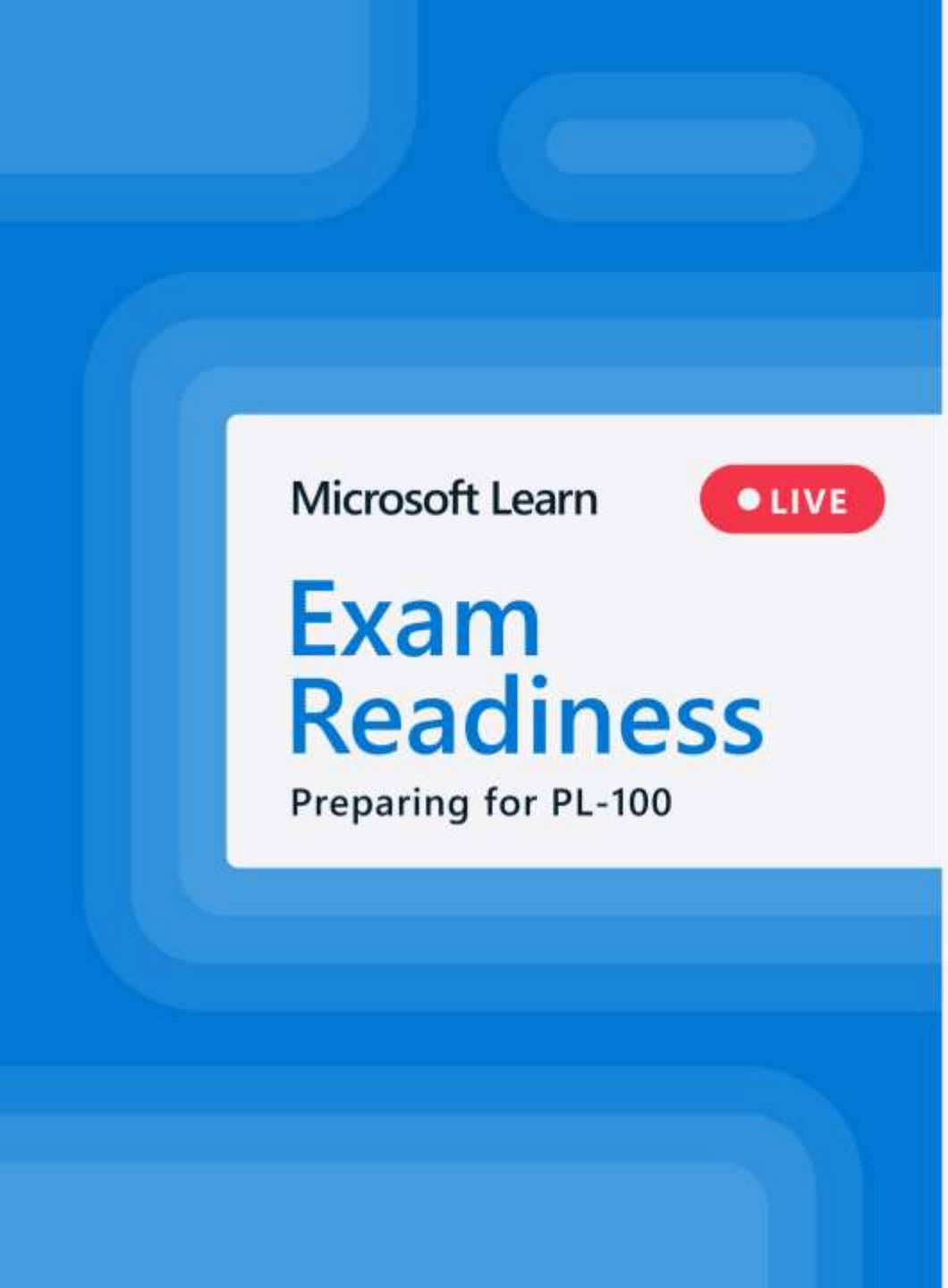

Microsoft

Preparing for the PL-100

Power Platform App Maker Exam

April Dunnam, Principal Cloud Advocate

Daniel Laskewitz, Senior Cloud Advocate

David Abu, Cloud Advocate

Gomolemo Mohapi, Cloud Advocate

The journey to Microsoft Certified:

Power Platform

Start here
Decide if this is the right certification for you

Browse all Power Platform certifications

Pass required exam to earn your certification

PL-900
Power Platform Fundamentals

Pass required exam to earn your certification

PL-100
Microsoft Power Platform App Maker

PL-200
Microsoft Power Platform Functional Consultant

PL-300
Microsoft Power BI Data Analyst

PL-400
Microsoft Power Platform Developer

PL-500
Microsoft Power Automate RPA Developer

Pass required exam to earn your certification

PL-600
Microsoft Power Platform Solution Architect

Microsoft

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Exam Core Concepts

- Design business solutions (20 – 25%)
- Analyze and visualize data (10 – 15%)
  - Creating and consuming Power BI Dashboards
  - Describing AI Builder models
- Create business solutions (60 – 65%)
  - Manage Power Platform components
  - Create model-driven apps
  - Create canvas apps
  - Configure Dataverse
  - Create Power Automate flows
  - Create Power Virtual Agents chatbots in Teams

https://query.prod.cms.rt.microsoft.com/cms/api/am/binary/RE4wo07

Design Business Solutions

- Create a high-level design
- Identify Power Platform components
- Design the user interface (UI) and reporting/visualizations

Design Business Solutions

- **Create a high-level design**
  - ✓Identify existing data sources needed
  - ✓Describe the expected user experience
  - ✓Describe the differences between Microsoft Power Platform app types
  - ✓Create a high-level structure for a new data sources

Design Business Solutions

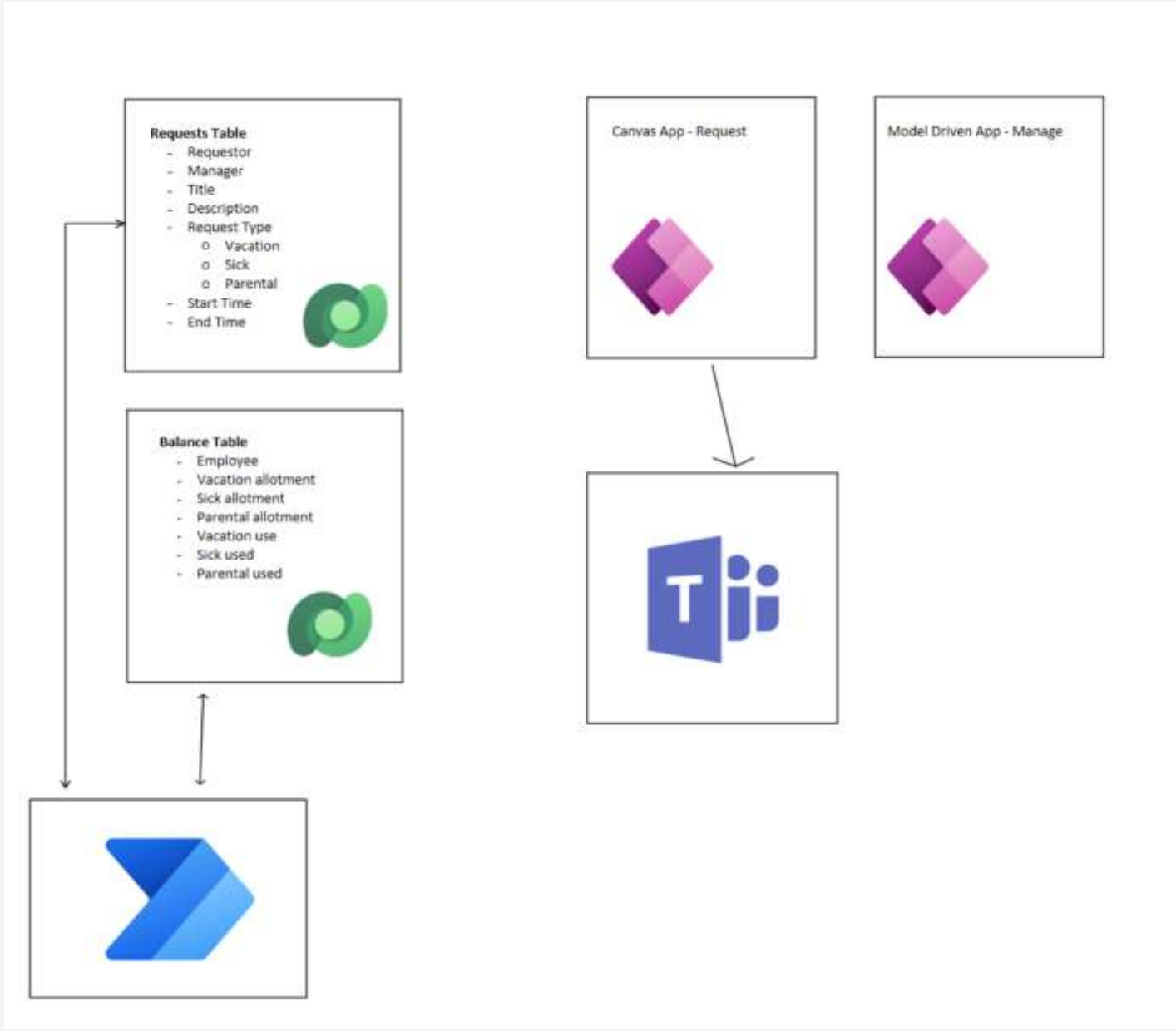
Identify Power Platform components

- ✓ Determine the required Power Apps app type
- ✓ Determine when to use Dataverse for Teams
- ✓ Map a problem domain to Microsoft Power Platform tools
- ✓ Identify options for implementing business logic
- ✓ Describe connectors
- ✓ Describe uses cases for cloud flows and desktop flows
- ✓ Describe use cases for chatbots in Microsoft Teams

Sample Business Problem: Time Off Request

- Users need an application that works on mobile and desktop to view and submit their time off requests
- Approvers should receive automatic notifications to approve requests
- Approvers and admins need a way to see all submitted requests and to build reports off the data
- Your organization uses Microsoft Teams heavily
- The org is large, and you expect a high volume of data

Design


Requests Table
- Requestor
- Manager
- Title
- Description
- Request Type
o Vacation
o Sick
o Parental
- Start Time
- End Time
Balance Table
- Employee
- Vacation allotment
- Sick allotment
- Parental allotment
- Vacation use
- Sick used
- Parental used
Canvas App - Request
Model Driven App - Manage

Easily integrate with Microsoft Teams

Depth of coding required

Microsoft Teams integrations

Ready-made apps

+ hundreds of partner apps

Low-code apps & workflows

(Power Platform)

Power Apps

Build custom apps

Power Automate

Automate repetitive tasks

Power Virtual Agents

Create tailored chatbots

Power BI

Visualize and discuss data

Full-code custom solutions

Departmental tools

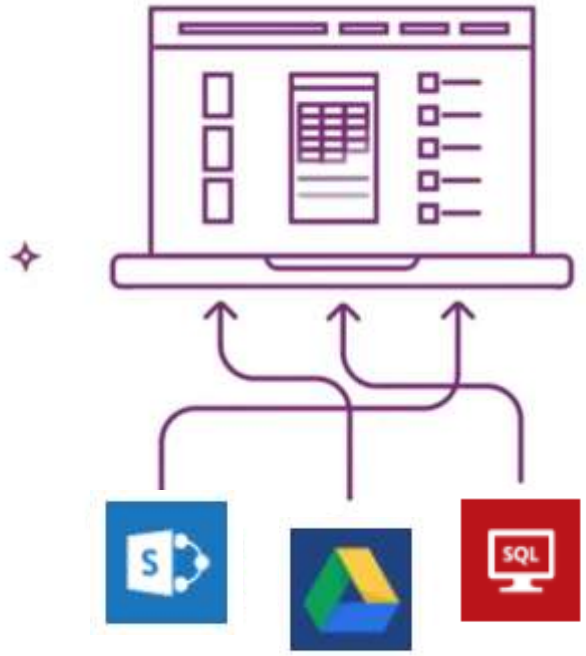
Employee resources

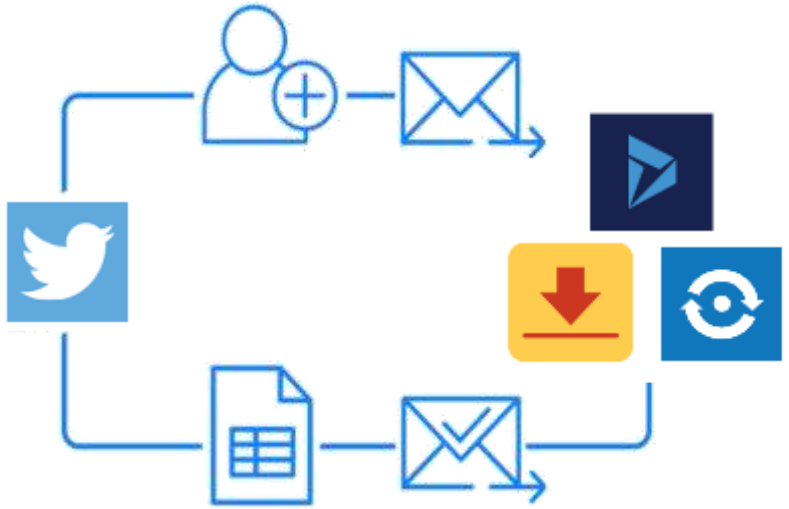
Processes and workflow

Support and info

A connector is a wrapper

A **connector** is a wrapper around an API that allows the underlying service to talk to **Power Automate** and **Power Apps**

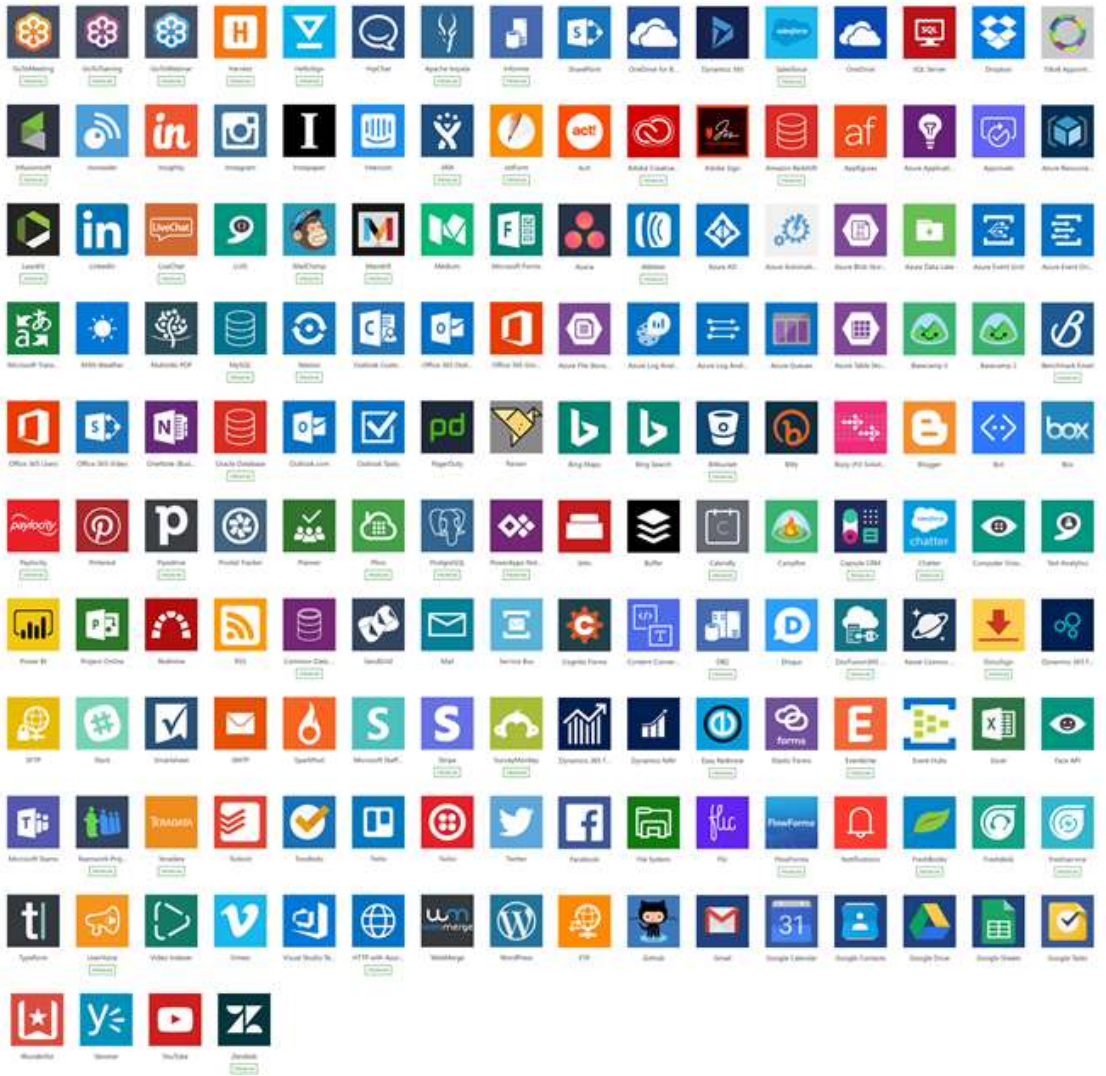




Cloud and on-premises connectivity

- Built-in connectivity to cloud services, files, databases, web APIs, etc. using public connectors
- Seamless hybrid connectivity to on-premises systems via the On-Premises Data Gateway
- Connect to the service with your own security credentials
- Open source
  - https://github.com/microsoft/PowerPlatformConnectors

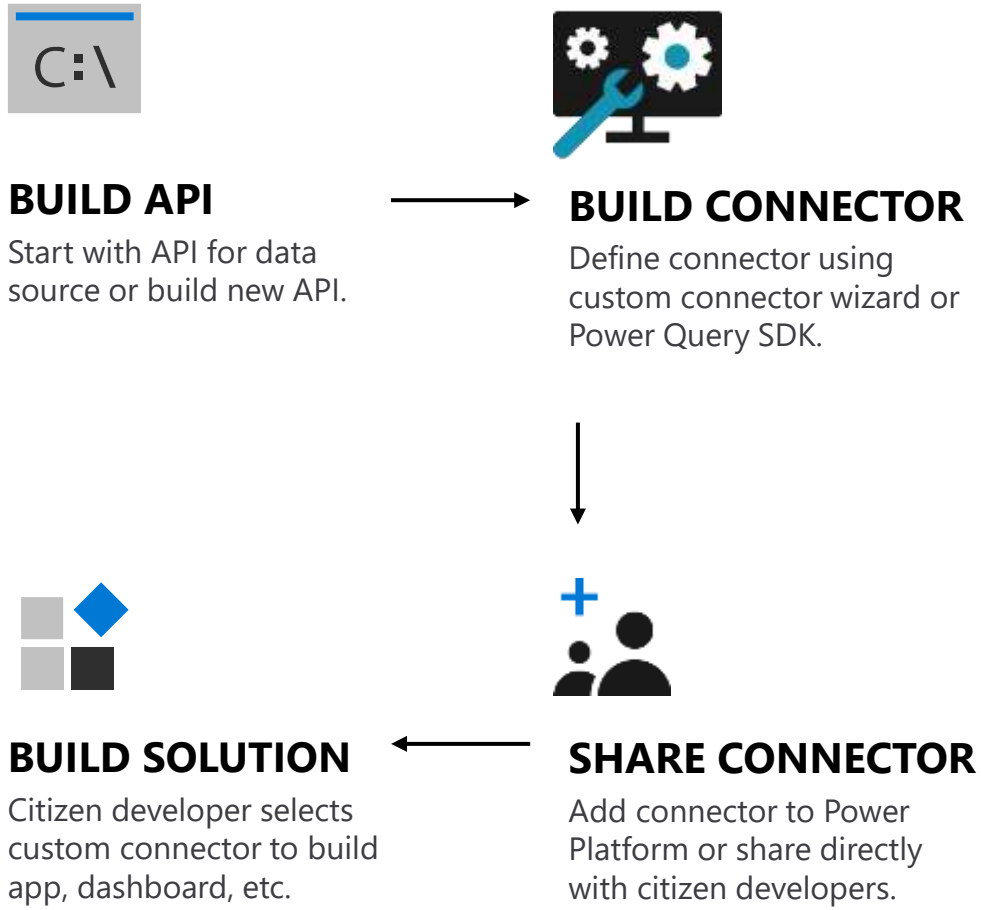
- With custom connectors, you can extend the reach for your organization



Hundreds of connectors today

Unlock access to any data source with custom connectors

- Communicate with services that are not available as prebuilt connectors.
- Create a connector using in-product wizards in Power Platform
- Connectors in Power Automate can include your own triggers and actions.
- Connectors in Power BI can include your own logic and credential options.



