

Building custom agents with Copilot Studio

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Agenda



- Copilot Studio overview (10 mins)
- Understanding language and AI capabilities (20 mins)
- Building custom copilots (85 mins)
 - Design (35 mins)
 - Enhance (20 mins)
 - Manage (30 mins)
- How to plan a custom copilot project (15 min)
- Closing (10 mins)





Copilot Studio overview

Two Key Concepts



Copilot

Every employee will have a Copilot

Your personal AI assistant for work

Grounded in work content like email, meetings and documents

The UI for AI



Agents

Every business process will have an agent

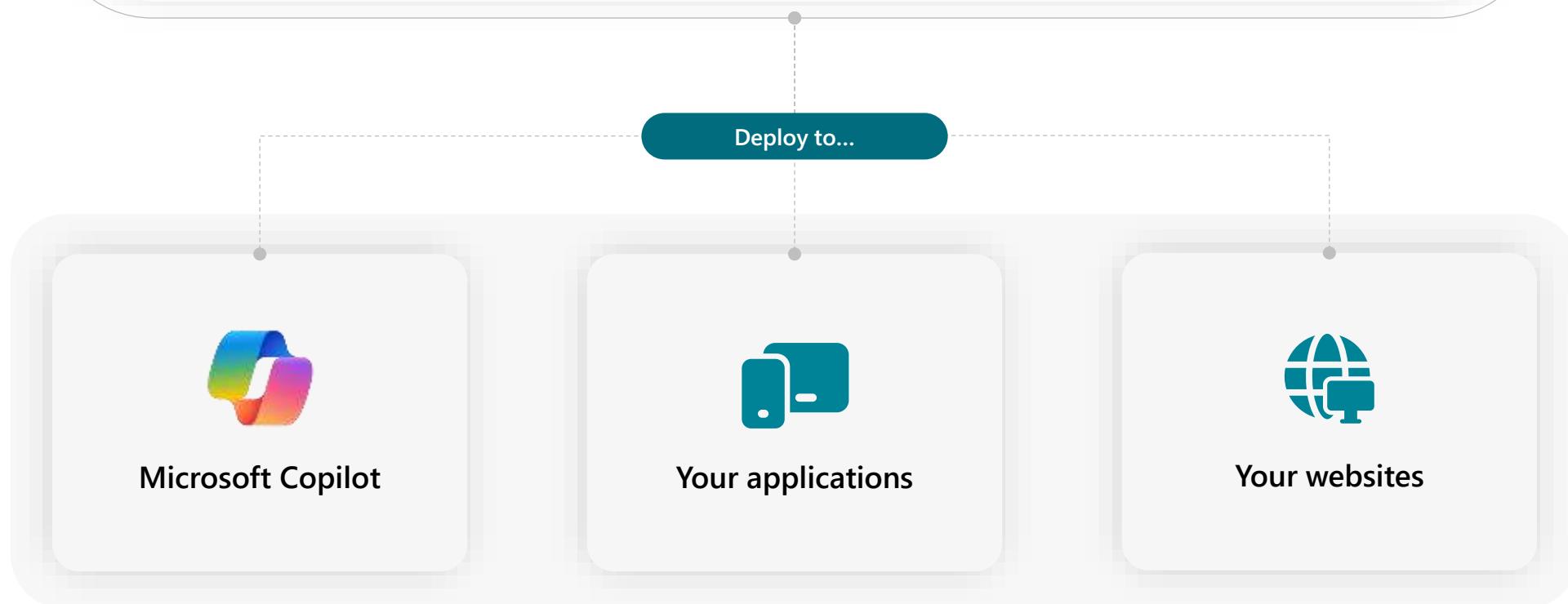
AI-powered system with actions, triggers and knowledge

