" (unchecked) and "Searchable" (checked). Below these is a "Calculated or Rollup" section with a "+ Add" button. An "Advanced options" section is collapsed, showing a "Description" text area and a "Max length" field set to "100". At the bottom right are "Done" and "Cancel" buttons.

challenge

Environment

Challenge Code

Display name *

Challenge Code

Name * ⓘ

crf71_ ChallengeCode

Data type * ⓘ

Text

☐ Required

☒ Searchable

Calculated or Rollup ⓘ + Add

Advanced options ^

Description

Max length *

100

IME mode

Auto

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 text "App Designer". The main header area shows the app name "Innovation Challenge" and a status bar indicating "Last Saved on: 9/15/2019 1:06 PM Published". Action buttons for "Save", "Save And Close", "Validate", "Publish", and "Play" are visible.

The central canvas area is divided into several sections:

- Site Map:** Contains a "Site Map" component.
- Dashboards:** Contains a "Dashboards" component with a count of 1.
- Business Process Flows:** Contains a "Business Process Flow" component.
- Entity View (9):** A grid of components for different entities, including "Challenge", "Document...", "Feedback", "Idea", "Process", and "SharePoin...". Each entity has associated "Forms", "Views", "Charts", and "Dashboards" components.

The right-hand sidebar contains two tabs: "Components" and "Properties". The "Components" tab is active, showing a list of available components categorized under "ARTIFACTS" and "ENTITY ASSETS".

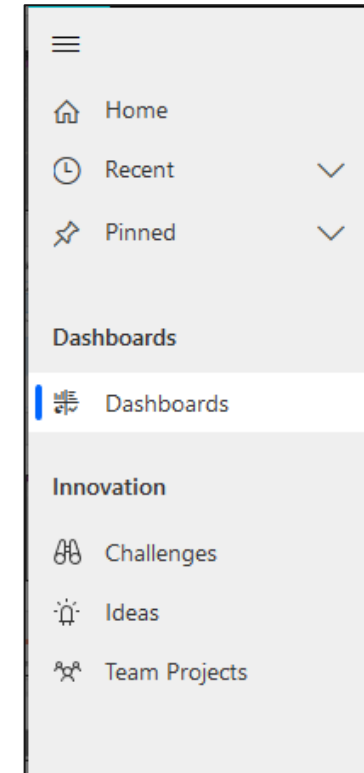
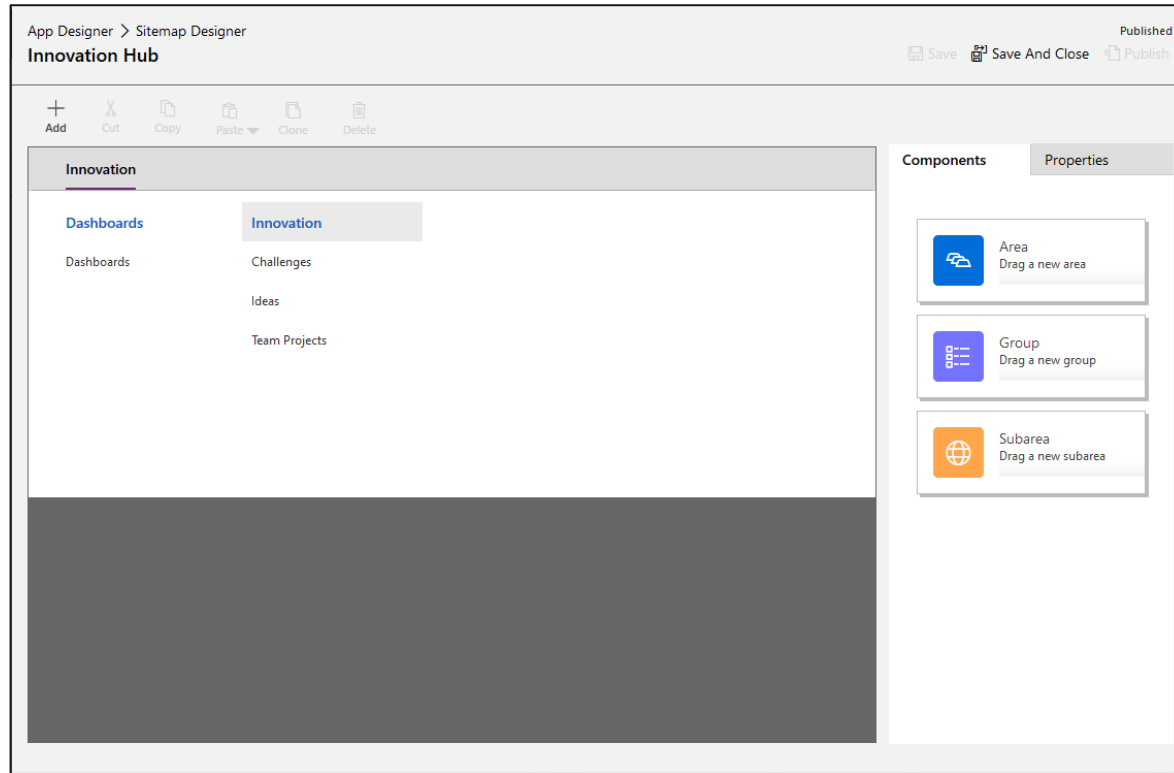
ARTIFACTS:

- 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 ...