Design Business Solutions

- **Describe the UI**
  - ✓ Identify opportunities for component reuse
  - ✓ Select UI elements for canvas apps
  - ✓ Identify the model-driven forms and Microsoft Dataverse views that are needed

Low-code Creation of Reusable Components

Quickly develop reusable, embeddable components with the low-code canvas

Reuse within and across apps; compose with pro-dev components

Enable faster and more consistent development when many makers are using the same components

Types of components

Canvas Components

Targeted for canvas app makers

Built in Power Apps Studio using Power Fx

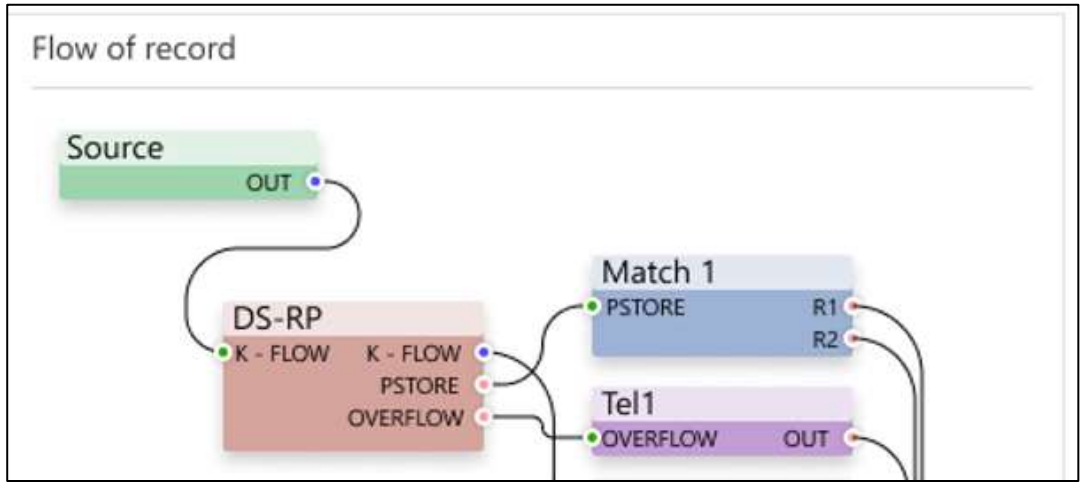
Works in canvas apps

Power Apps Component Framework (PCF)