Works on behalf of employees, teams and functions

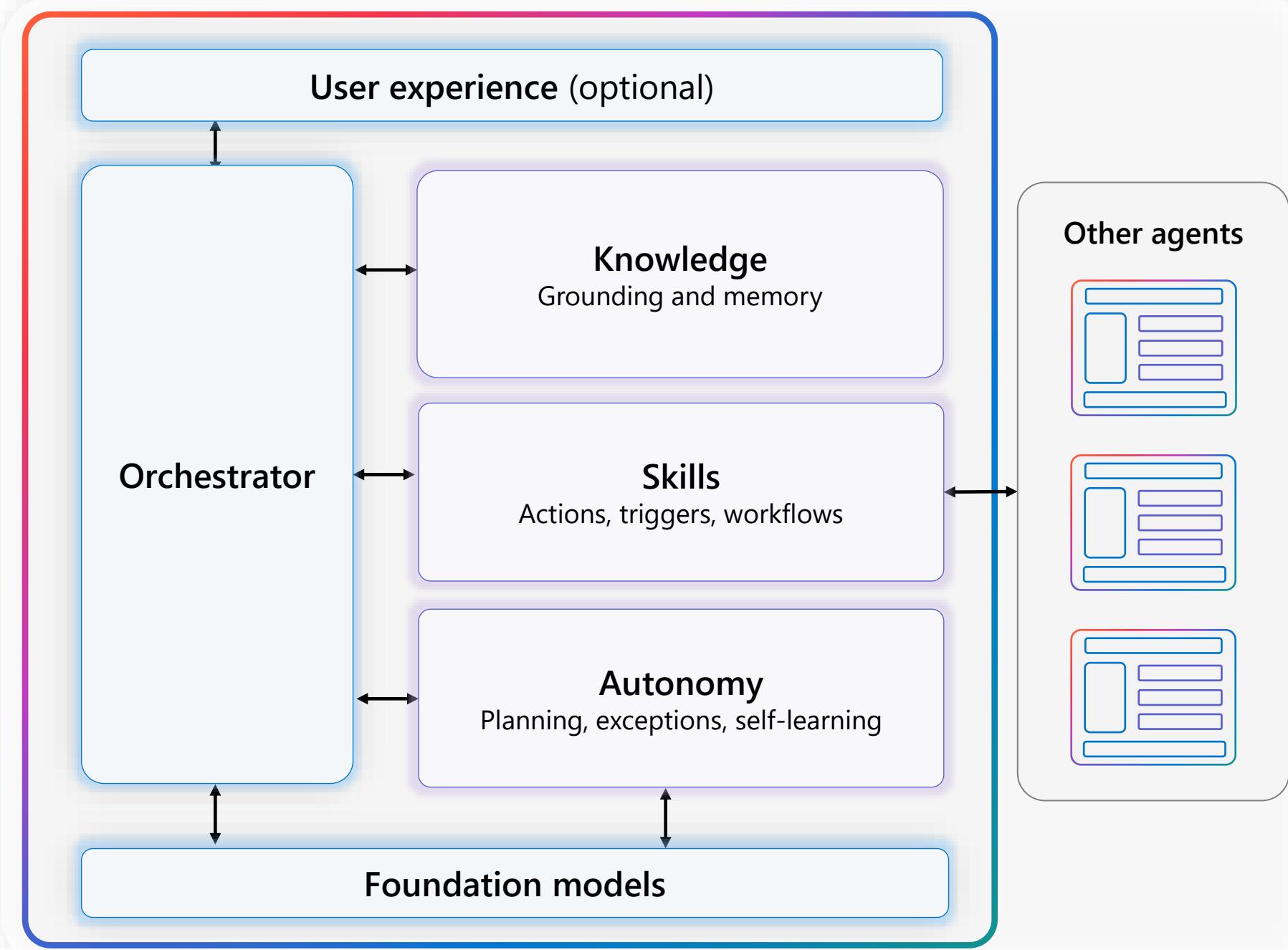
Connected to Copilot or autonomous

What is an agent?

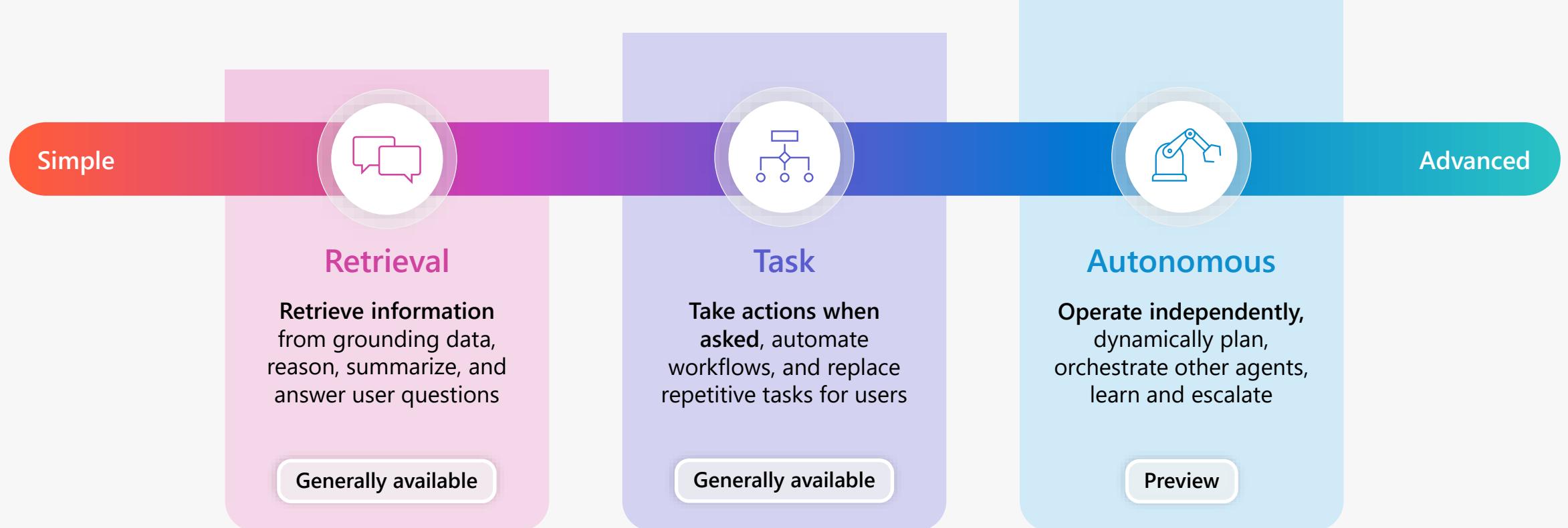
Agents use AI to **automate and execute business processes**, working alongside or on behalf of a person, team, or organization.