ENTITY ASSETS:

- 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

≡

Account

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.

🔍 Search

No data available.

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) ▼	+ 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 ...

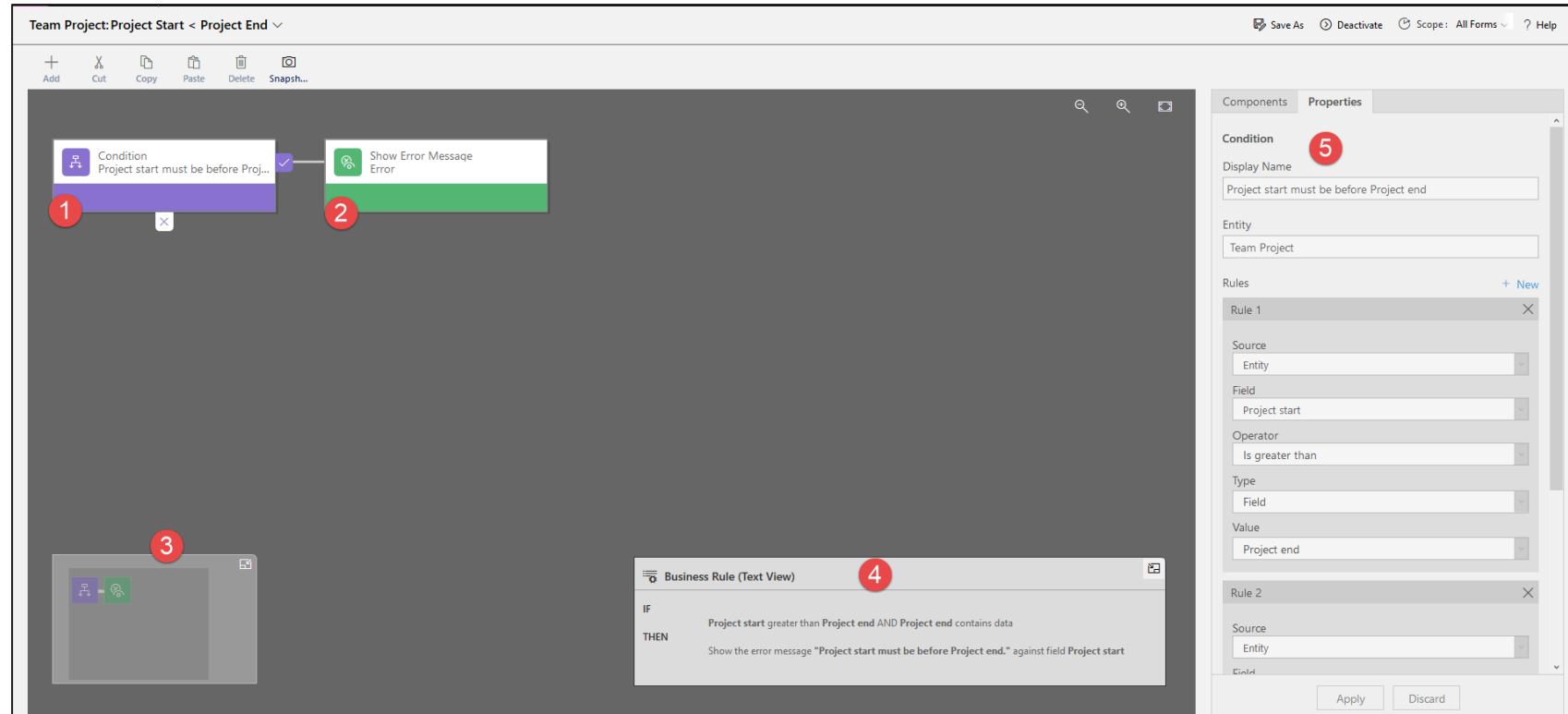
Owner is current user ×

Status is 'Active' ×

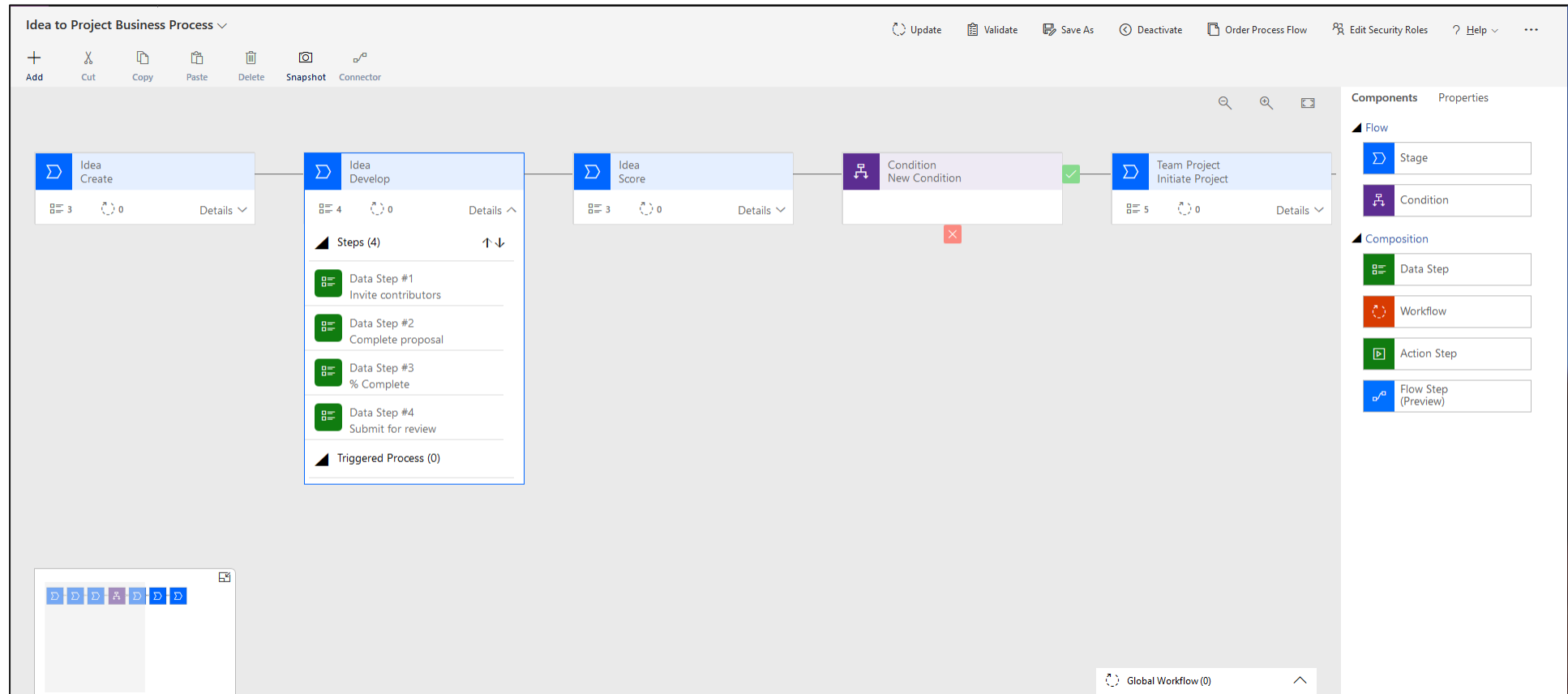
🔍 Edit filters ...

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