Targeted for professional developers to build

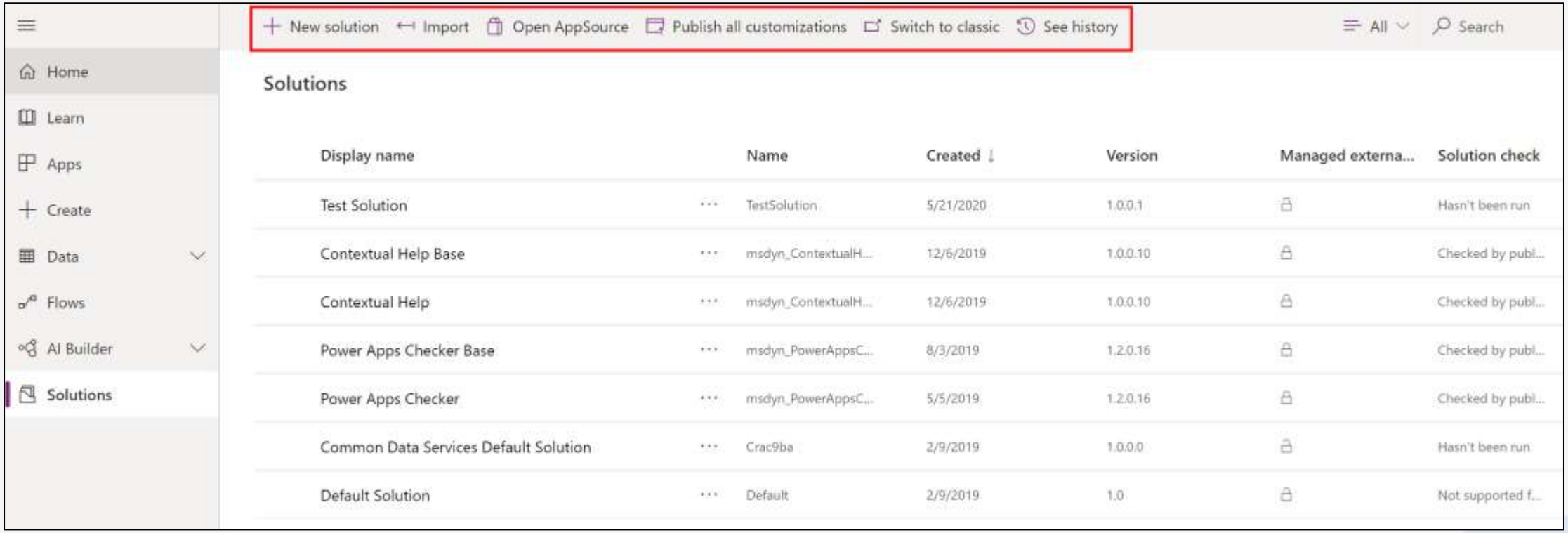
Built in TypeScript using pro tooling

Works in model-driven, canvas and portal apps

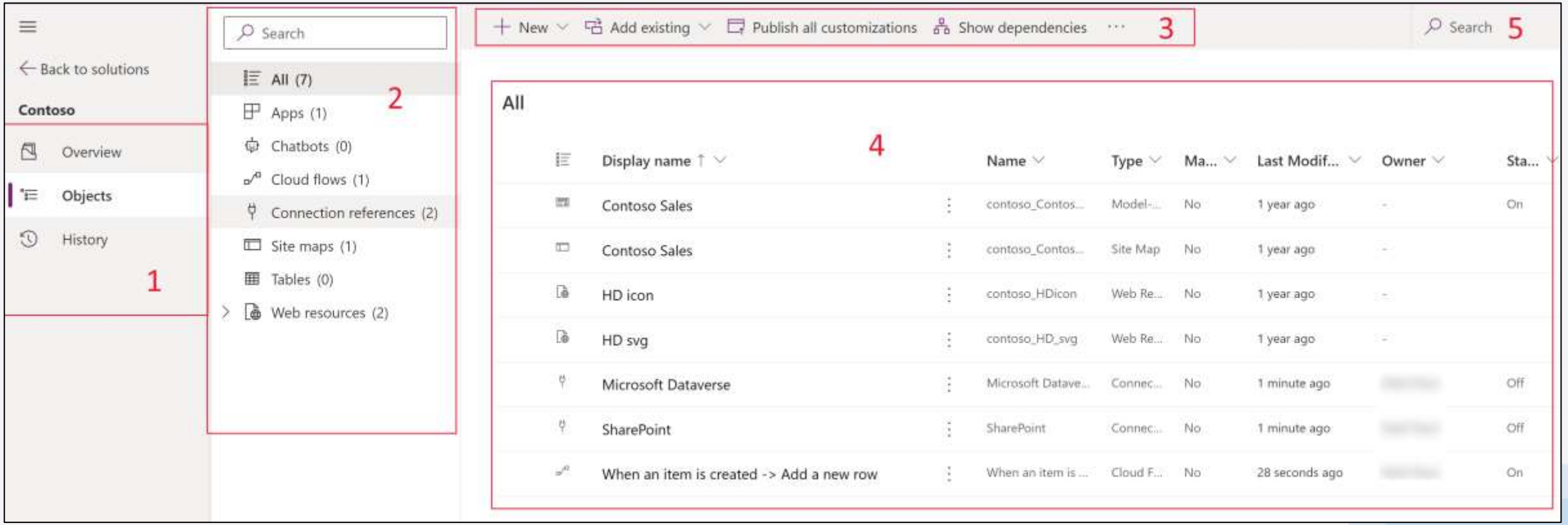


Solutions

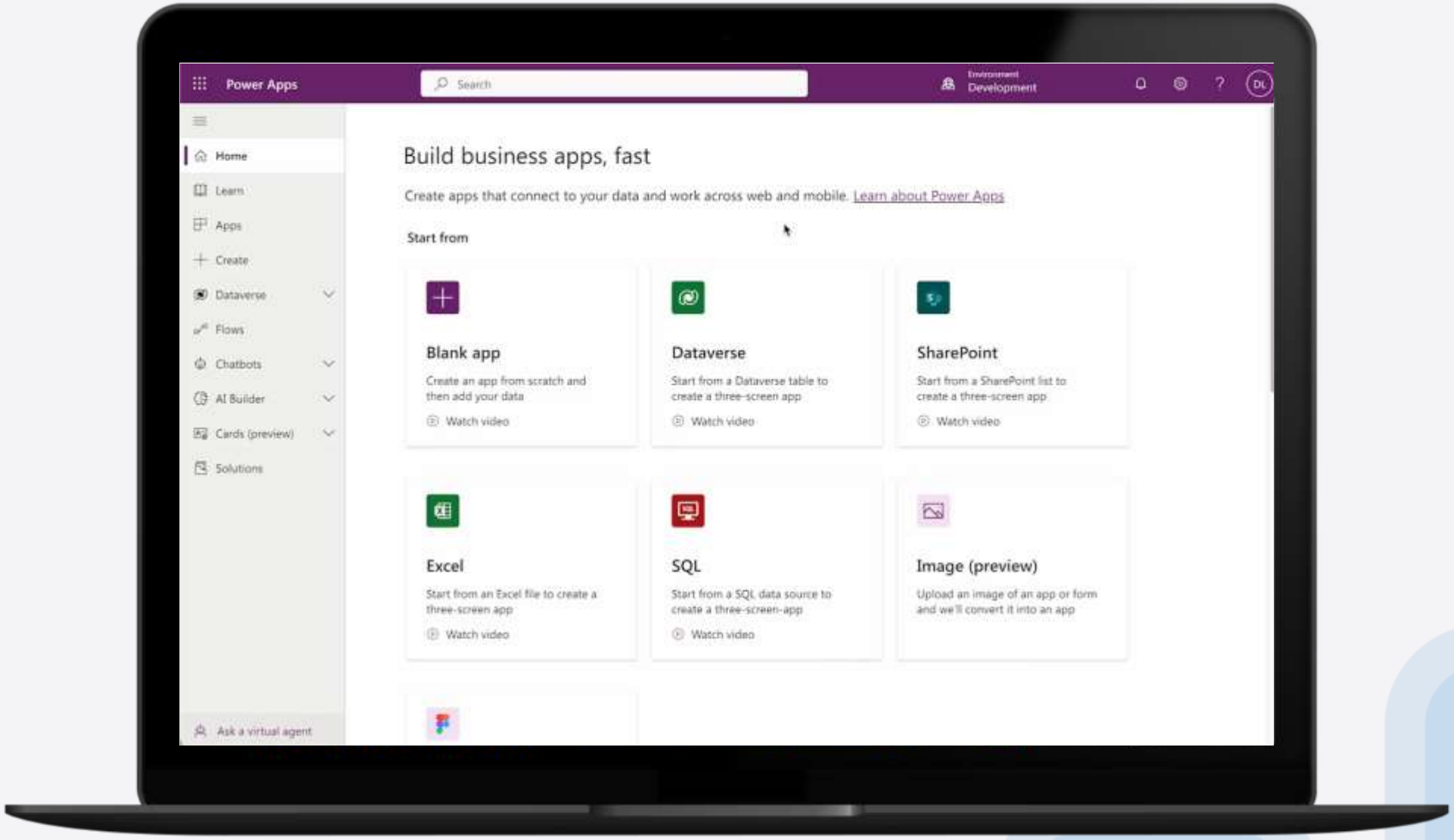
Solution Overview



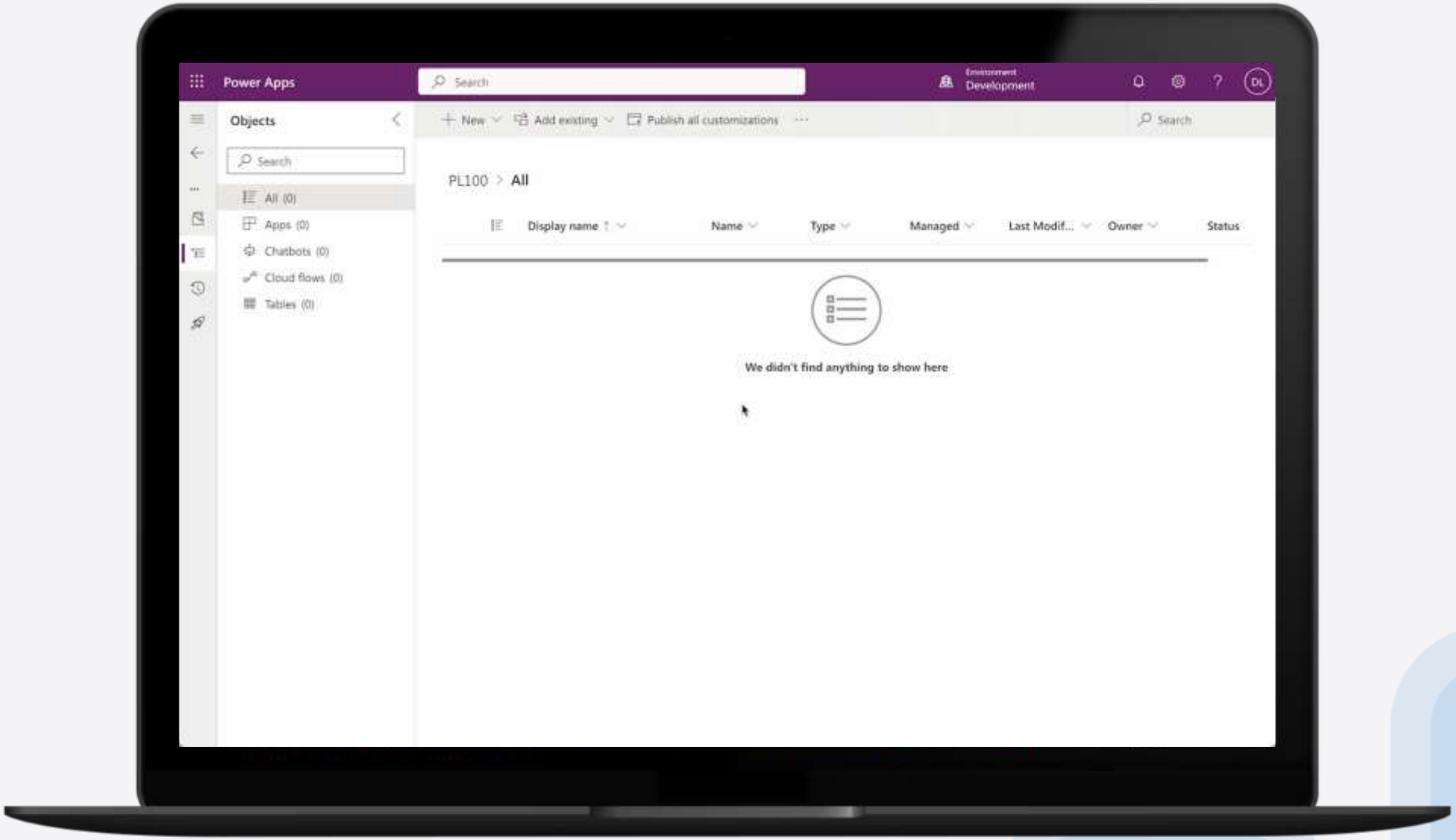
Solution View



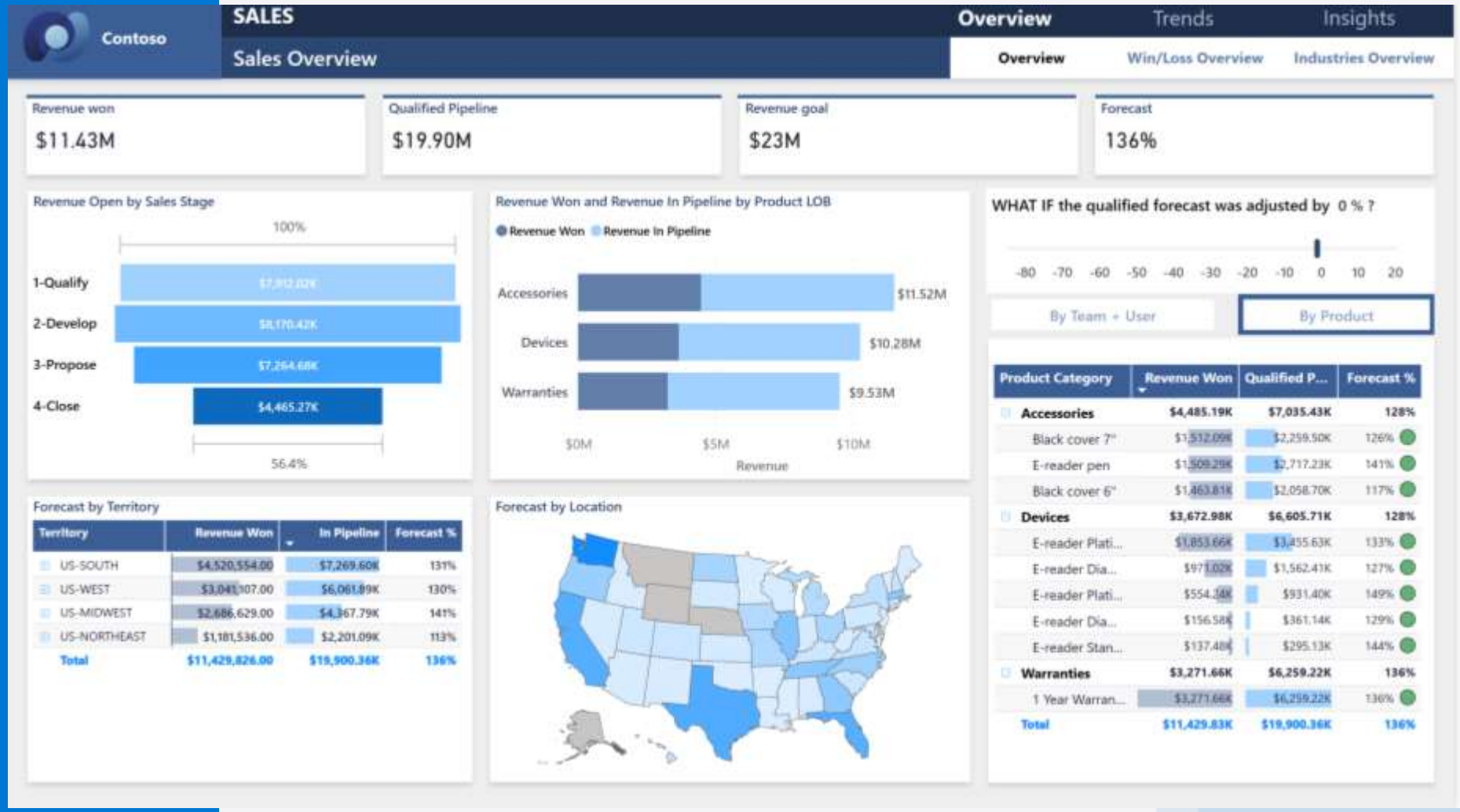
Create a new solution



Add an existing app / flow to a solution



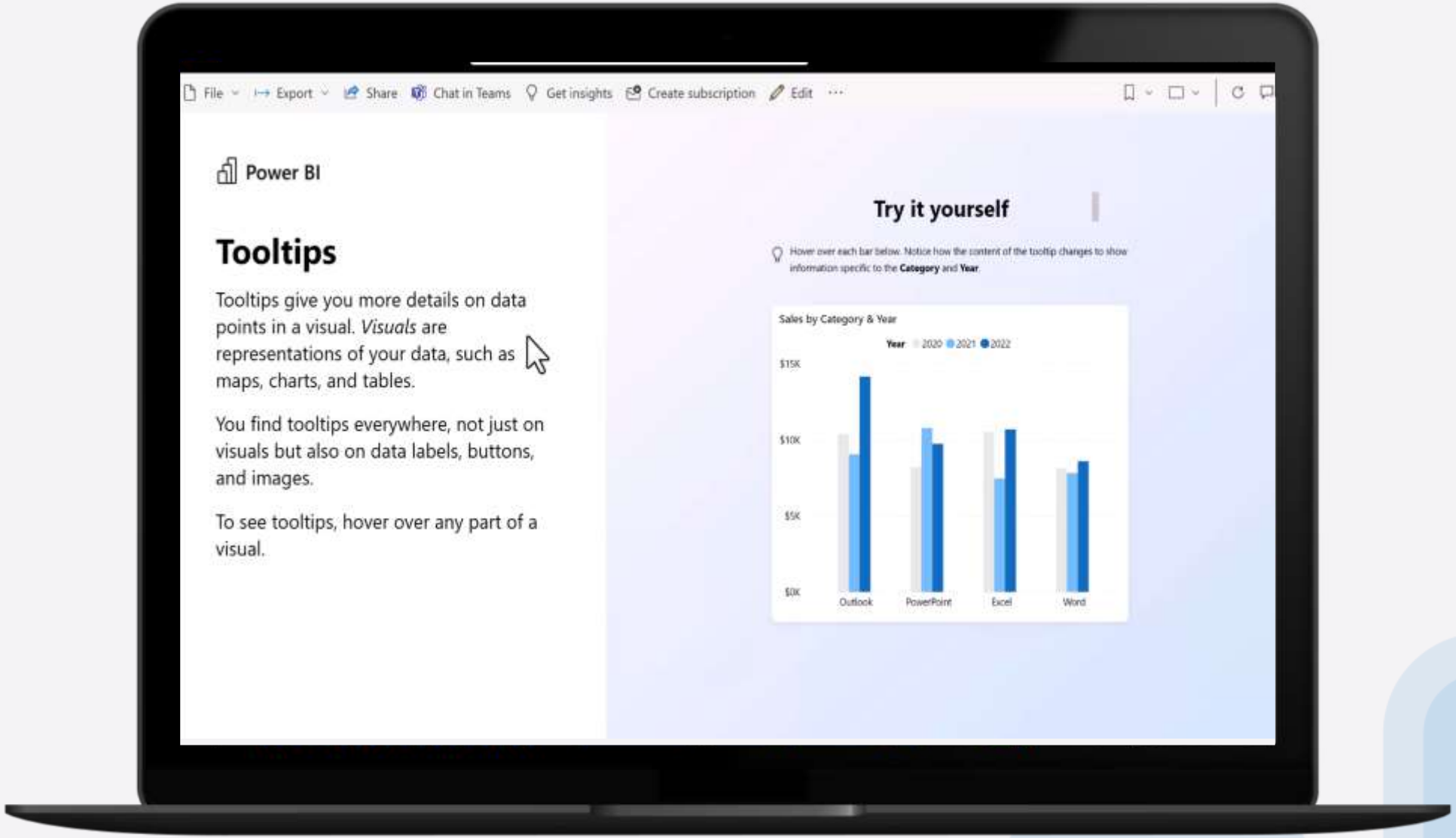
Analyze and Visualize Data



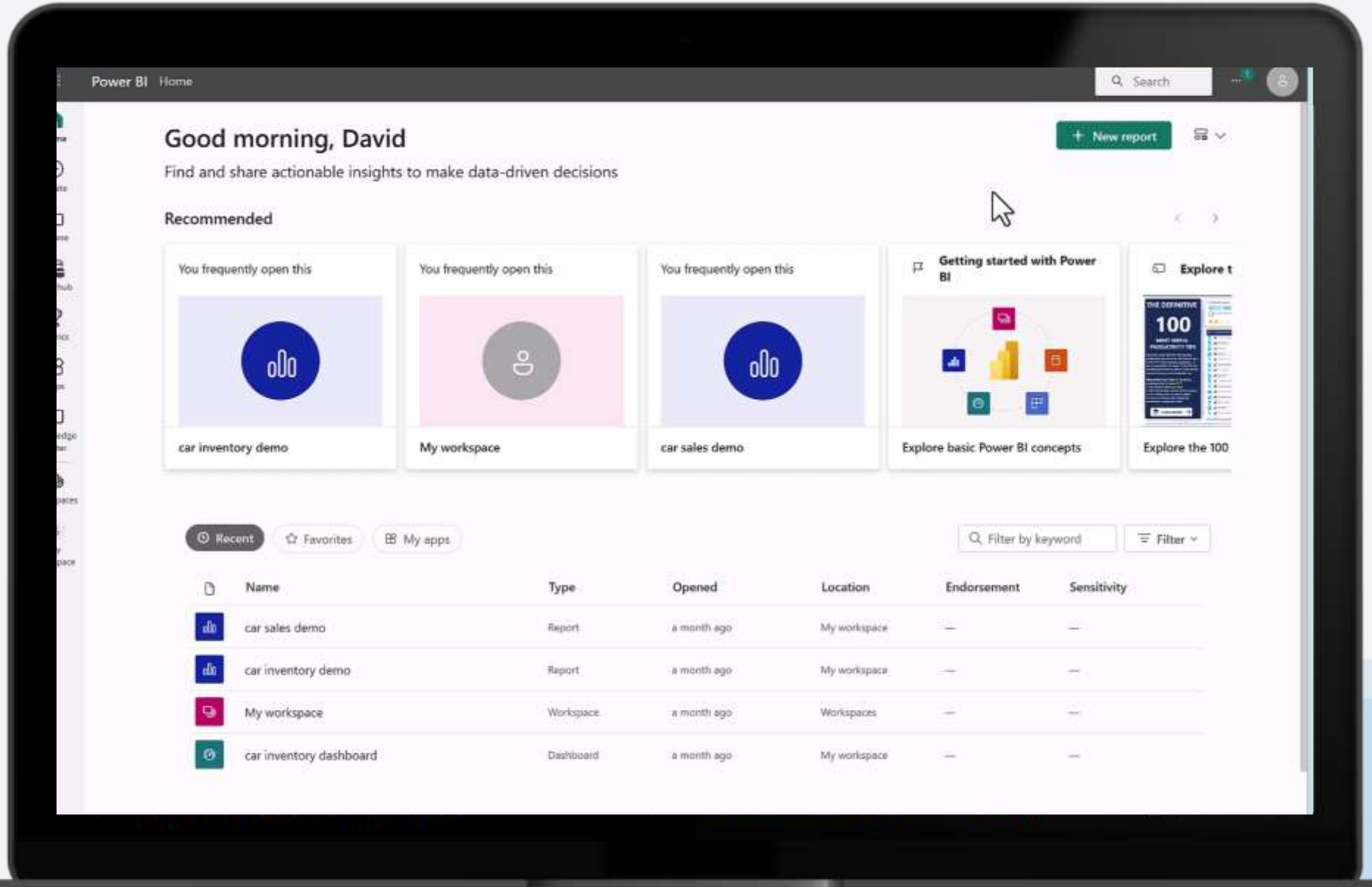
Create and consume Power BI dashboards

- Create and consume Power BI dashboards
- Create a simple report from an existing dataset by using Power BI Service
- Create Power BI dashboards from existing reports
- Share Power BI dashboards
- Embed Power BI dashboards and tiles in canvas apps and model-driven apps

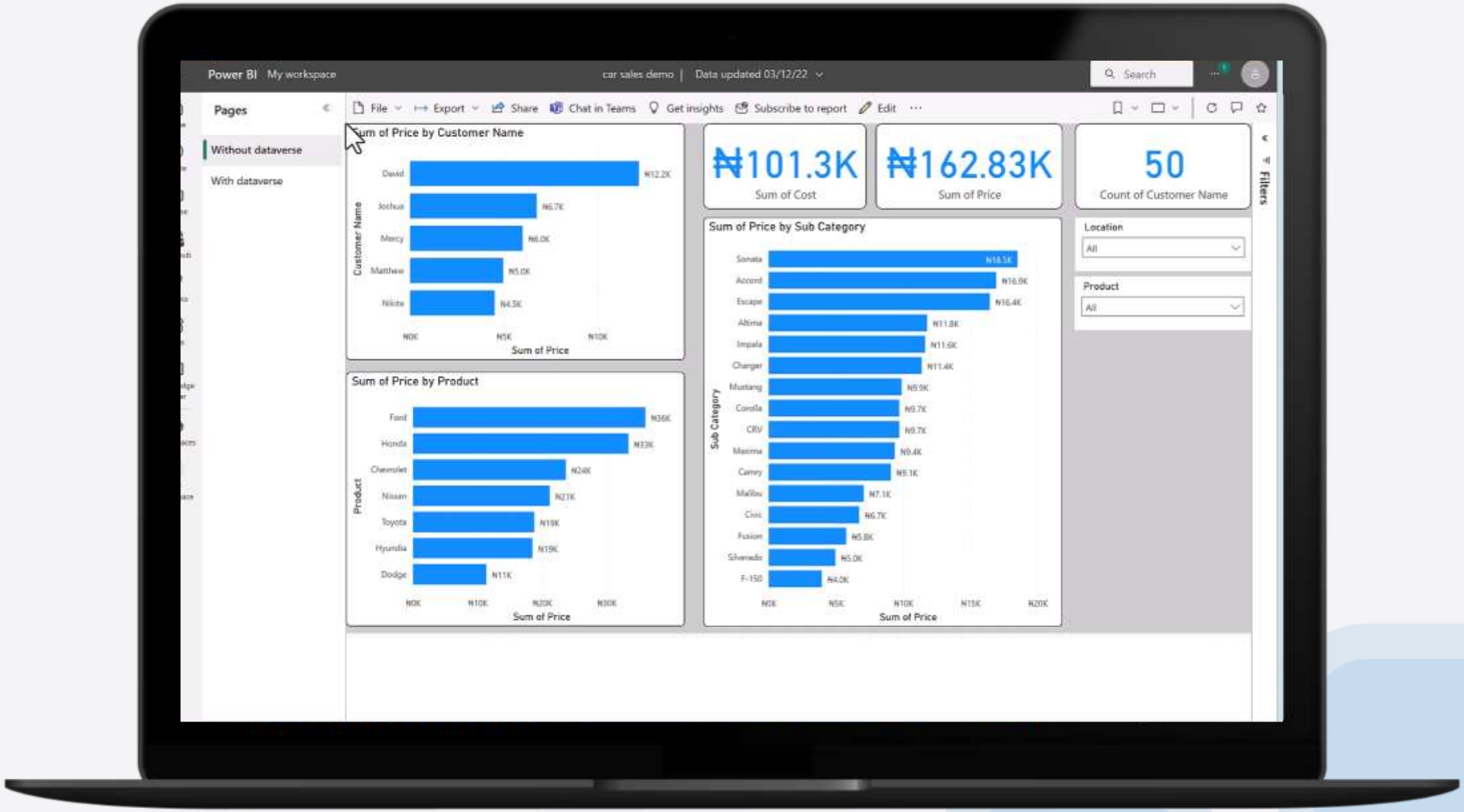
Create and consume Power BI dashboards



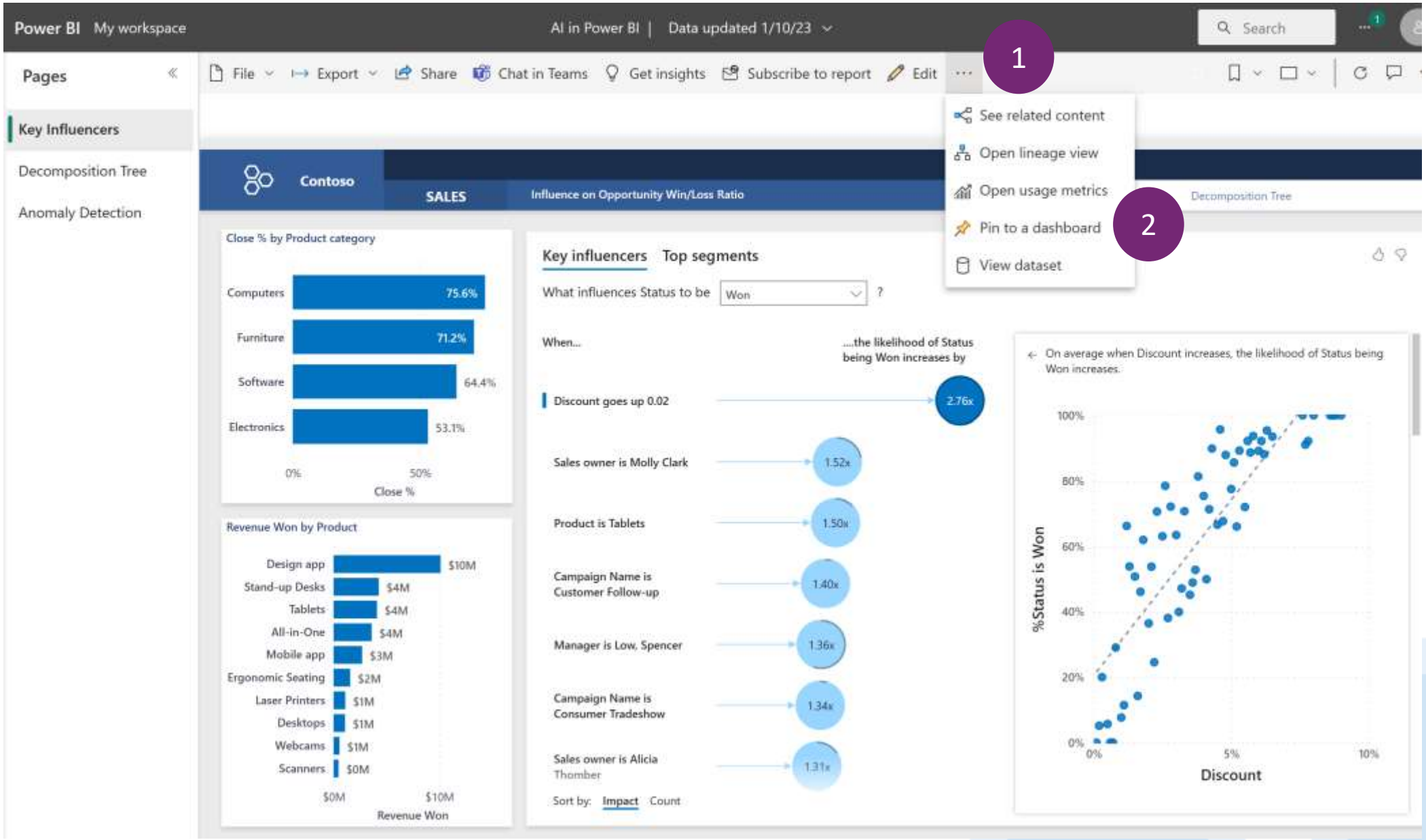
Create a simple report from an existing dataset by using Power BI Service



Edit existing reports within Power BI Service



Create Power BI dashboards from existing reports

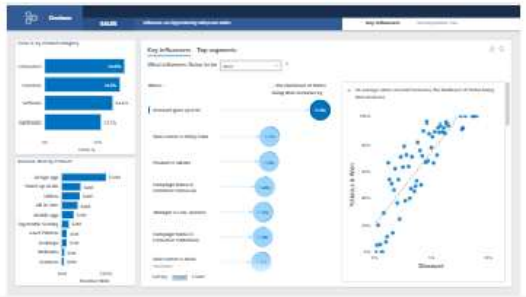


Create Power BI dashboards from existing reports

Preview: Last saved state

AI in Power BI

KEY INFLUENCERS



Pin to dashboard

Select an existing dashboard or create a new one.

Where would you like to pin to?

- ○ Existing dashboard
- ◉ New dashboard

1

Dashboard name

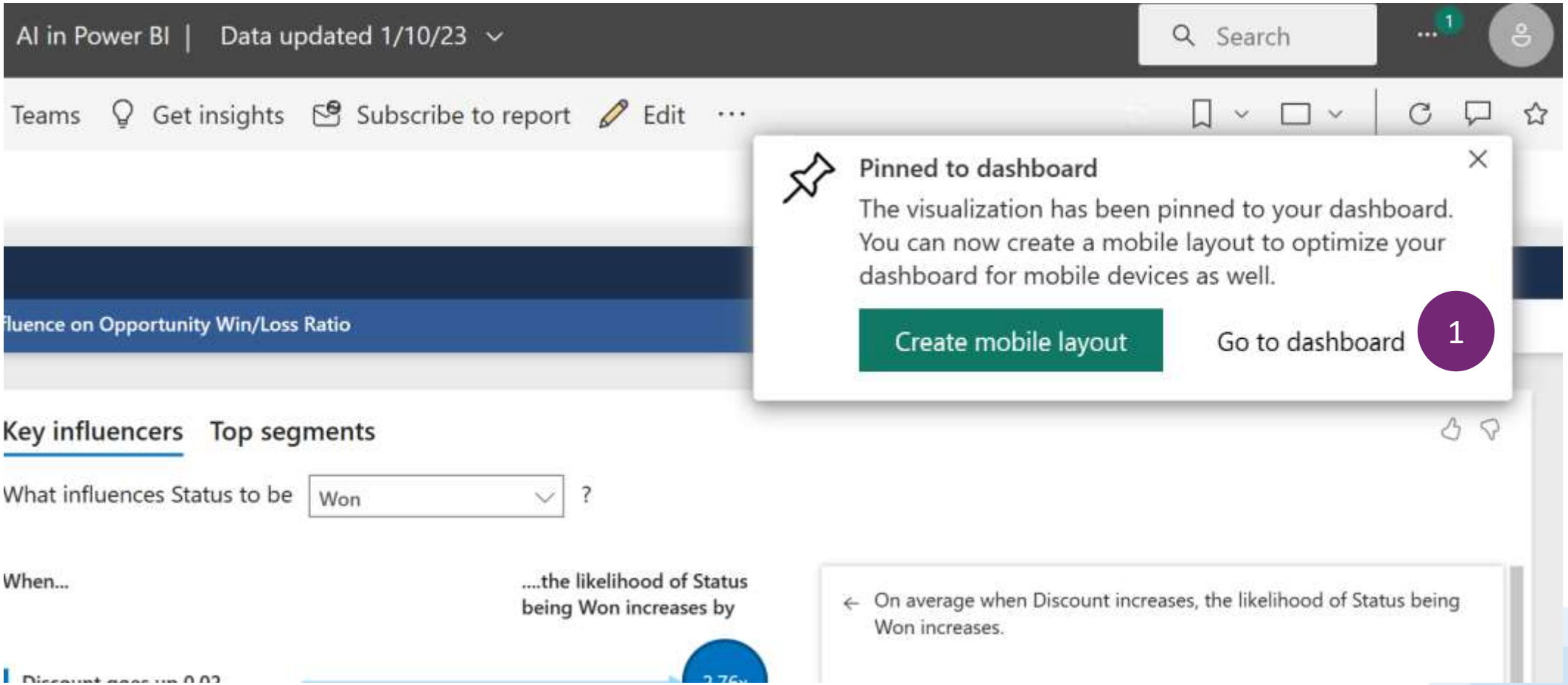
dashboard1

2

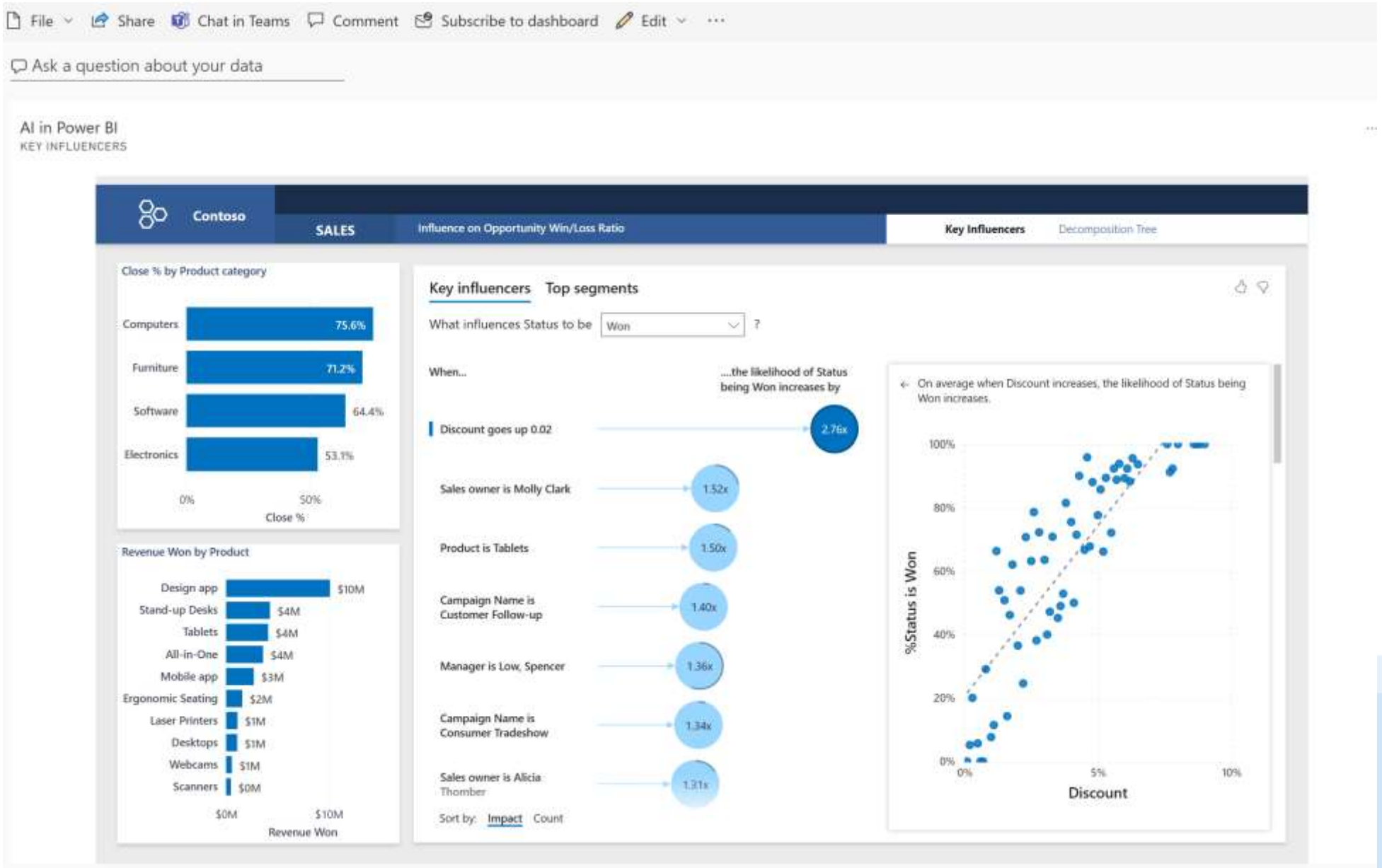
ⓘ Pin live page enables changes to reports to appear in the dashboard tile when the page is refreshed.