Anatomy of an agent



Spectrum of agents



← Agents vary in levels of complexity and capabilities depending on your need →

Explore a continuum of solutions

IT Helpdesk agent

How do I connect to the corporate network?



Simple



Project Tracker agent

What is the status of phase 2 for project X and the remaining budget?



Device Refresh agent

Request a new laptop and send approvals via IT Service tool.



Budget Management agent

Review outstanding open PO's and begin financial planning.



Lead Gen agent

The agent has identified and researched 15 new leads for you to review.



Advanced

Customer Support agent

The agent has identified new support issues and triaged to other agents.



Agent tooling

No code



<<<<<<<<



>>>>>>>>



Pro code

For End Users



Agent builder

For Makers



Copilot Studio

For Developers

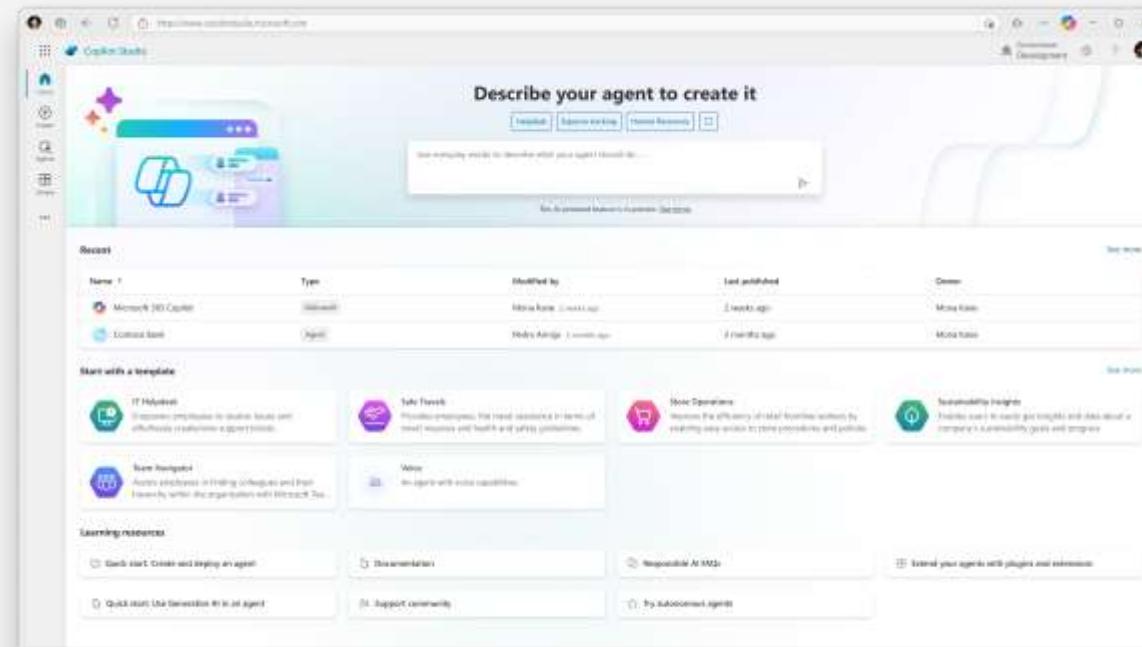


Copilot Studio + Azure AI



Copilot Studio

Copilot Studio is a low code tool for **building agents** and **extending Microsoft 365 Copilot**.



✓ Meet your users where they already are

✓ Access everything in one place

✓ Automate your workflows

✓ Integrate with your external apps

✓ Connect to your data in Microsoft 365

Copilot Studio is the platform for Copilot agents

Deploy and use Copilot agents in any system



Microsoft 365

Add Copilot agents that give Copilot focused knowledge and new skills.



Build and customize

your agents using
Copilot Studio



Your applications

Deploy Copilot agents to your website and other line of business applications.



Dynamics 365

Build Copilot agents that integrate and improve business processes.



Power Platform

Extend Power Platform with Copilot agents that transform your low code apps and pages.