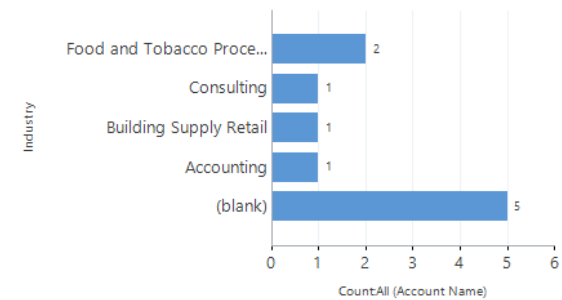
Name: * Sample dashboard

Section

Chart

Accounts by Industry

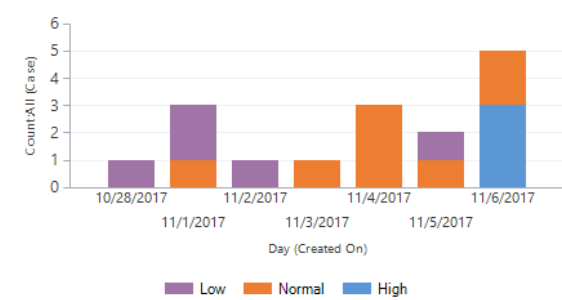
Active Accounts



Chart

Cases By Priority (Per Day)

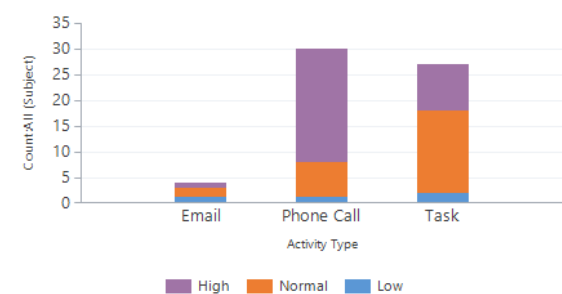
Active Cases



Chart

Activities by Type and Priority

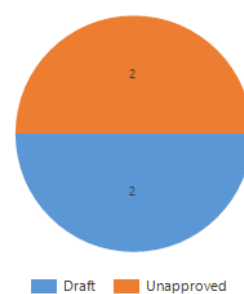
All Activities



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 Dataverse 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.