3 Pin live Cancel

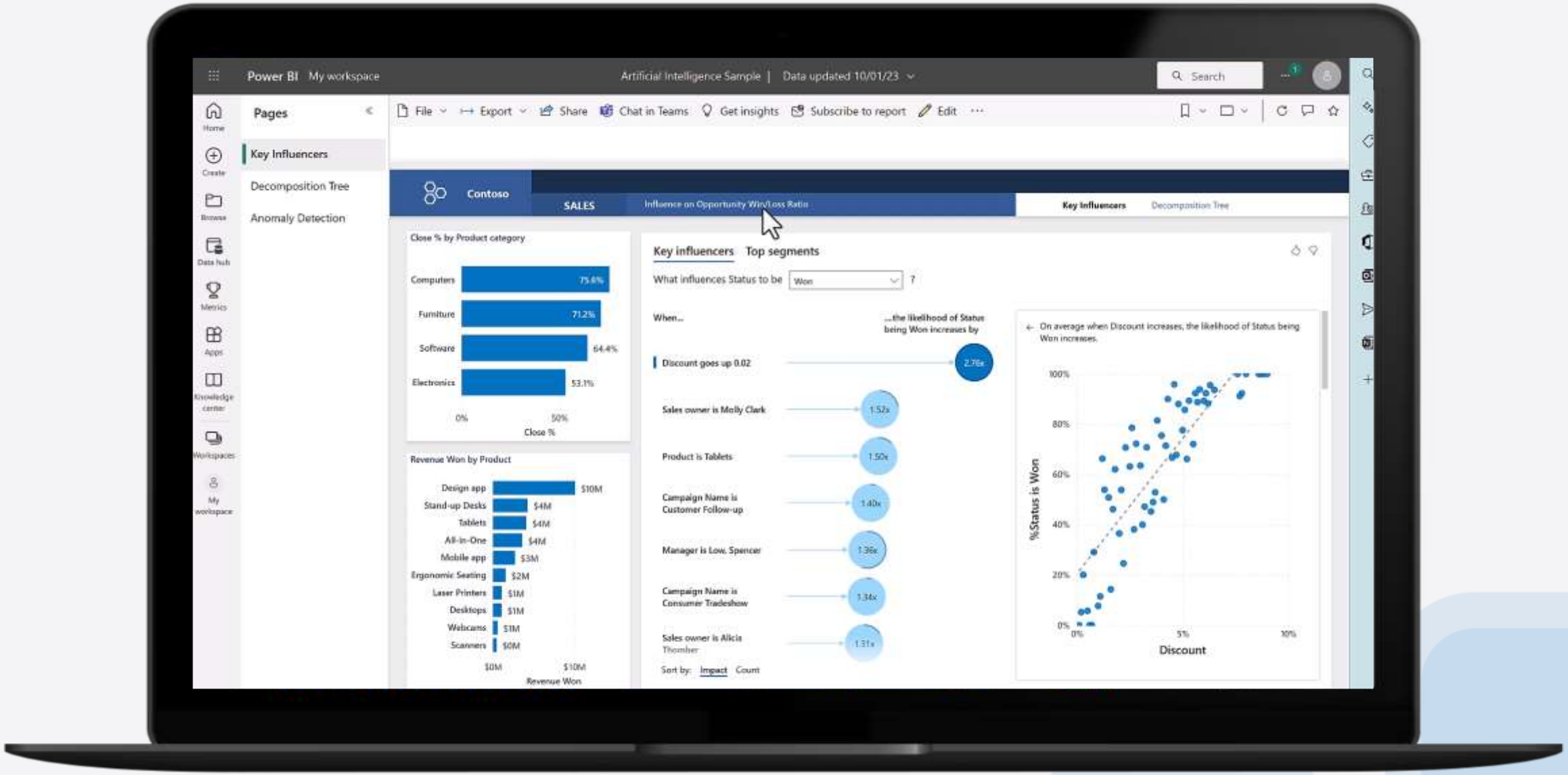
Create Power BI dashboards from existing reports



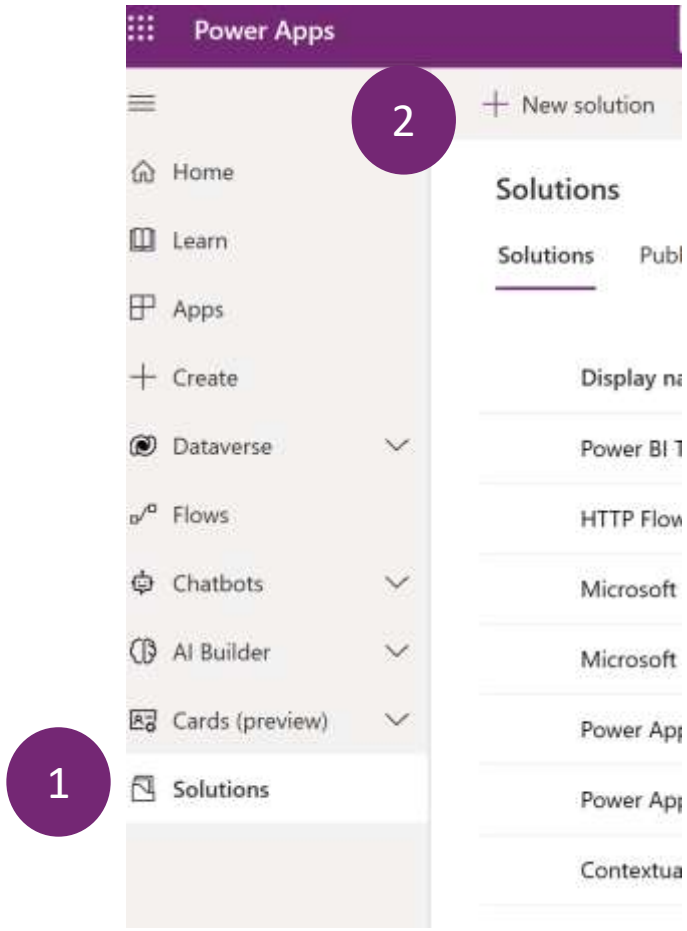
Create Power BI dashboards from existing reports

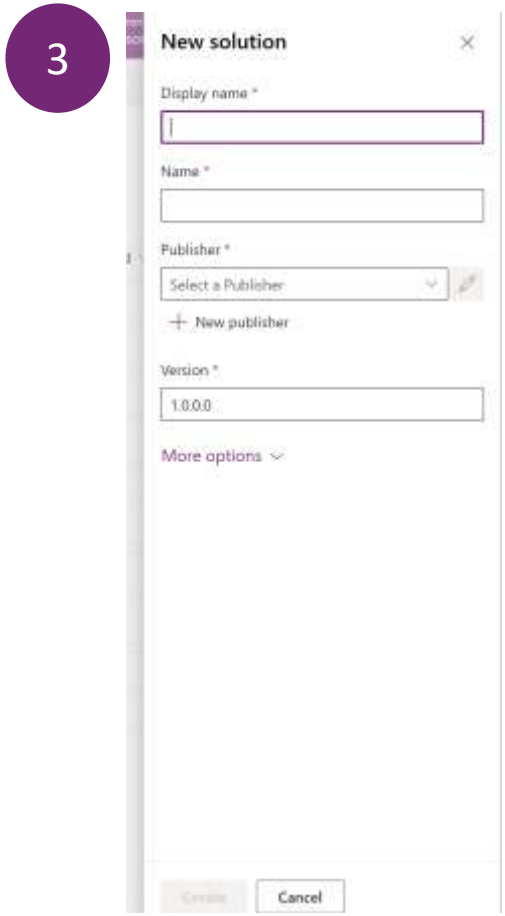


Share Power BI dashboards

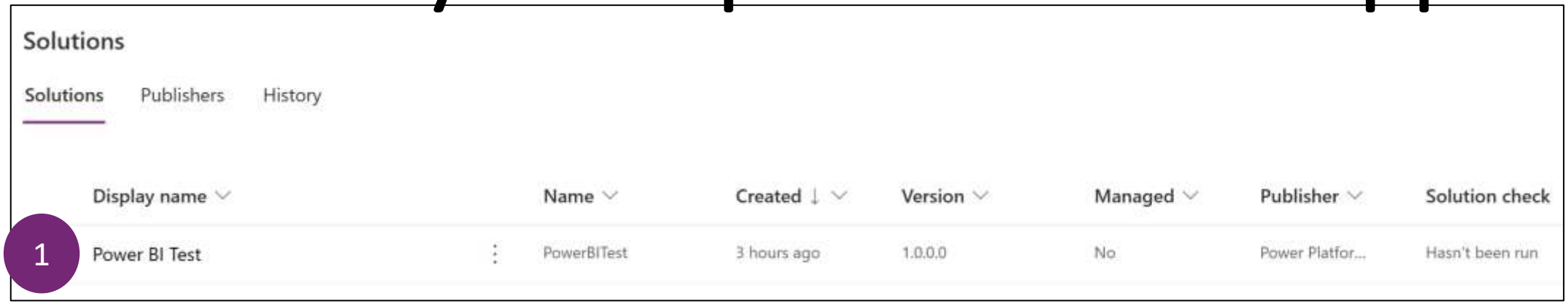


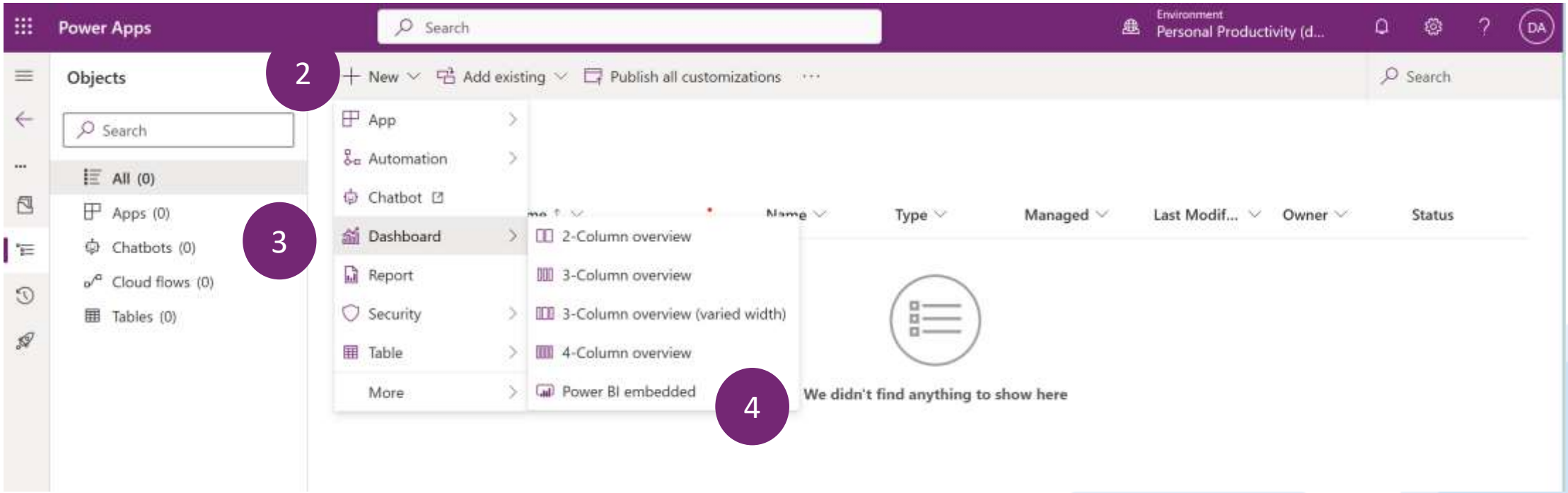
Embed your report in Power Apps



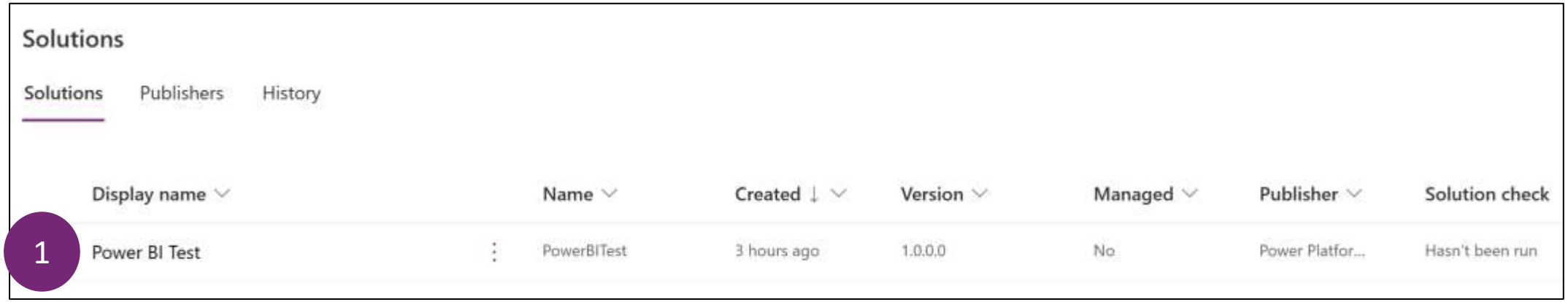


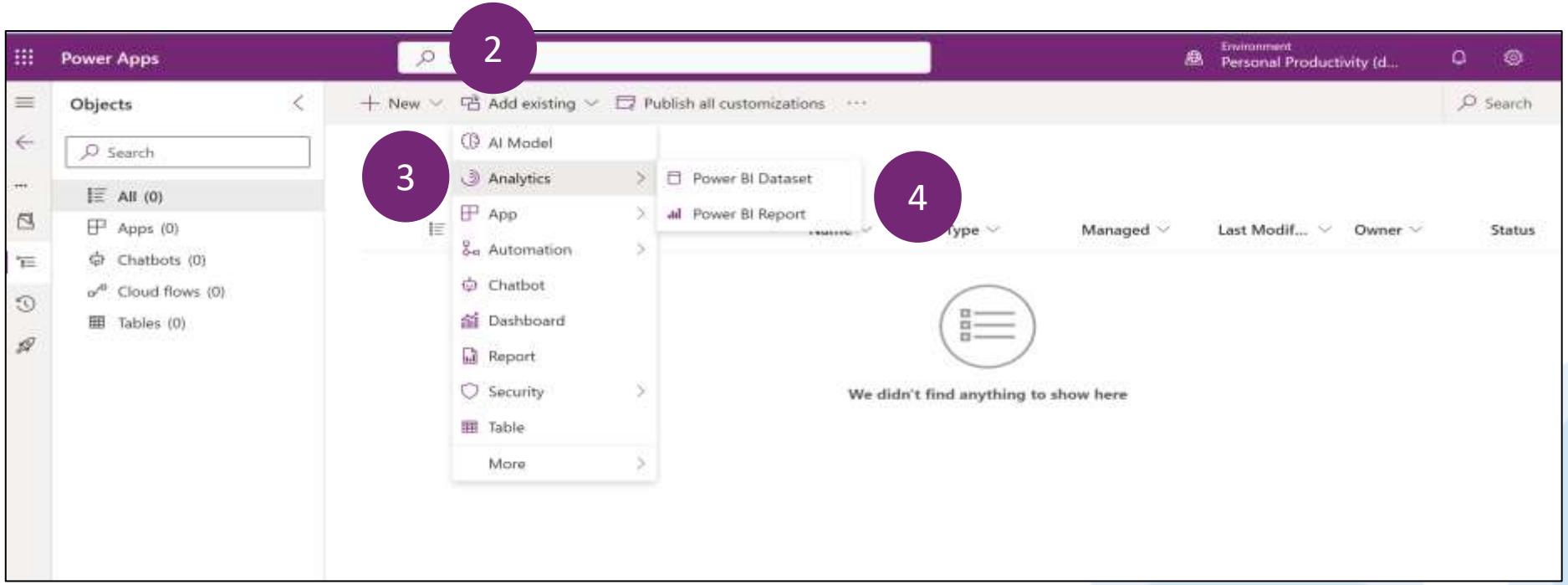
Embed your report in Power Apps





Embed your report in Power Apps





Resources

Power BI

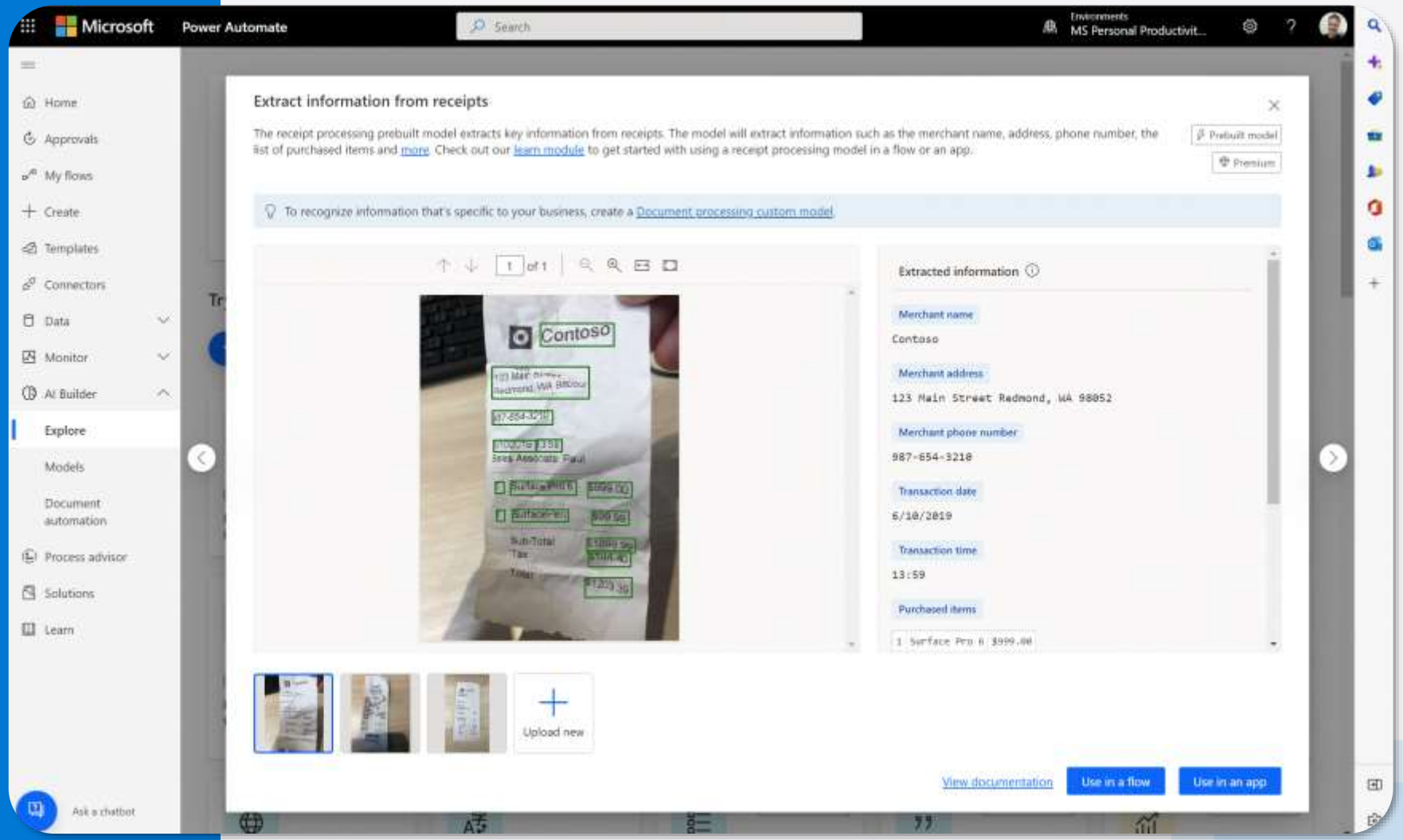
https://aka.ms/PL100/PowerBI

https://aka.ms/PL100/PowerBIDesktop

https://aka.ms/PL100/PowerBIDataverse

https://aka.ms/PL100/ReportInPowerApps

AI Builder


Microsoft
Power Automate
Search
Environments
MS Personal Productivit...
Home
Approvals
My flows
Create
Templates
Connectors
Data
Monitor
AI Builder
Explore
Models
Document automation
Process advisor
Solutions
Learn
Ask a chatbot
Extract information from receipts
The receipt processing prebuilt model extracts key information from receipts. The model will extract information such as the merchant name, address, phone number, the list of purchased items and more. Check out our learn module to get started with using a receipt processing model in a flow or an app.
Prebuilt model
Premium
To recognize information that's specific to your business, create a Document processing custom model
1 of 1
Contoso
Extracted information
Merchant name
Contoso
Merchant address
123 Main Street Redmond, WA 98052
Merchant phone number
987-654-3210
Transaction date
6/10/2019
Transaction time
13:59
Purchased items
1 Surface Pro 6 $999.00
Upload new
View documentation
Use in a flow
Use in an app