Copilot Studio Core Capabilities

- Available for both Copilot Studio standalone **AND** Copilot Studio for Microsoft 365 Copilot
- Only available for Copilot Studio standalone

Intuitive UX	Visual canvas	Low code design	Pro code views	Real-time testing	Easy collaboration	Natural language to build
Conversation Design	Build + publish custom actions	Tailor specific topics	Create rich + dynamic responses	Multi-language	Multi-channel	Templates
Conversation Orchestration	Multi-turn conversations	Logic / variable management	Escalate to live agent	Multi-LLM routing	Dynamic content based on user	
Data Connectivity	AI Builder prompts	1,400 pre-built data connectors	Custom data connectors	Power Automate flows	Generative actions	Generative answers
Pro-Dev Extensibility	DIY gen AI	Bring your own Model (BYOM)*	Custom Azure Bot Framework Skills	Knowledge base extension	Custom analytics	Azure app insights telemetry
Streamlined Management	Responsible AI checks	Trusted platform	Admin center	Compliance standards	Analytics	ALM automation

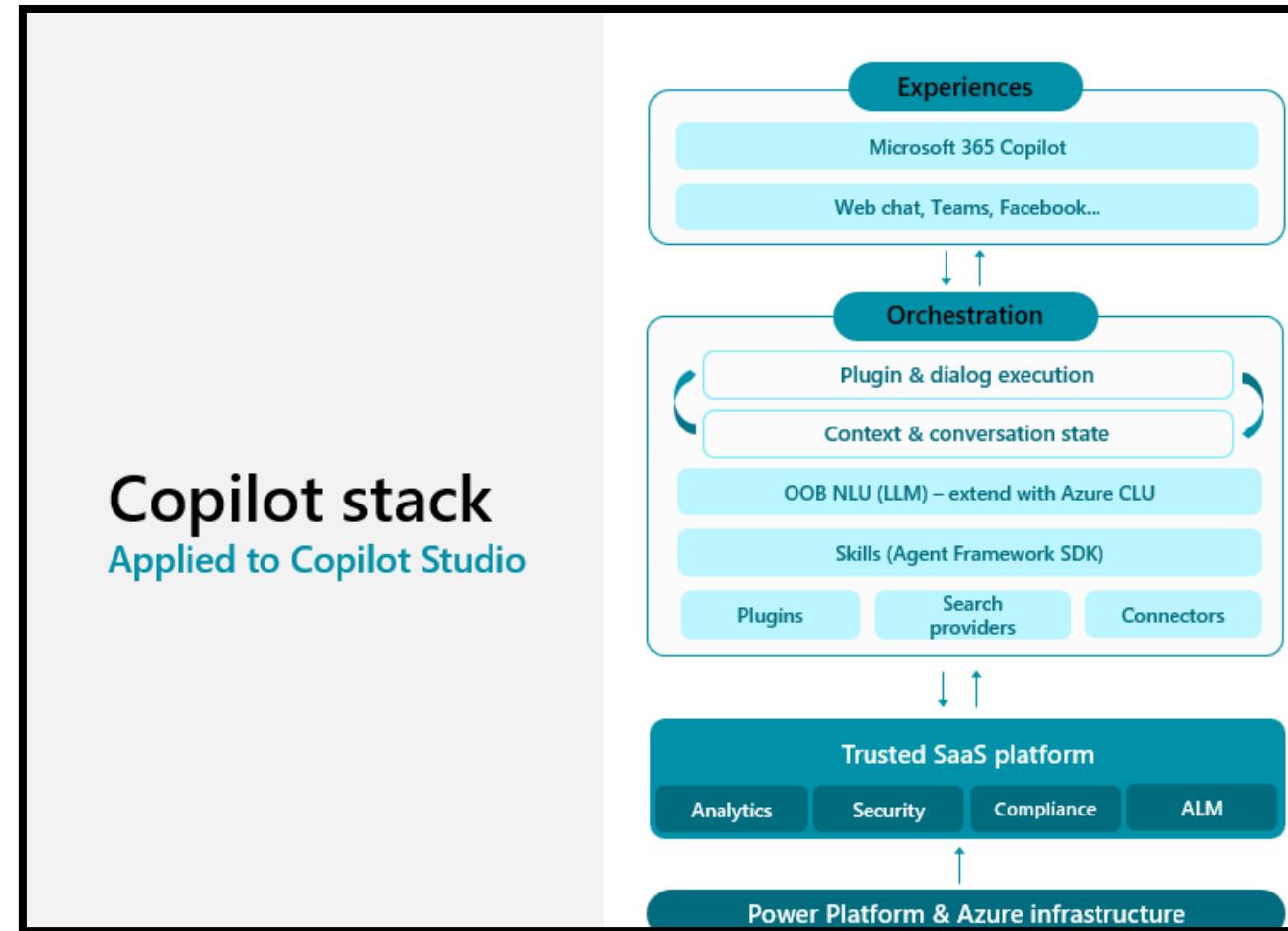
End-to-end conversational AI platform

Additional recommended content

Appendix section on this deck

Learn more about agent architecture and how to integrate them into your enterprise.