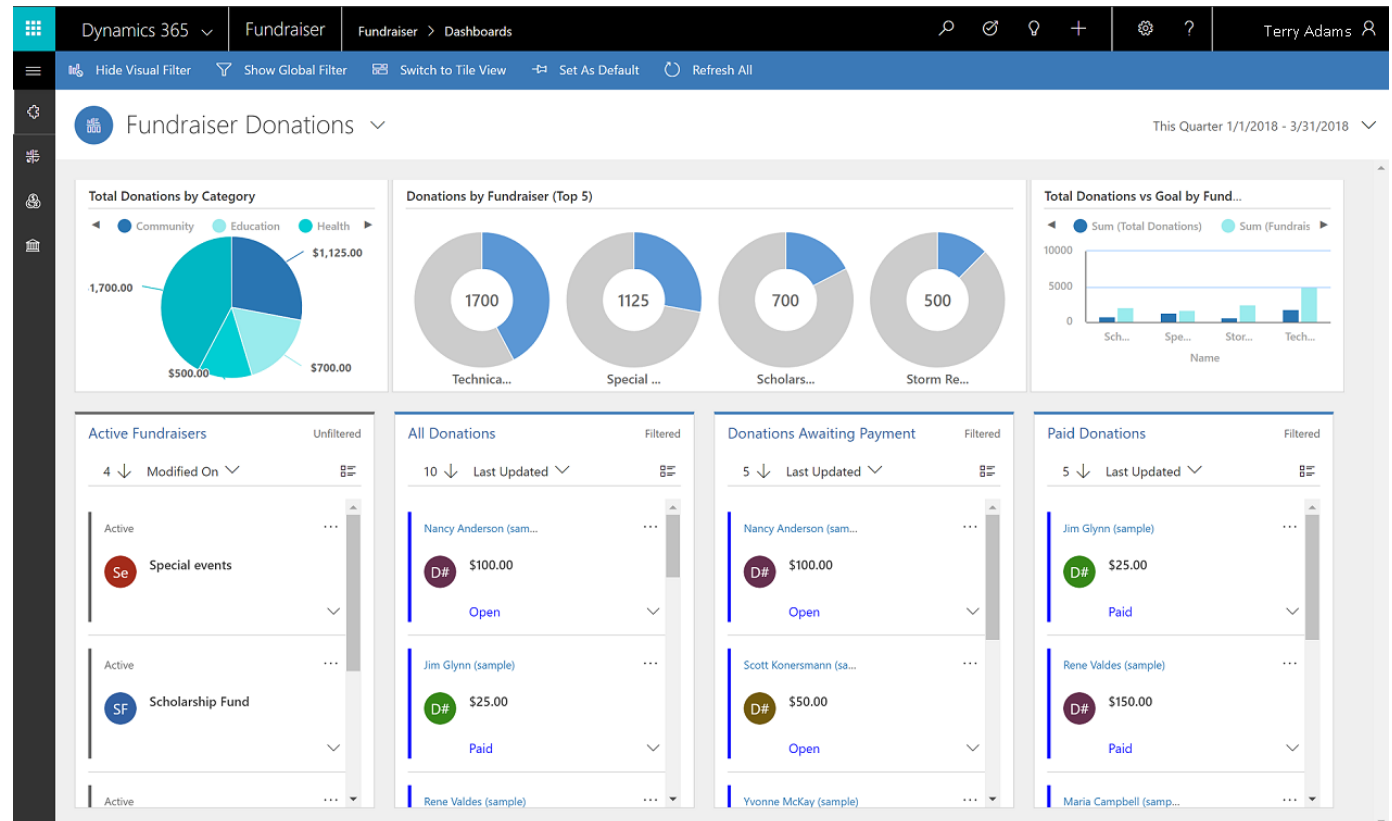
Currency ?
USD

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 3

Module 3: Power Apps Model-driven App

Module 3: Learning objectives



Create a standalone Model-driven app



Customize forms for the Model-driven app



Create a Business Process Flow



Active Device Orders

✓	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

1 - 23 of 23 (0 selected)

DEVICE ORDER

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 >

Primary Name * Laptop for

Owner * Samee

Approver manager@



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