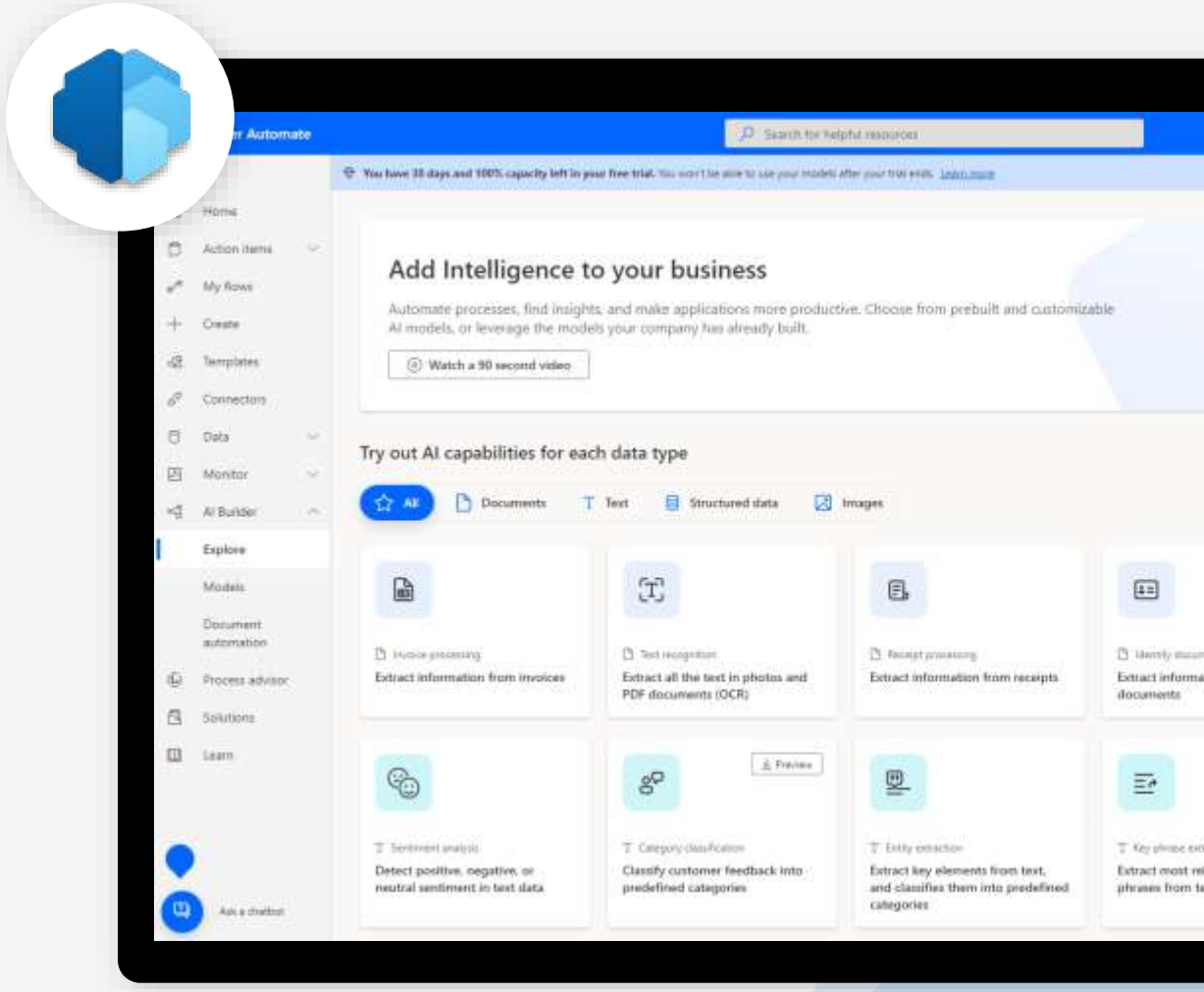
Add intelligence to your business with AI Builder

Use **pre-built** AI models or build **custom models** for your business need in minutes without code or data scientists

Govern the AI model lifecycle for your enterprise

Industry leading **enterprise grade AI Technology** backed by Azure AI

Integrated in the Power Platform so makers can use AI to **build more intelligent apps and workflows.**

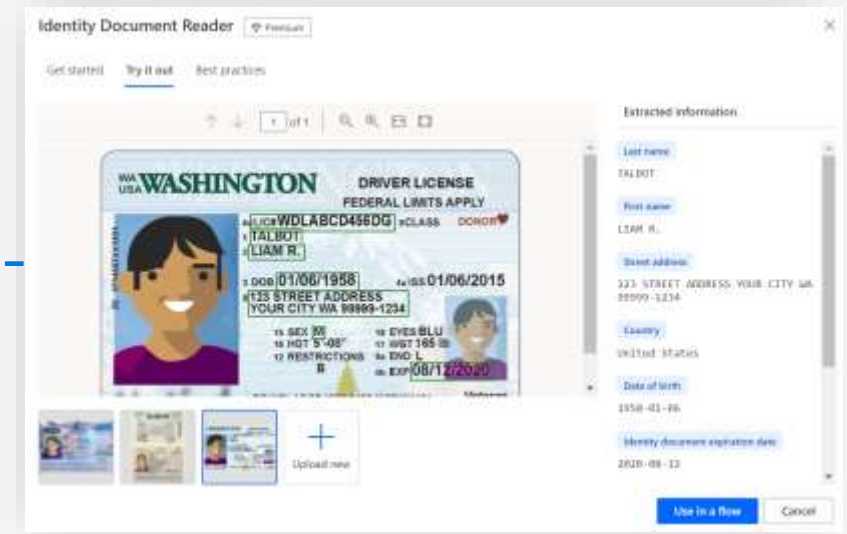


Custom vs. Prebuilt AI Models

Pre-built AI Models are ready to use out of the box and don't require any training.

You can invoke them directly from Power Automate or Power Apps to build intelligent apps and workflows.

Ex: Process an ID document

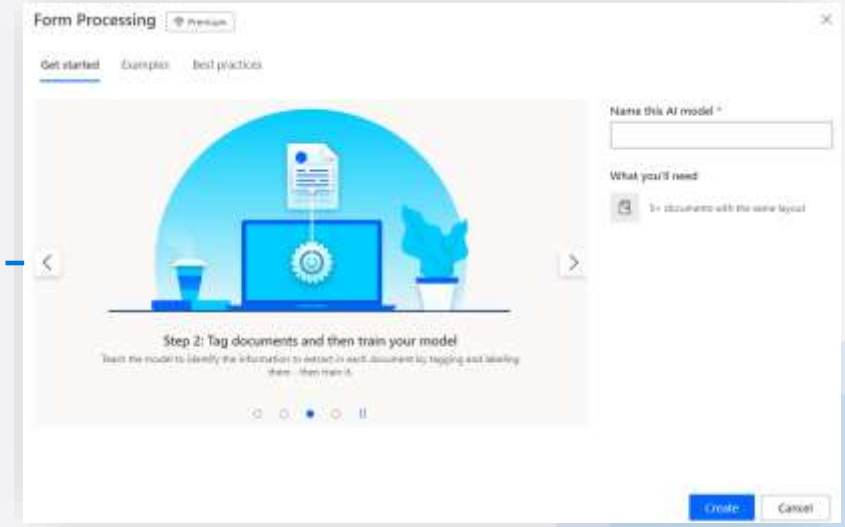


Custom AI models require training to be able to understand company specific information.

Before using them, makers need to train the model for a specific need, by submitting historical data and teaching the model how to understand it.

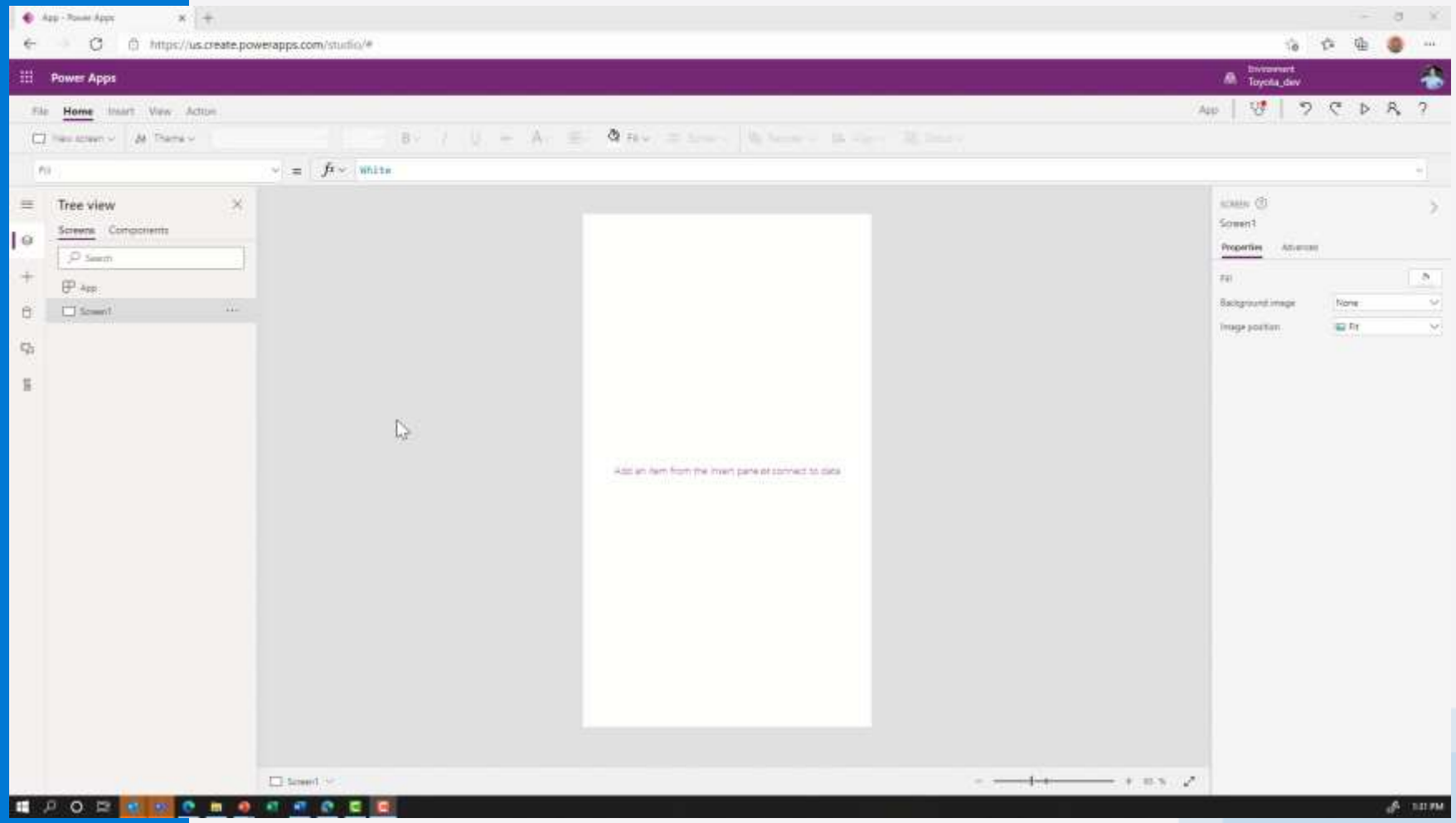
A no-code wizard guides the maker during this process.

Ex: Understand a specific company template to process purchase orders



Demo: Train and use AI Builder Models

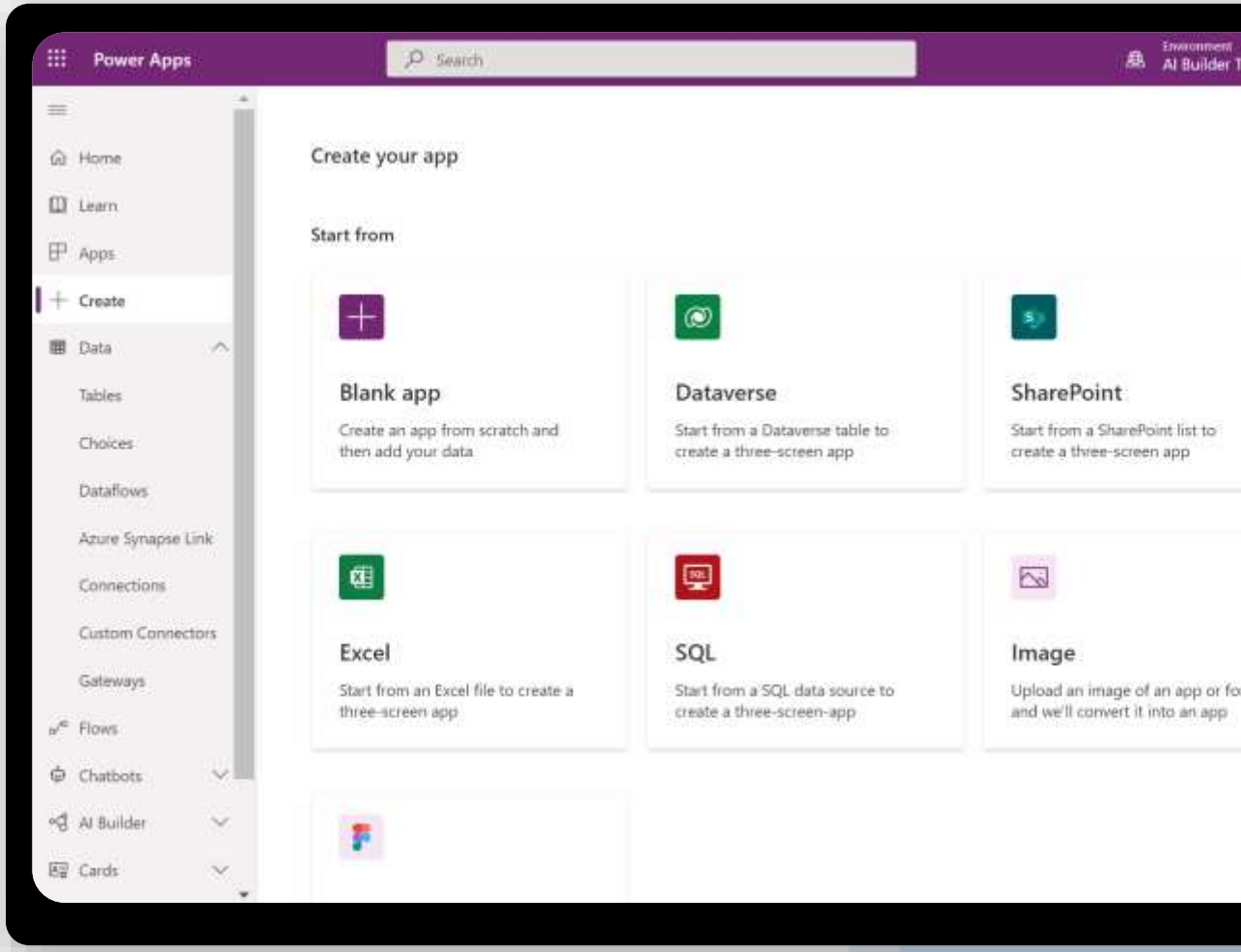
Power Apps


Power Apps
Tree view
Screens
Components
Screen1
Properties

Power Apps

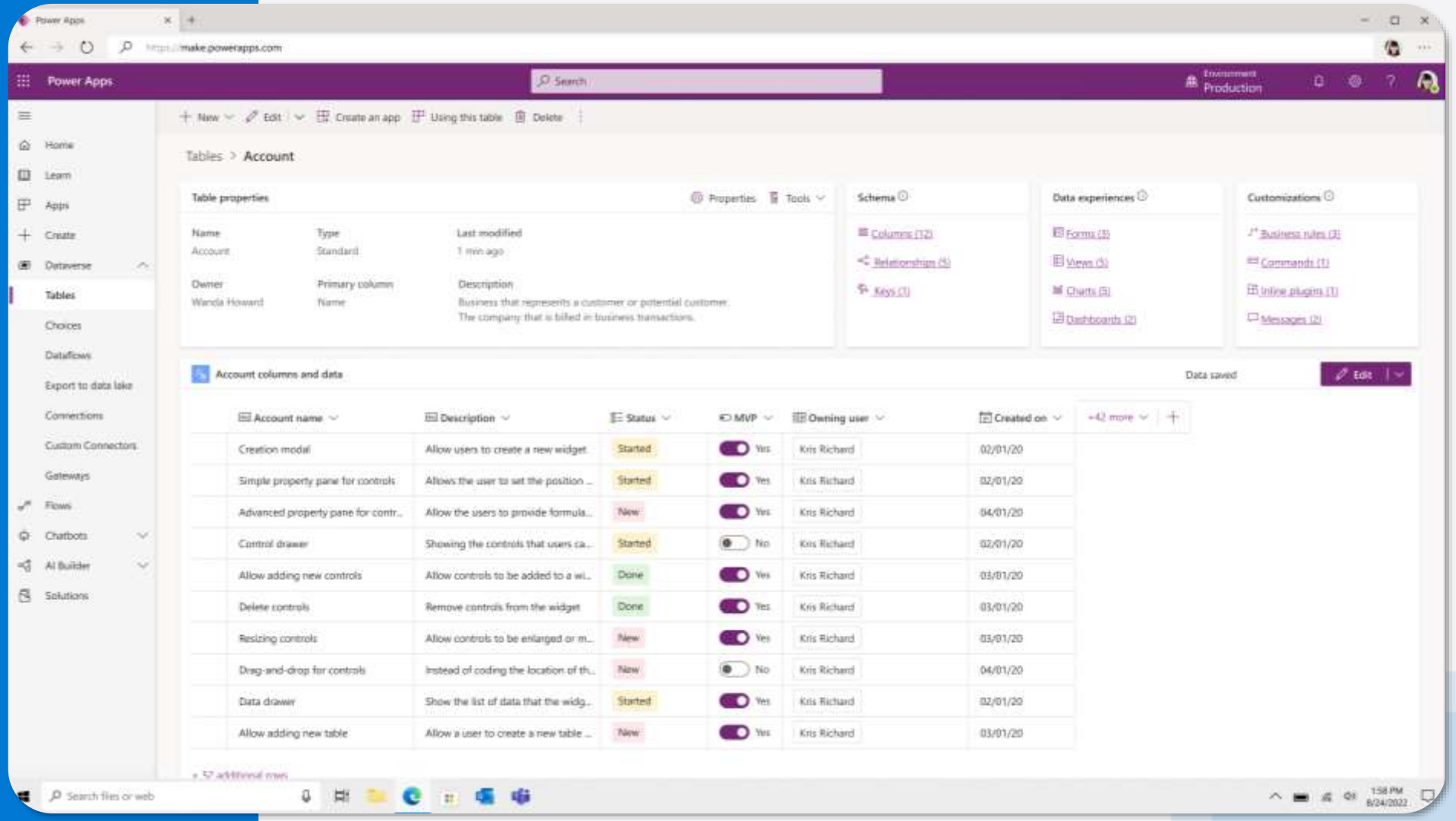
Empower everyone to create apps

- Use Power Apps to rapidly create web and mobile front ends using a drag and drop UI.
- Build once and deploy apps in one click across iOS, Android, Windows, and Web.
- Customize every detail of an app to optimize for specific tasks, roles, and industries.
- Enable pro developers to create re-usable components to share with citizen developers.
- Connect to data using pre-built or custom connectors.