Copilot stack Applied to Copilot Studio



Understanding Copilot Studio language and AI capabilities

Language

Natural language understanding

	 Standard NLU model	 Custom Azure CLU model	 Dynamic chaining
	<ul style="list-style-type: none">✓ Default, out-of-the-box, model that comes pre-trained, with many predefined entity types.✓ Configuration is done by adding trigger phrases and custom entities (either closed lists with values and synonyms, or regular expressions).	<ul style="list-style-type: none">✓ Supports additional languages, with native models.✓ Allows to further customize the intent triggering model for better intent recognition or to address specific industry requirements.✓ Allows for complex entity extraction (e.g., of the same type).✓ Entity extraction can also leverage Copilot Studio standard NLU.	<ul style="list-style-type: none">✓ Uses a GPT large language model.✓ Can handle multiple intents and chain topics and/or plugins.✓ Automatically generate questions for missing inputs and answers complex entities and questions from the conversation context.✓ Configuration is done by simply describing topics, plugin actions, and inputs/outputs.
	<ul style="list-style-type: none">✓ Single intent recognition per query.✓ Cannot be extended.✓ Slot-filling multiple entities of the same type in the same query requires disambiguation for each (e.g., from and to cities)	<ul style="list-style-type: none">✓ Single intent recognition per query.✓ Configuration is done in Azure and involves additional costs.✓ Has its own service limits that need to be evaluated.✓ Azure CLU intents and Copilot Studio topics must be carefully kept in sync.	<ul style="list-style-type: none">✓ As it's a generative AI feature, the licensing burn rate of messages is higher than in regular topic triggering.✓ Preview capability.

Standard NLU model in Copilot Studio

Intent recognition

Define a few trigger phrases that captures the way a customer might ask for help

[Learn more](#)

Slot-filling

Contextual understanding of what you type and can 'hop' to the appropriate part of the conversation and skip a repetitive question/comment

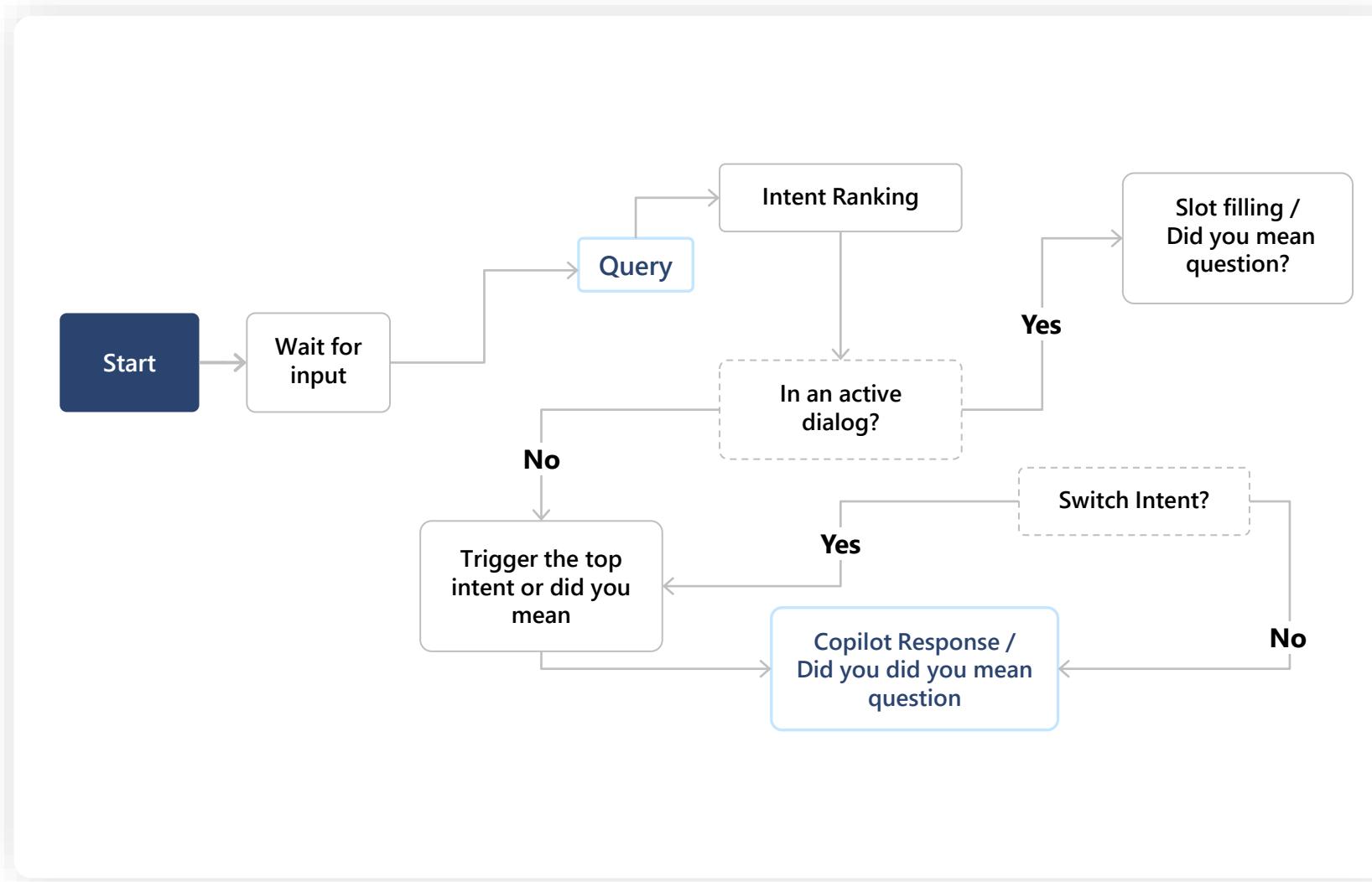
[Learn more](#)

Entity recognition

Prebuilt that represent the most used information such as age, colors, numbers, and names and the possibility to create custom entities

[Learn more](#)

Standard NLU model in Copilot Studio



Fundamentals

- New transformer-based NL model – Dual Transfer Encoder (DTE)
- Enhanced intent triggering with entities
- Slots and entities

Authoring

- Topic 'confusion' tool
- Multi-turn topic suggestions
- Regex entities

Continuous Copilot improvements

- Intent triggering auto-improvement from live traffic
- Topic suggestion from live traffic such as URL, CSV, DOCX, PDF
- Proactive slot filling
- User context aware, personal and dynamic conversations

Copilot Studio rules-based architecture

Dataverse environment

Copilot Studio agent (0, 1 or more copilots in a Dataverse environment)

User Topics (1 or M in an agent)

It's common to have 25+ user topics within an agent. To help you get started, the agent comes with 4 pre-defined user topics that you can use or delete. Within each topic you construct a conversation tree.

Conversation Tree (1 per user topic)

Consists of trigger phrases, multiple nodes (message, question, etc.), conditions, the ability to use entities and call actions (flows or skills). You can redirect/call another user topic or system topic from within a conversation tree.

Trigger Phrases
(0,1 or more in a user topic)

Prebuilt Entities
(0,1 or more)

Power Automate Flows*
(0,1 or more)

Custom Entities
(0,1 or more)

Copilot Framework Skills
(0,1, or more)

System Topics (8 pre-defined in a copilot)

Includes: Greeting, Goodbye, End of conversation survey etc. Recommend minimal editing e.g., greeting message only. Think of these as building blocks for your conversation.

Conversation Tree

Consists of trigger phrases, multiple nodes (message, question, etc.), conditions, the ability to use entities and call actions (flows or skills).

Trigger Phrases (read only in system topics)
(0, 1 or more)

Prebuilt Entities
(0,1 or more)

Custom Entities
(0,1 or more)

Power Automate Flows*
(0,1 or more)

Copilot Framework Skills
(0,1, or more)

*To use Power Automate flows in an agent built with Copilot Studio, they must be in a solution that's within the same Dataverse environment as the agent

Topic structure

Creating and designing efficient topics



Topics are discrete conversation paths that, when used together, allow for users to have a conversation with a copilot that feels natural and flows appropriately.



While there's no one size fits all, given how topics can be triggered, it's a good practice to distinguish between:

- ✓ **Topics that will trigger based on user utterances.** These can almost be seen as your entry points topics.
If you have trigger phrases that overlap multiple topics, consider having a catch-all topic and then redirect to other topics after clarifying questions. With entity extraction and slot filling, clarifying questions can be skipped if already answered.
- ✓ **Topics that will trigger when called from a redirect action, activity or event.**
These can be called by multiple topics and can have input and output variables. They're ideally reusable, bite-size, topics.
- ✓ **A topic can also be both,** triggered through intent recognition or by an explicit redirect.
- ✓ **Conversational boosting and fallback:** topics that trigger when no matching topic is triggered based on a user query.

Handling unrecognized intents

Answering for unplanned user queries

1

The **Fallback** topic gets triggered when Copilot Studio doesn't understand a user utterance and doesn't have sufficient confidence to trigger any of the existing topics.

2

There are many ways to handle unrecognized intents: using **Generative Answers** to look for the answer on various data sources and/or using the Fallback topic to integrate with other systems. For example, question answering in Azure Cognitive Service for Language allows you to offload large volumes of question-and-answer pairs. It also has a chitchat model to handle random questions to the copilot.