Demo: Create and Manage Canvas Apps

Dataverse


Power Apps
make.powerapps.com
Power Apps
Search
Environment
Production
New
Edit
Create an app
Using this table
Delete
Home
Learn
Apps
Create
Dataverse
Tables
Choices
Dataflows
Export to data lake
Connections
Custom Connectors
Gateways
Flows
Chatbots
AI Builder
Solutions
Tables > Account
Table properties
Properties
Tools
Name
Account
Type
Standard
Last modified
1 min ago
Owner
Wanda Howard
Primary column
Name
Description
Business that represents a customer or potential customer.
The company that is billed in business transactions.
Schema
Columns (72)
Relationships (4)
Keys (1)
Data experiences
Forms (3)
Views (5)
Charts (5)
Dashboards (2)
Customizations
Business rules (3)
Commands (1)
Inline plugins (1)
Messages (2)
Account columns and data
Data saved
Edit
Account name
Description
Status
MVP
Owning user
Created on
+42 more
Creation modal
Allow users to create a new widget
Started
Yes
Kris Richard
02/01/20
Simple property pane for controls
Allows the user to set the position ...
Started
Yes
Kris Richard
02/01/20
Advanced property pane for contr...
Allow the users to provide formula...
New
Yes
Kris Richard
04/01/20
Control drawer
Showing the controls that users ca...
Started
No
Kris Richard
02/01/20
Allow adding new controls
Allow controls to be added to a wi...
Done
Yes
Kris Richard
03/01/20
Delete controls
Remove controls from the widget
Done
Yes
Kris Richard
03/01/20
Resizing controls
Allow controls to be enlarged or m...
New
Yes
Kris Richard
03/01/20
Drag-and-drop for controls
Instead of coding the location of th...
New
No
Kris Richard
04/01/20
Data drawer
Show the list of data that the widg...
Started
Yes
Kris Richard
02/01/20
Allow adding new table
Allow a user to create a new table ...
New
Yes
Kris Richard
03/01/20
Search files or web
1:58 PM
8/24/2022

What is Dataverse?

Dataverse **easily structures** a **variety of data** and **business logic** to support **interconnected applications and processes in a secure and compliant** manner

Why Dataverse?

Data is responsible for **application performance** and can inform deep insights on **user behavior**.

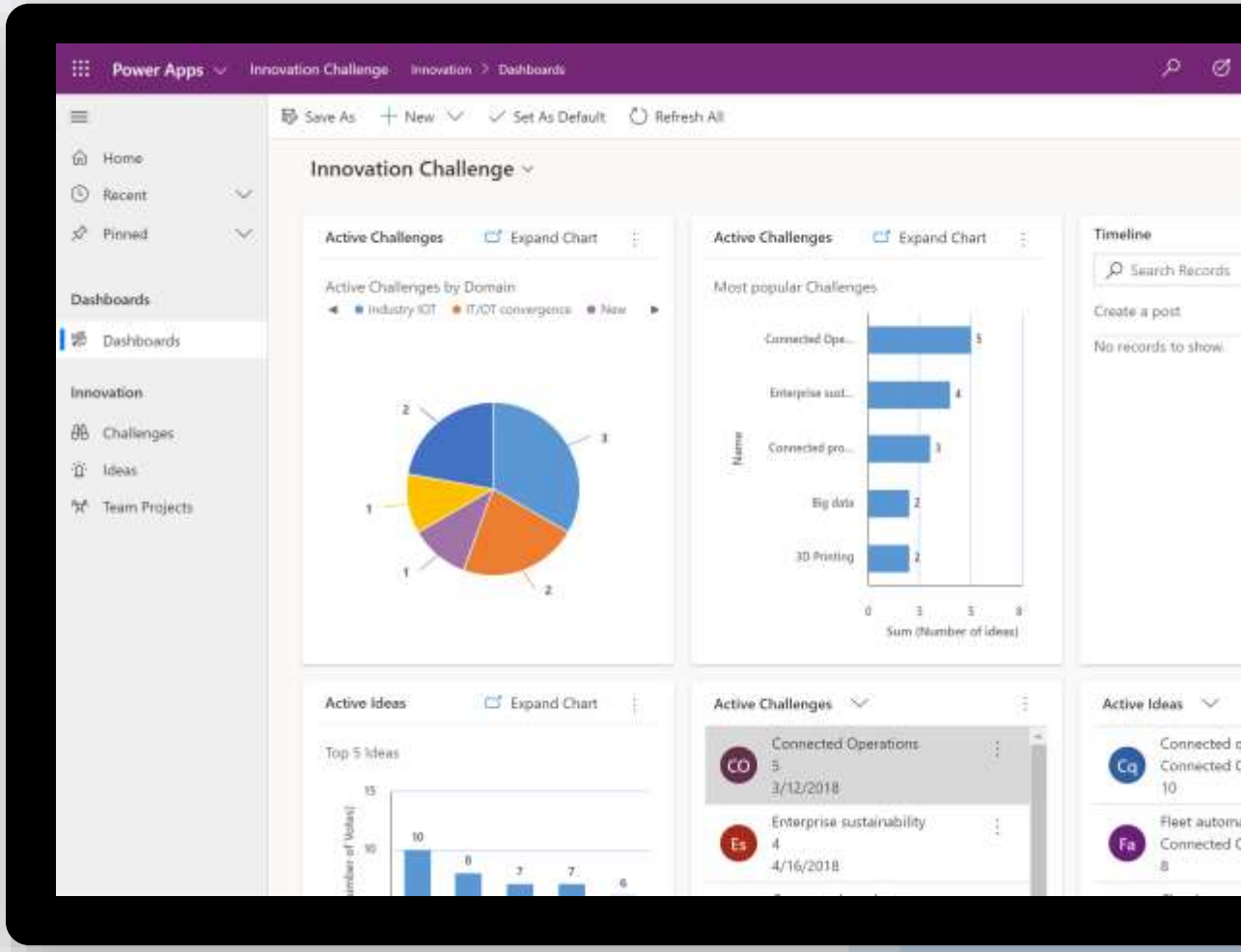
Dataverse offers **powerful, scalable solutions** for your data, leveraging the security and connectivity across Microsoft and the Power Platform so that you can **fully control, automate, and strengthen your business**.

Demo: Configure Microsoft Dataverse

Model-Driven Apps

Empower everyone to create apps

- Leverage your data model, relationships, and business processes to automatically generate immersive, responsive applications
- Create apps around forms and processes
- Design sophisticated table forms quickly
- Rich, responsive client experiences
- Enables easy reuse across multiple apps
- Easily add business rules and business process flows to model your business processes



Demo: Create and Manage Model-Driven Apps

Resources

AI Builder

https://aka.ms/PL100/AIBuilder

Canvas Apps

https://aka.ms/PL100/CanvasApps

https://aka.ms/PL100/CanvasAppsControls

https://aka.ms/PL100/CanvasAppsUI

https://aka.ms/PL100/CanvasAppsNavigation

Dataverse

https://aka.ms/PL100/DataverseTables

https://aka.ms/PL100/DataverseColumns

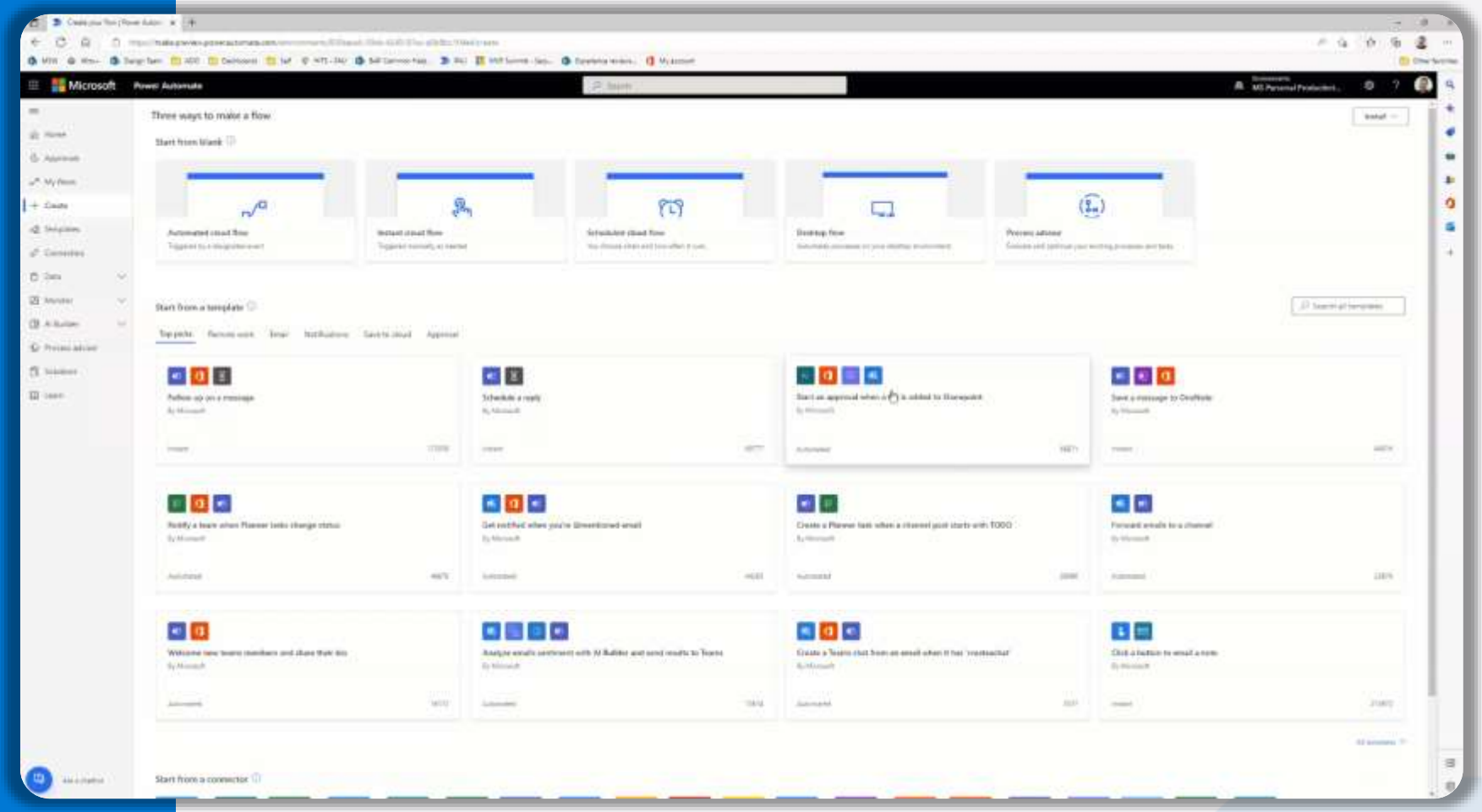
https://aka.ms/PL100/DataverseSecurityRoles

Model-Driven Apps

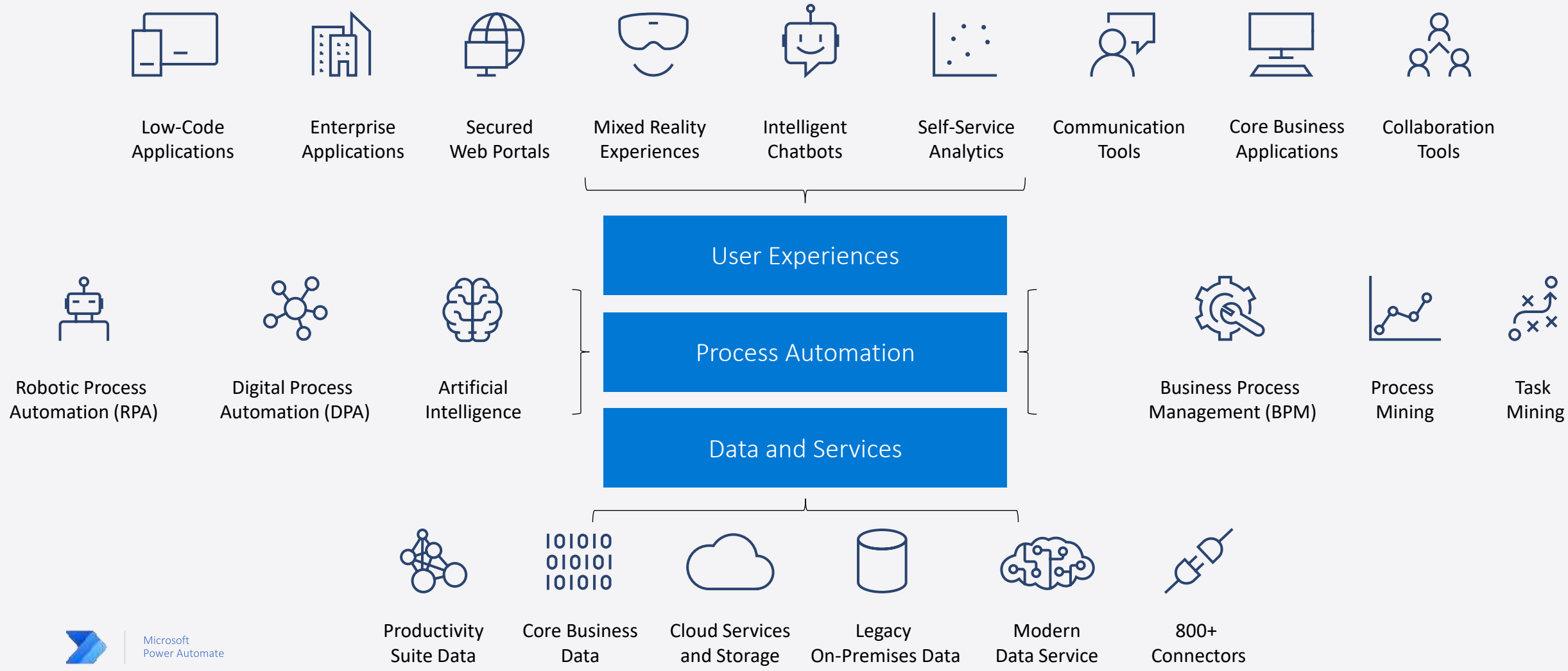
https://aka.ms/PL100/ModelDrivenApps

Power Automate

Power Automate

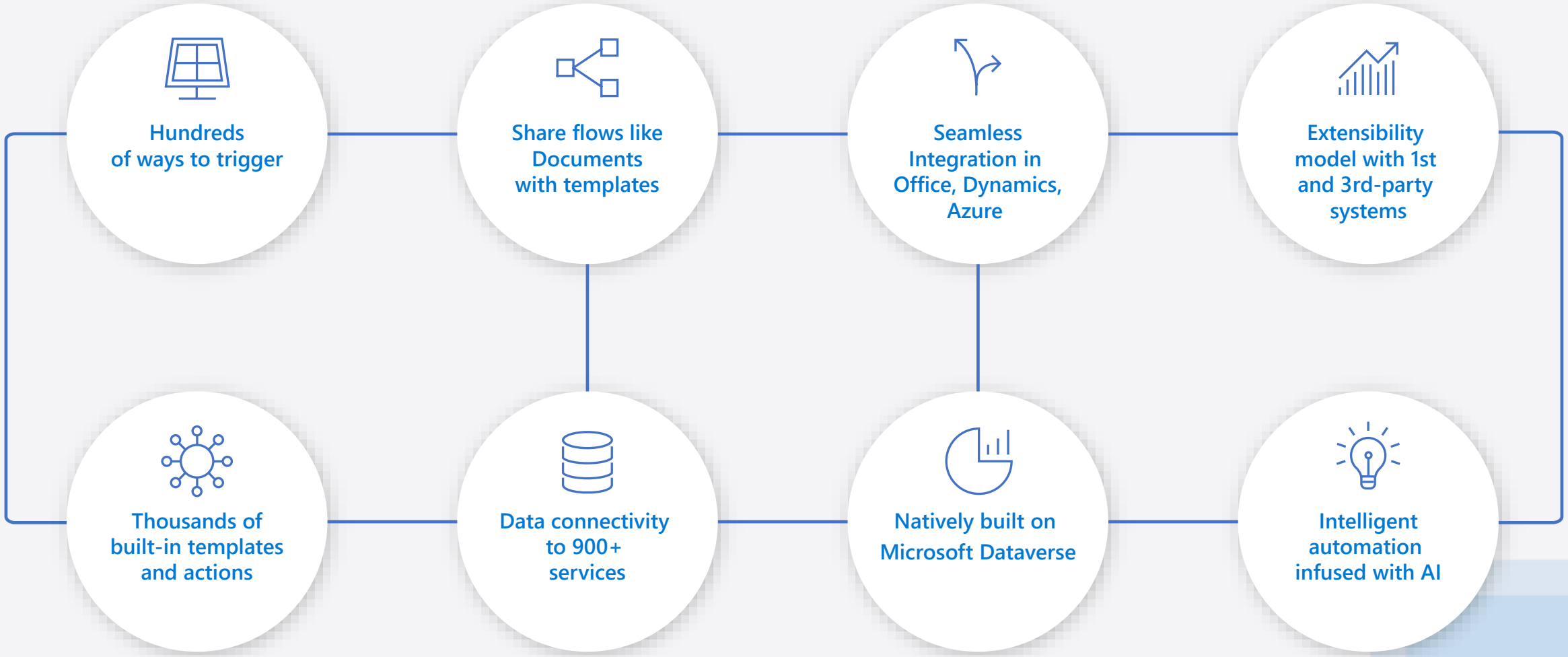


Hyper automation, all in one place

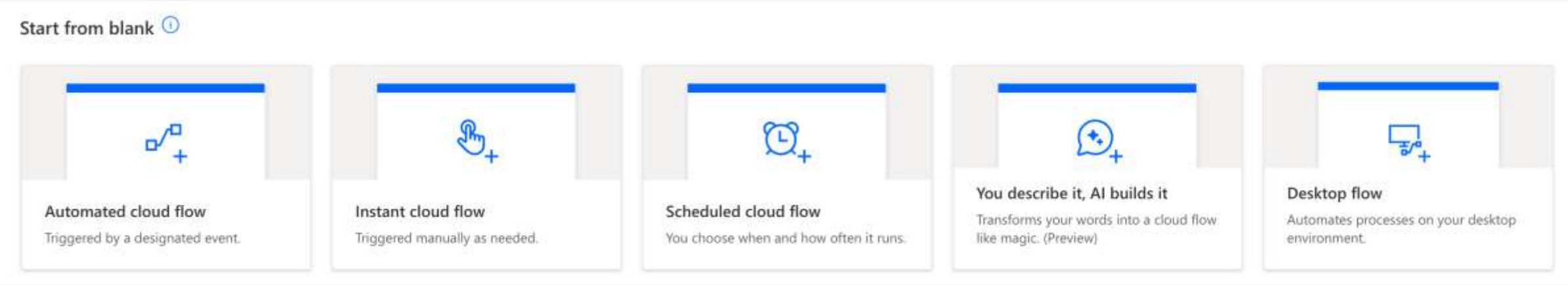


Microsoft Power Automate

Why Power Automate?