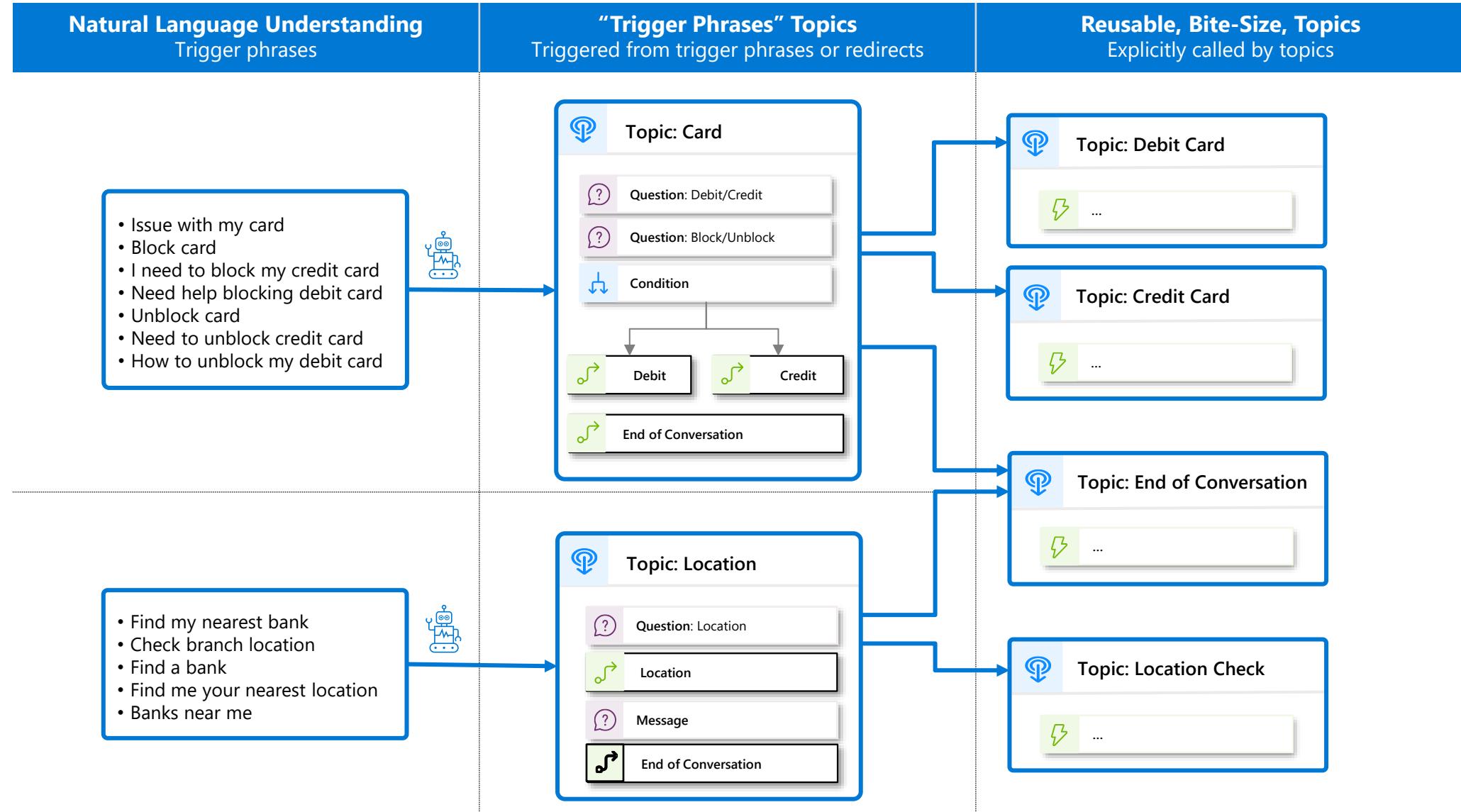
3

If Generative Answers are enabled on the copilot, the **Conversational Boosting** topic also triggers on the unknown intent event and triggers before the Fallback one.

4

While it's important to leverage the Conversational Boosting and Fallback capabilities, it's also important to make sure that the **core scenarios and topics** of your copilots are properly handled through custom topics and their outcomes defined (resolved, etc.).

Disambiguation with topic design



Choosing your language

The common approaches are:

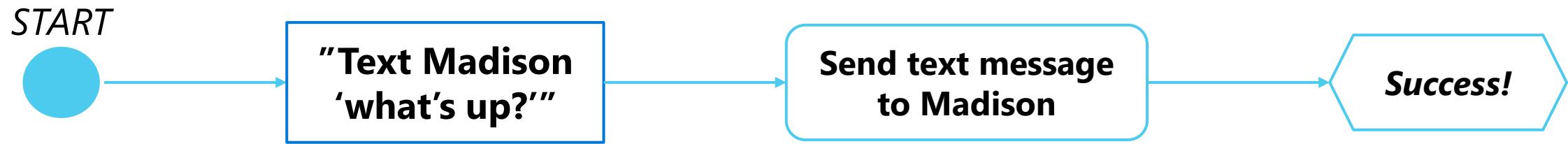
1. One copilot per language.
2. One copilot for multiple languages, with translations provided as part of the copilot configuration.
Translations need to be updated each time the copilot is updated or when new content is added.
3. One copilot for multiple languages, with translations provided real-time, at runtime, through a relay copilot sitting between the user and the copilot. This allows deploying more languages rapidly, but it also adds a dependency on a relay copilot and a real-time translation layer (e.g., Azure Service Copilot and Azure Cognitive Services Translator).