Create flows



Triggers and actions

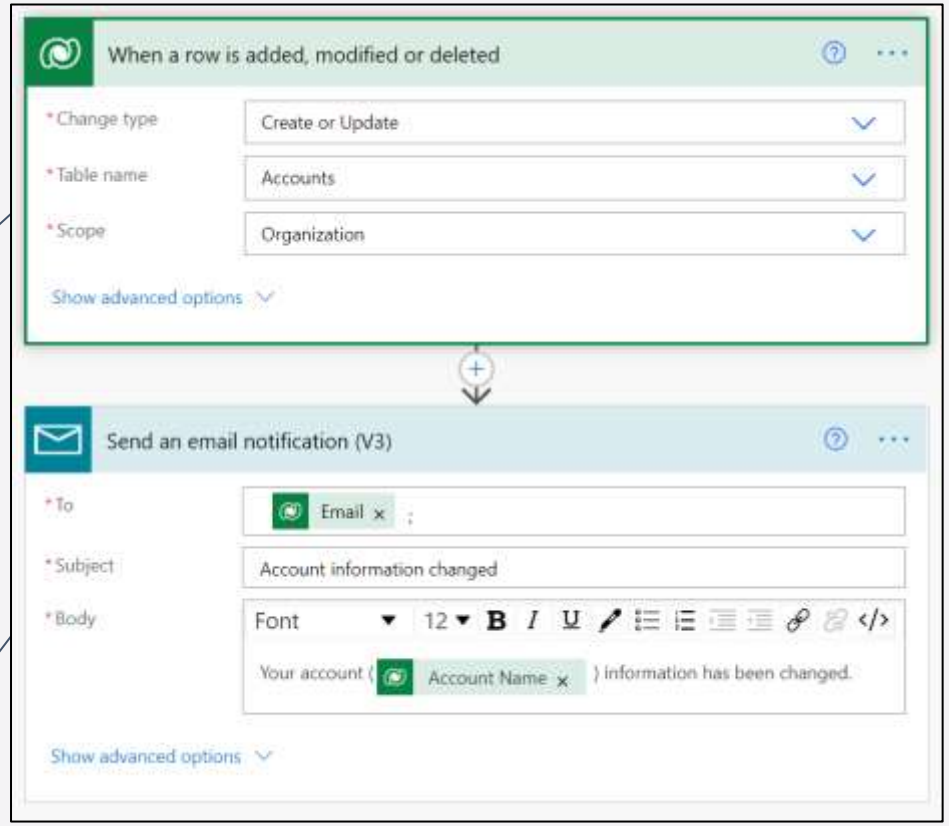
Example: Notification flow

Trigger–the event that kicks off the flow:

- Manual via button or Power Apps
- On a schedule
- On an event in the cloud

Actions–what the flow does

Uses data from the trigger

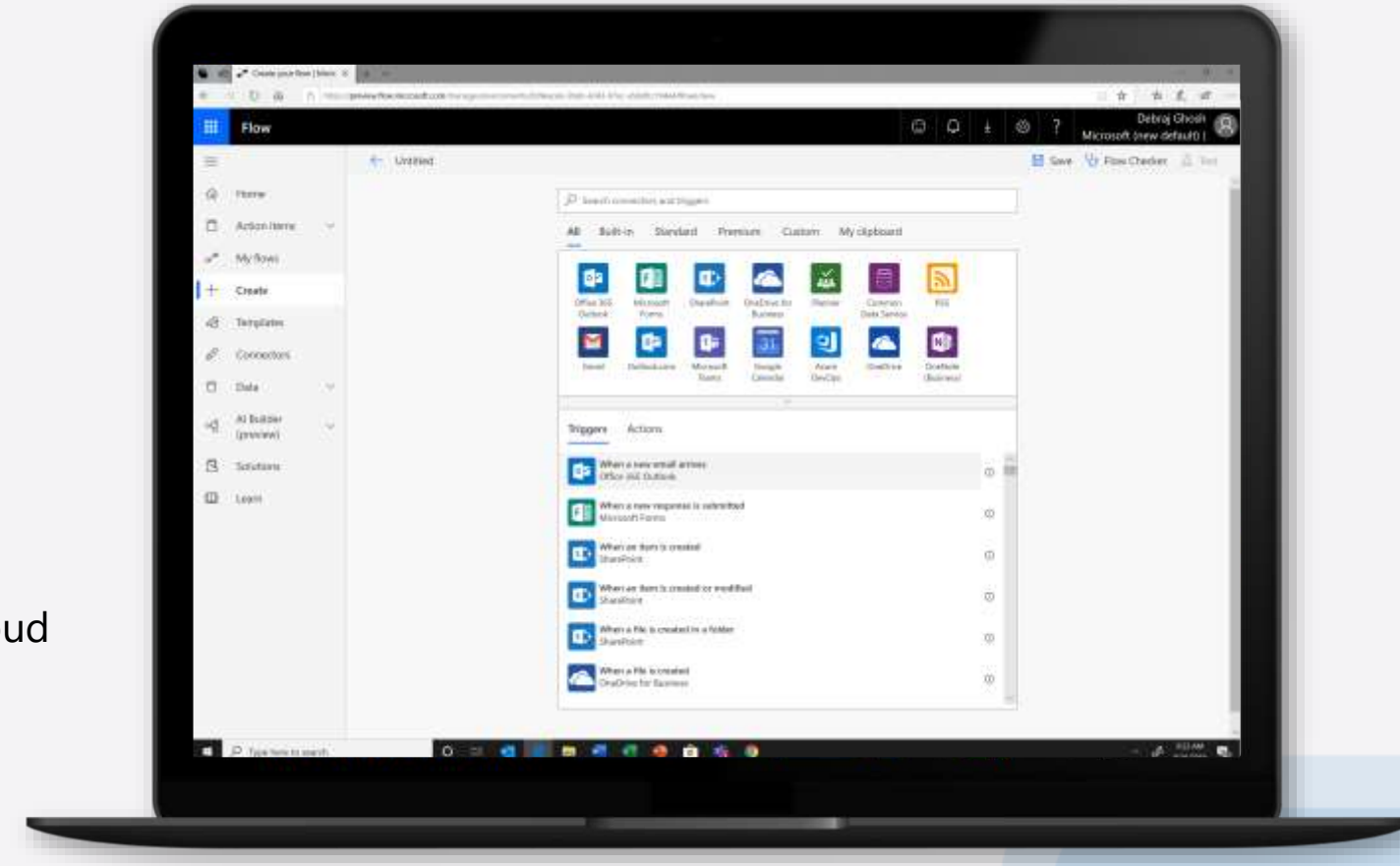


Types of triggers

Manual Action

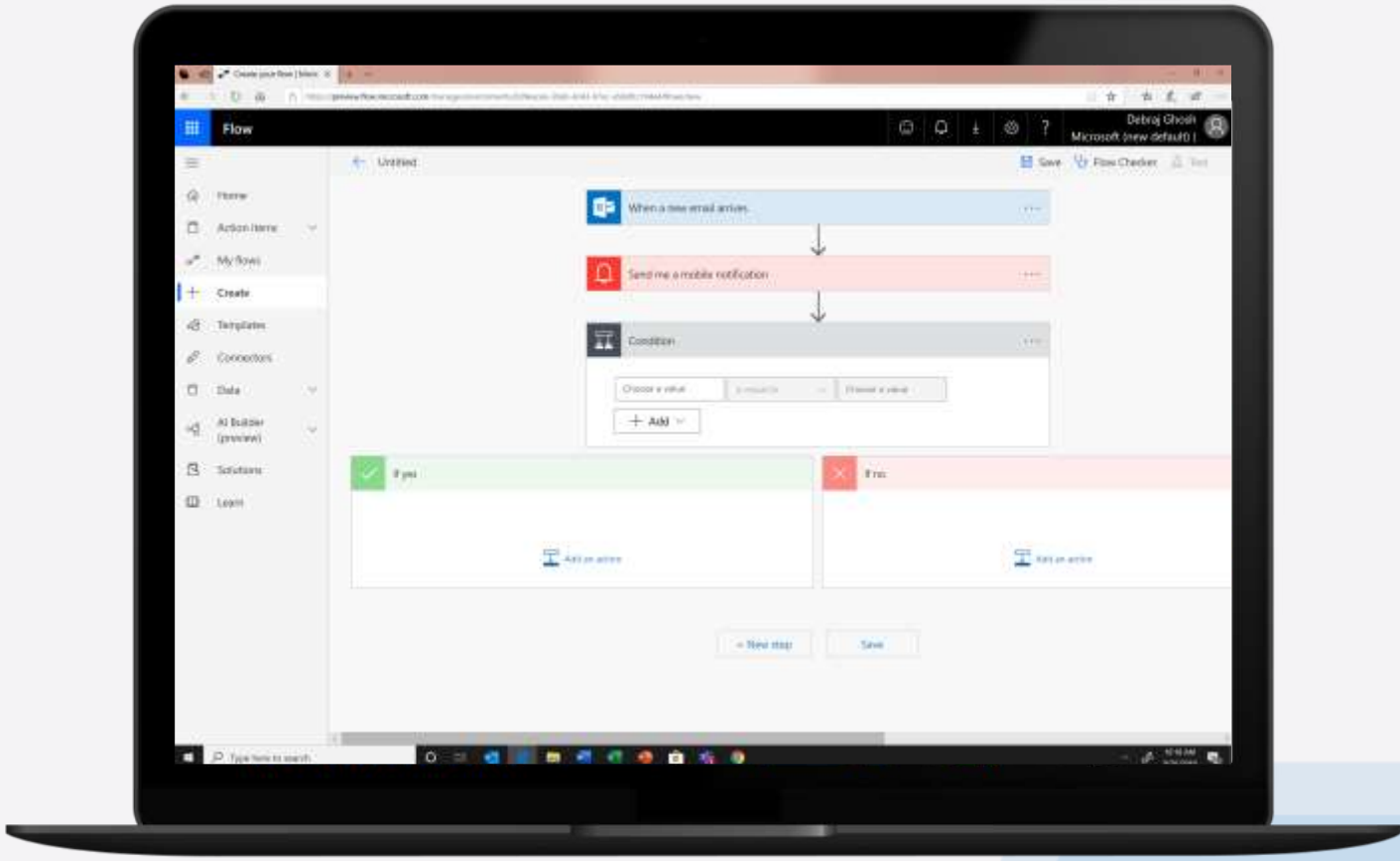
Run on a Schedule

Run based on an event that happens in a cloud or on-prem service



Conditional logic

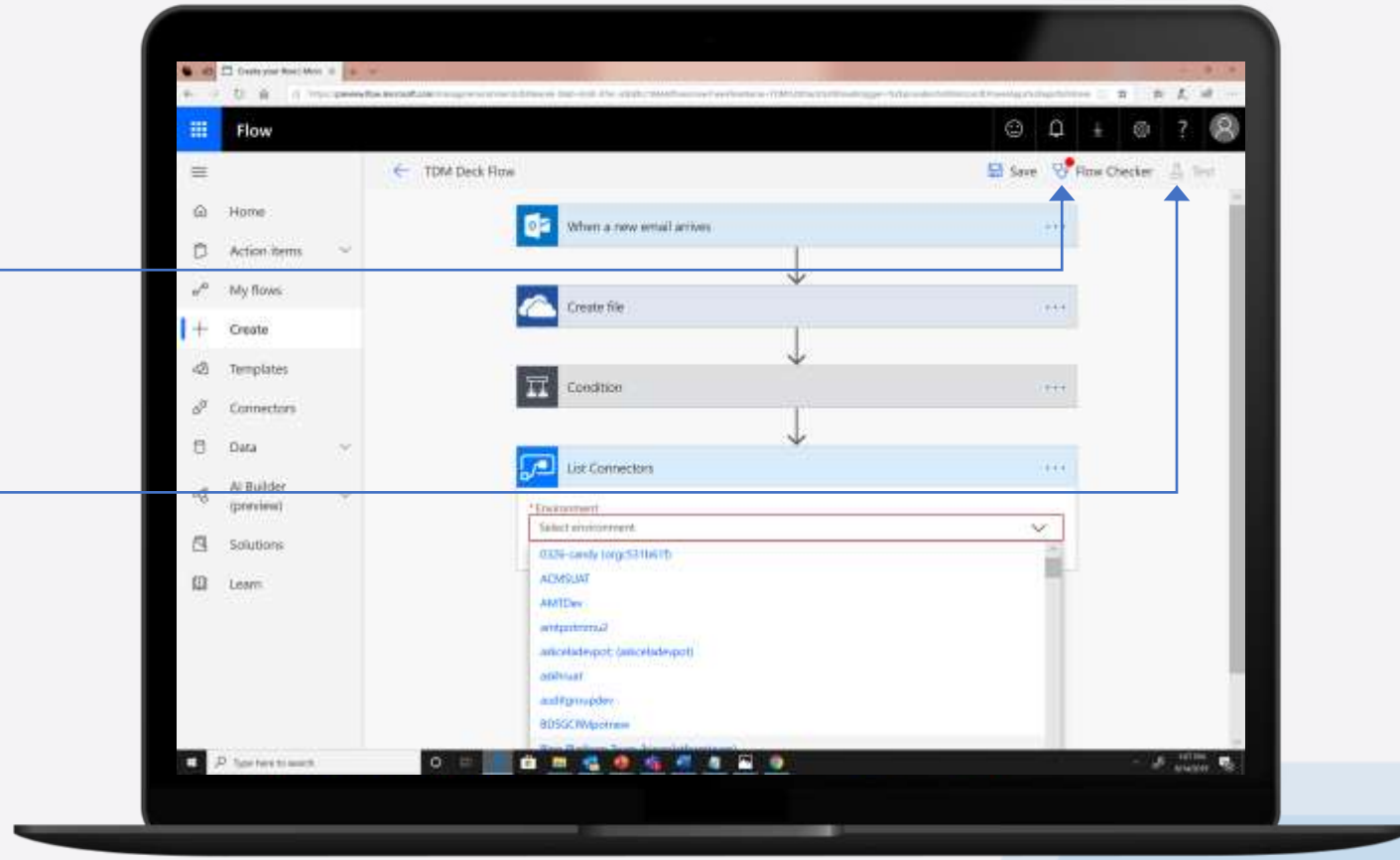
Conditional logic enables automated decisions based on a given scenario.



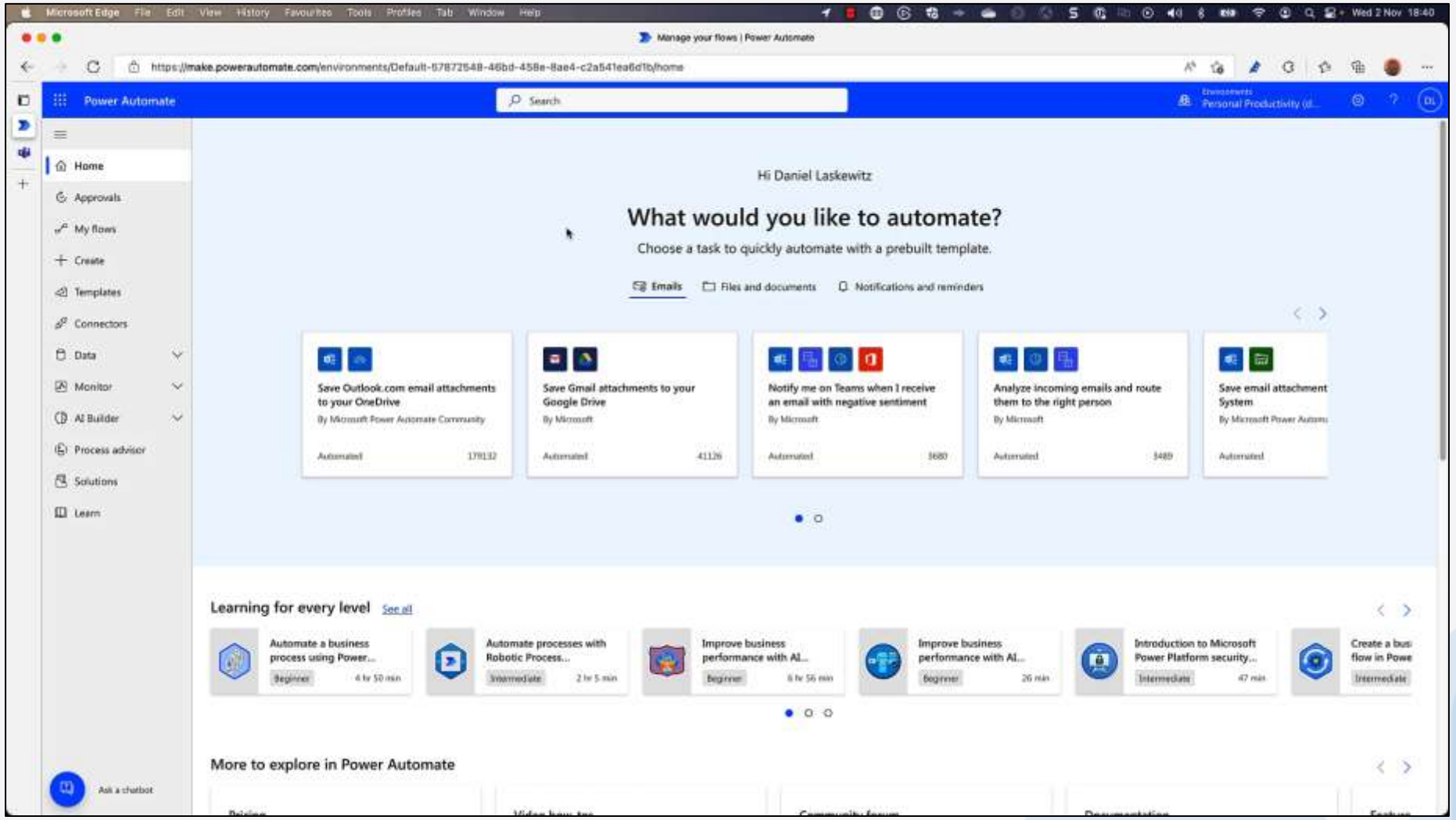
Test a cloud flow

Flow Checker

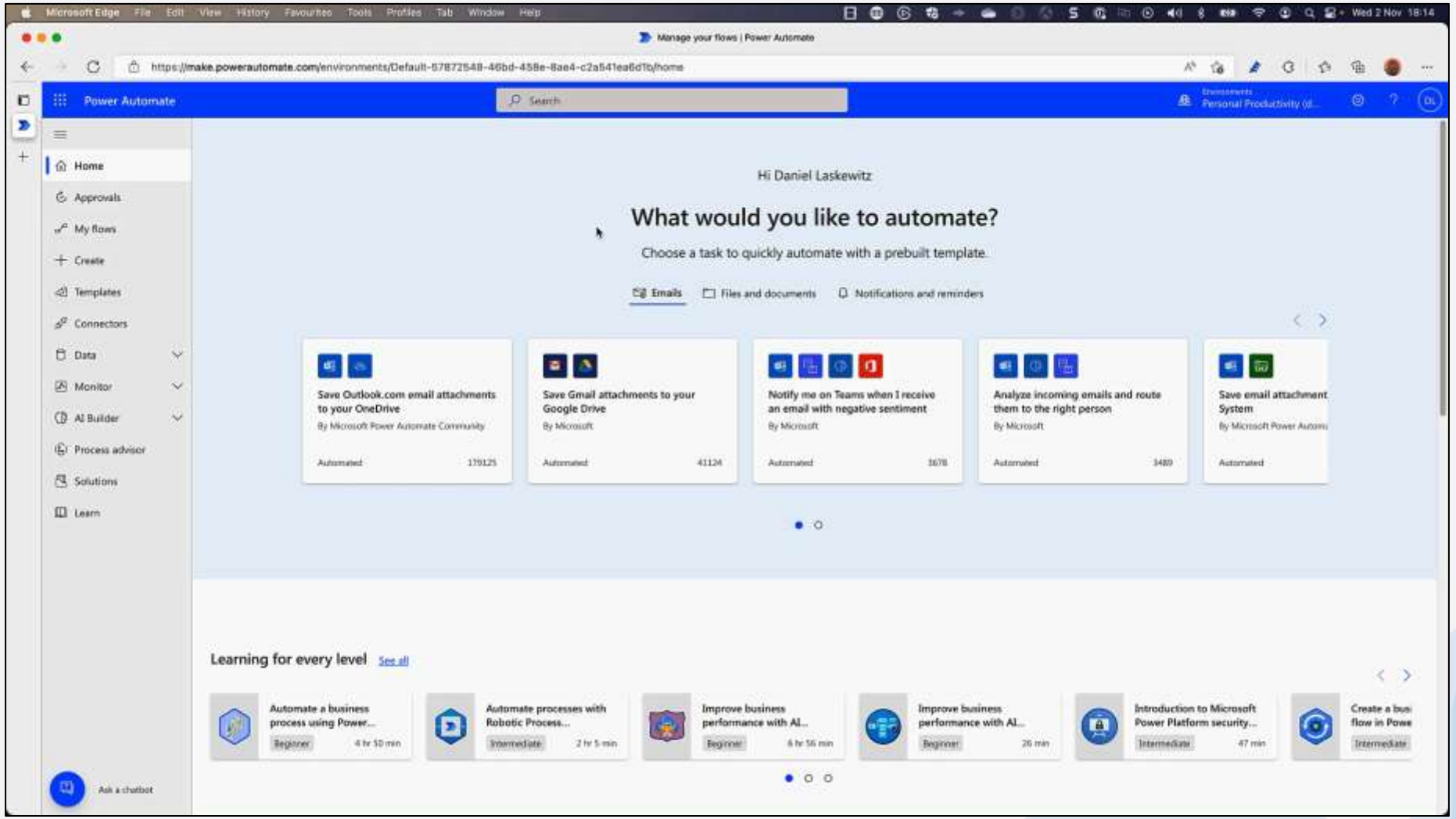
Test



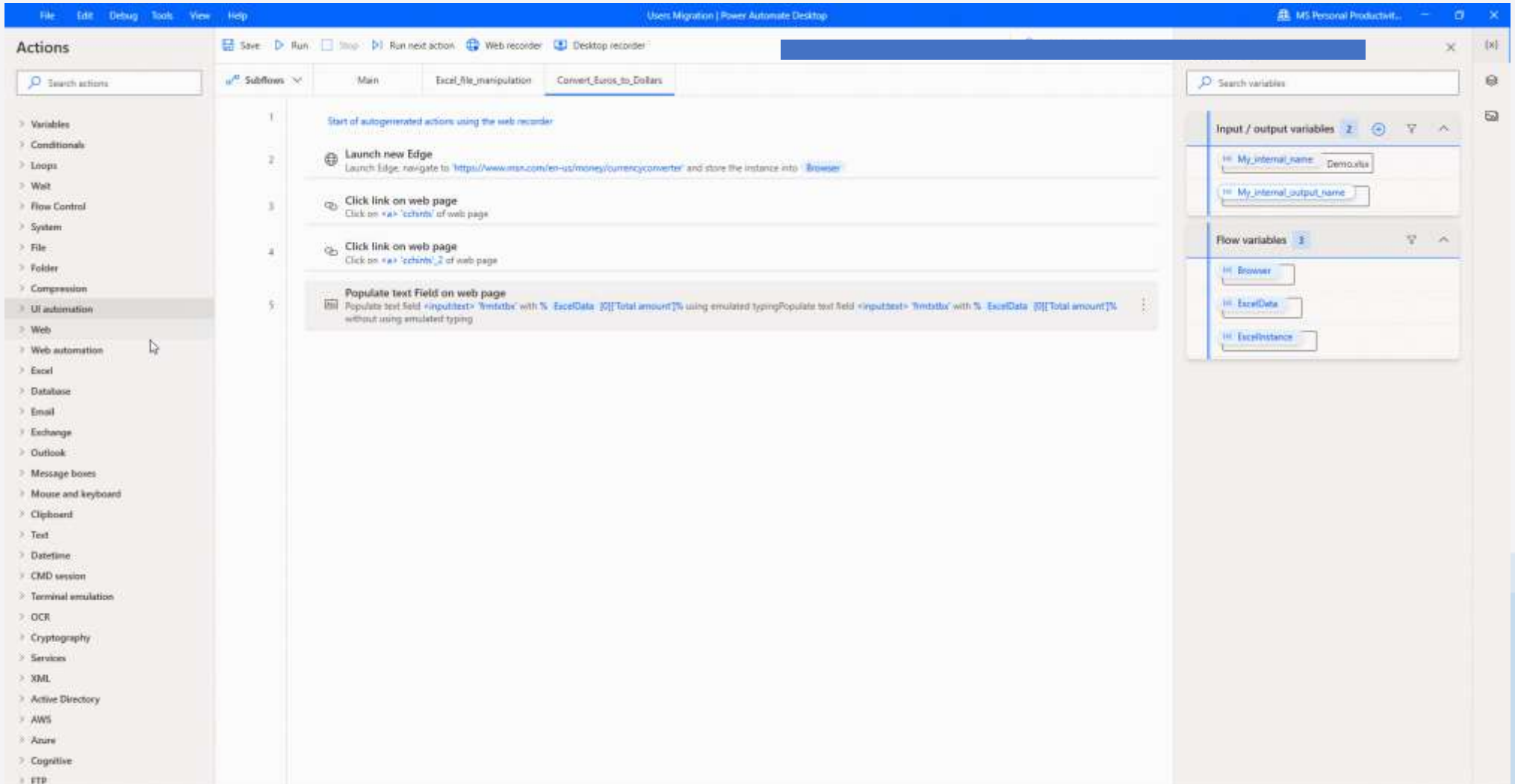
DEMO - Build a flow by using AI



DEMO – Create a flow from a template



DEMO – Create a desktop flow for personal use



Resources

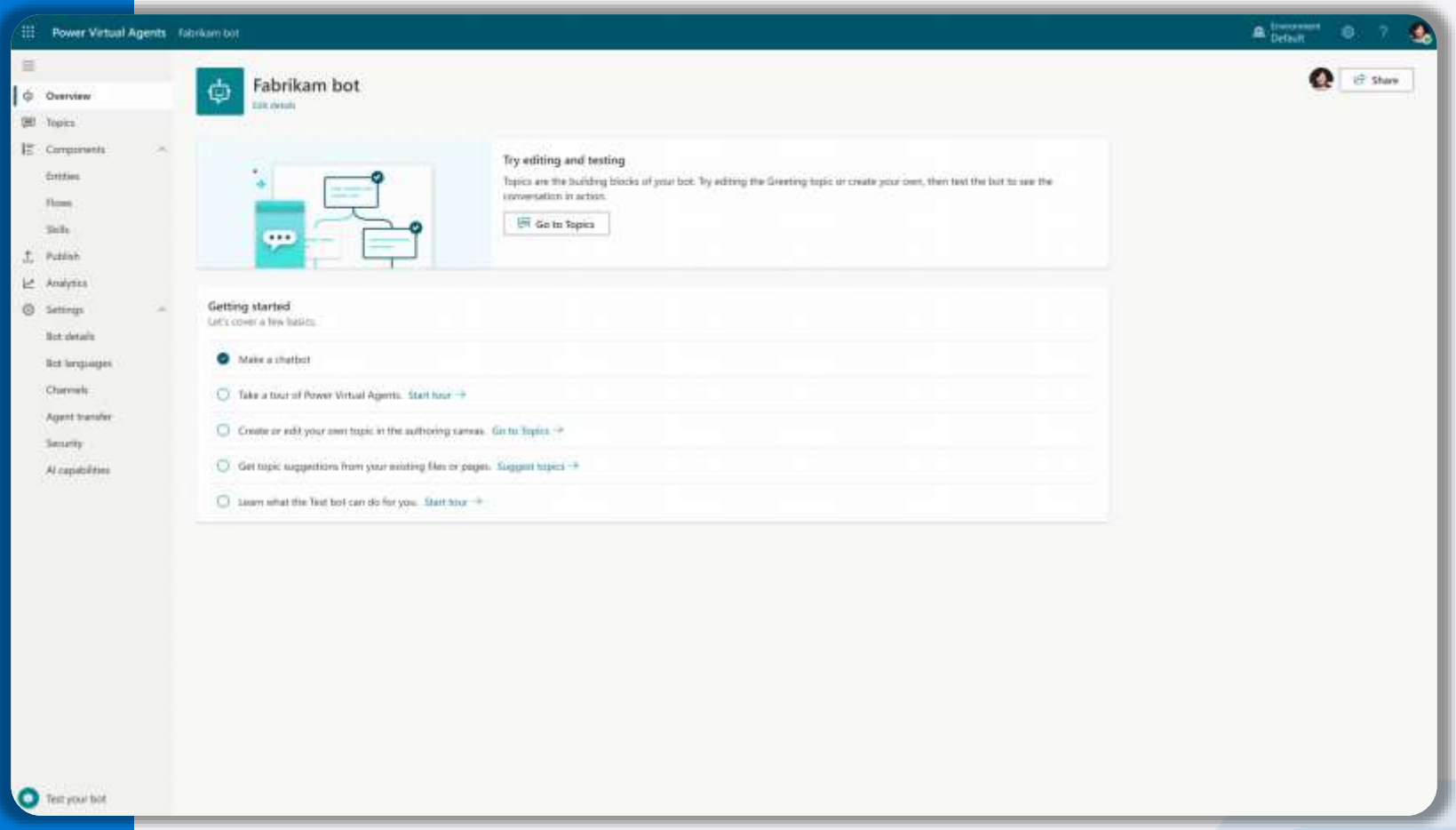
Power Automate

https://aka.ms/PL100/PowerAutomate

https://aka.ms/PL100/PowerAutomateTeams

https://aka.ms/PL100/PowerAutomateAdministration

Power Virtual Agents



What is Power Virtual Agents?

Empowers everyone – from citizen to pro developers – to seamlessly **build secure, scalable and intelligent conversational bots** together in a single platform.

Identify use cases

Customer Service

Reduce call volume for quick resolutions

- Where are you located?
- Request a refund
- Describe your issue
- Centralized FAQs
- Support tickets
- Pre-screening

Finance

Save time by automating budget and expense approvals

- Check payment status
- Update tax information
- Submit expenses for approval
- Invoices
- Payroll
- Budget requests

HR

Improve employee satisfaction and retention

- Sign up for healthcare plan
- Book time off
- Report office issue
- Benefits
- Leave and absence
- Incident reporting

IT

Optimize employee troubleshooting

- Reset my password
- How do I reconnect to the VPN?
- Refresh my laptop
- Support services
- Technical FAQs
- Equipment requests

Operations

Improve efficiency by digitizing paper processes

- Find case file
- Report equipment malfunction
- Check order delivery times
- Find documents
- Employee safety
- Manage inventory

Sales and Marketing

Increase up-sell and conversion opportunities

- You're eligible for a free upgrade!
- Update your email preferences
- Purchase an in-flight meal
- Promotions
- Email
- Upselling

Create bot using simple, graphical interface

Monitor bot performance and see where to improve

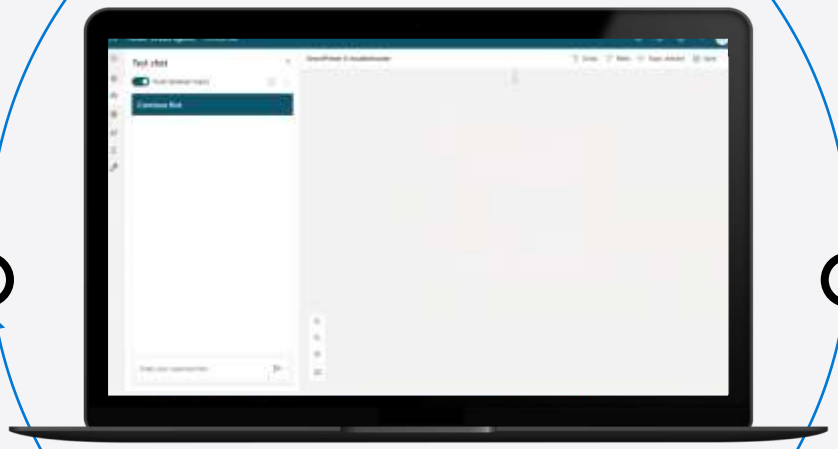
Get starter topics to build upon (from FAQs, sites, etc)

Publish bot to the channel of your choice

Author topics with powerful NL, slot extraction, variables, entities – no model training required

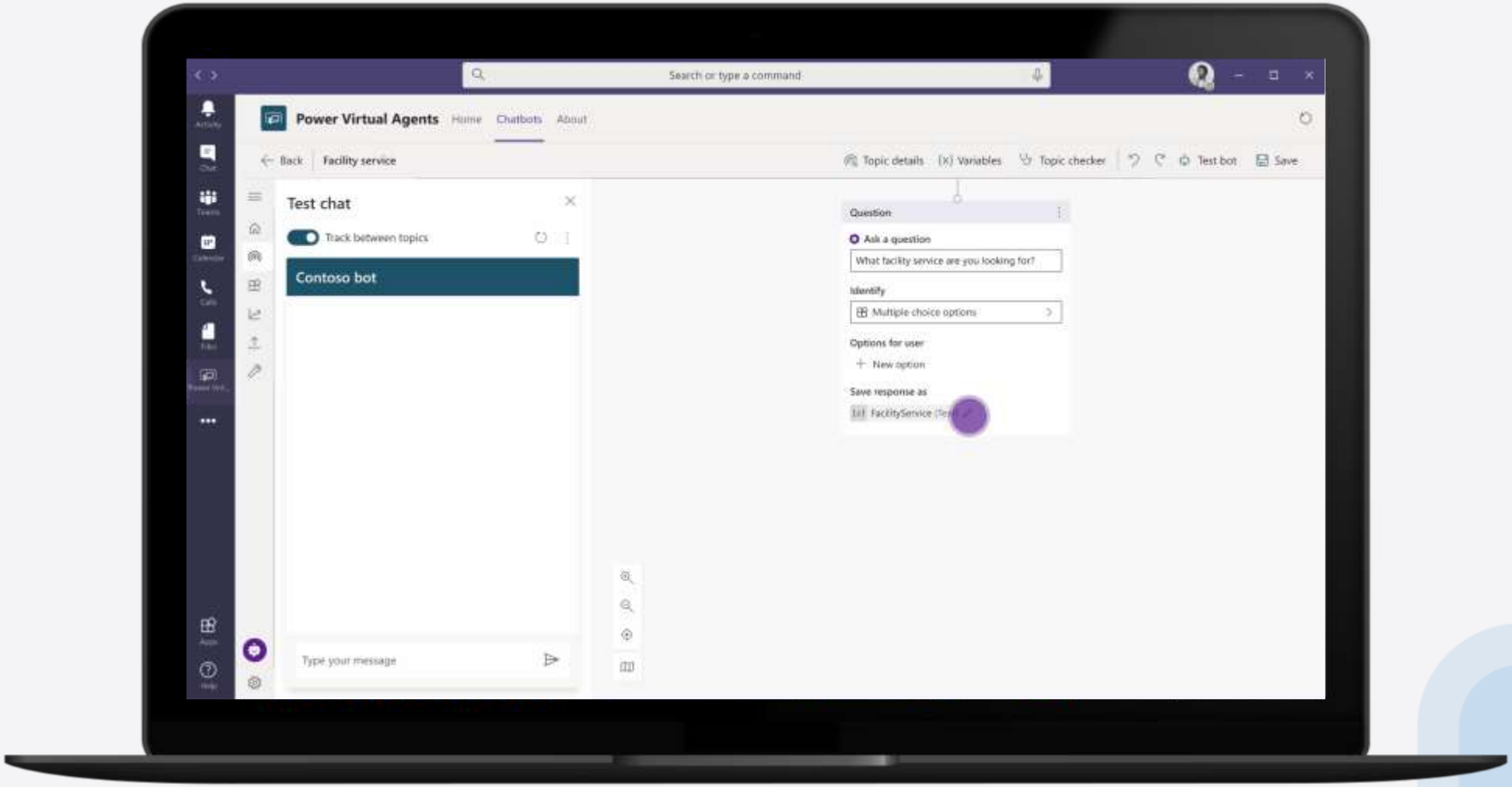
Easily extend with BF code for complex scenarios

Integrate bot with backend APIs using Power Automate

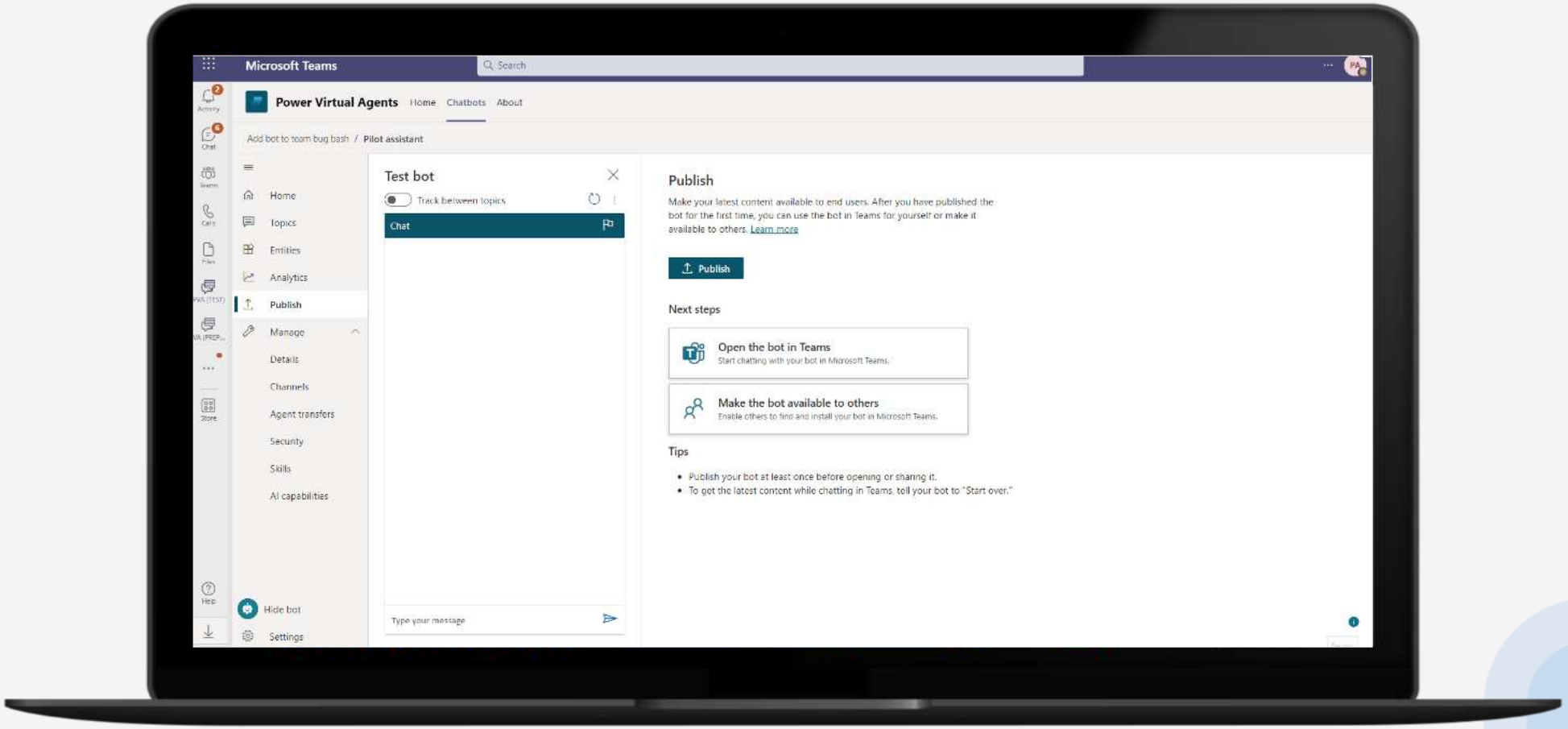


The bot building cycle

Create a chatbot that uses topics and trigger phrases



Publish a chatbot



Resources

Power Virtual Agents

https://aka.ms/PL100/PowerVirtualAgentsTeams

Questions