Language	Authoring canvas/End-User	Generative answers	Generative actions
Chinese (Simplified)	✓	✓	Preview
Chinese (Traditional)	✓		Preview
Czech	✓	✓	Preview
Danish	✓	✓	Preview
Dutch	✓	✓	Preview
English	✓	✓	Preview
Finnish	✓	✓	Preview
French	✓	✓	Preview
German	✓	✓	Preview
Greek	✓	✓	Preview
Hindi	✓	✓	Preview
Indonesian	✓	✓	Preview
Italian	✓	✓	Preview
Japanese	✓	✓	Preview
Korean	✓	✓	Preview
Norwegian	✓	✓	Preview
Polish	✓	✓	Preview
Portuguese (Brazil)	✓	✓	Preview
Russian	✓	✓	Preview
Spanish	✓	✓	Preview
Swedish	✓	✓	Preview
Thai	✓	✓	Preview
Turkish	✓	✓	Preview

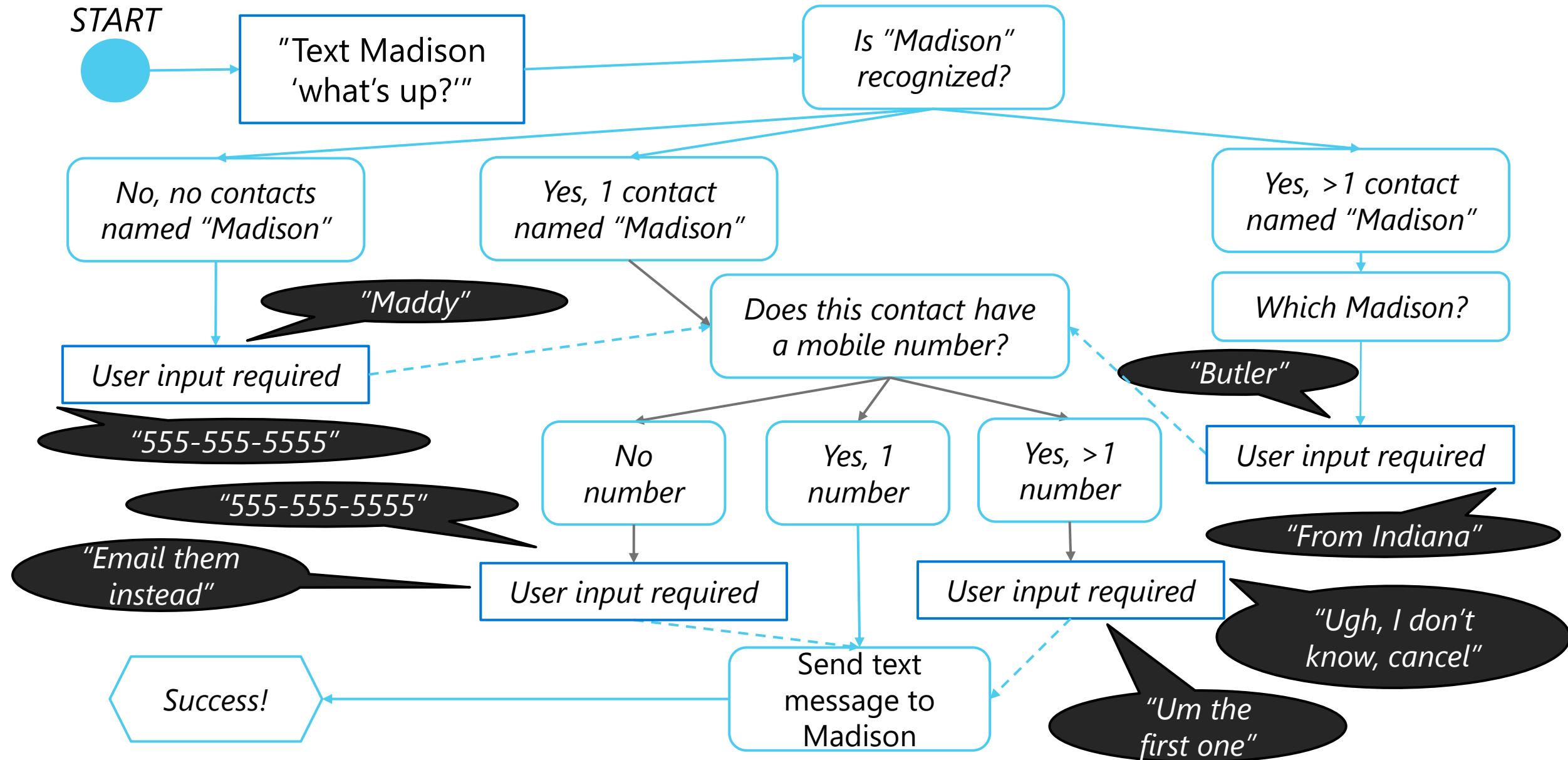
AI

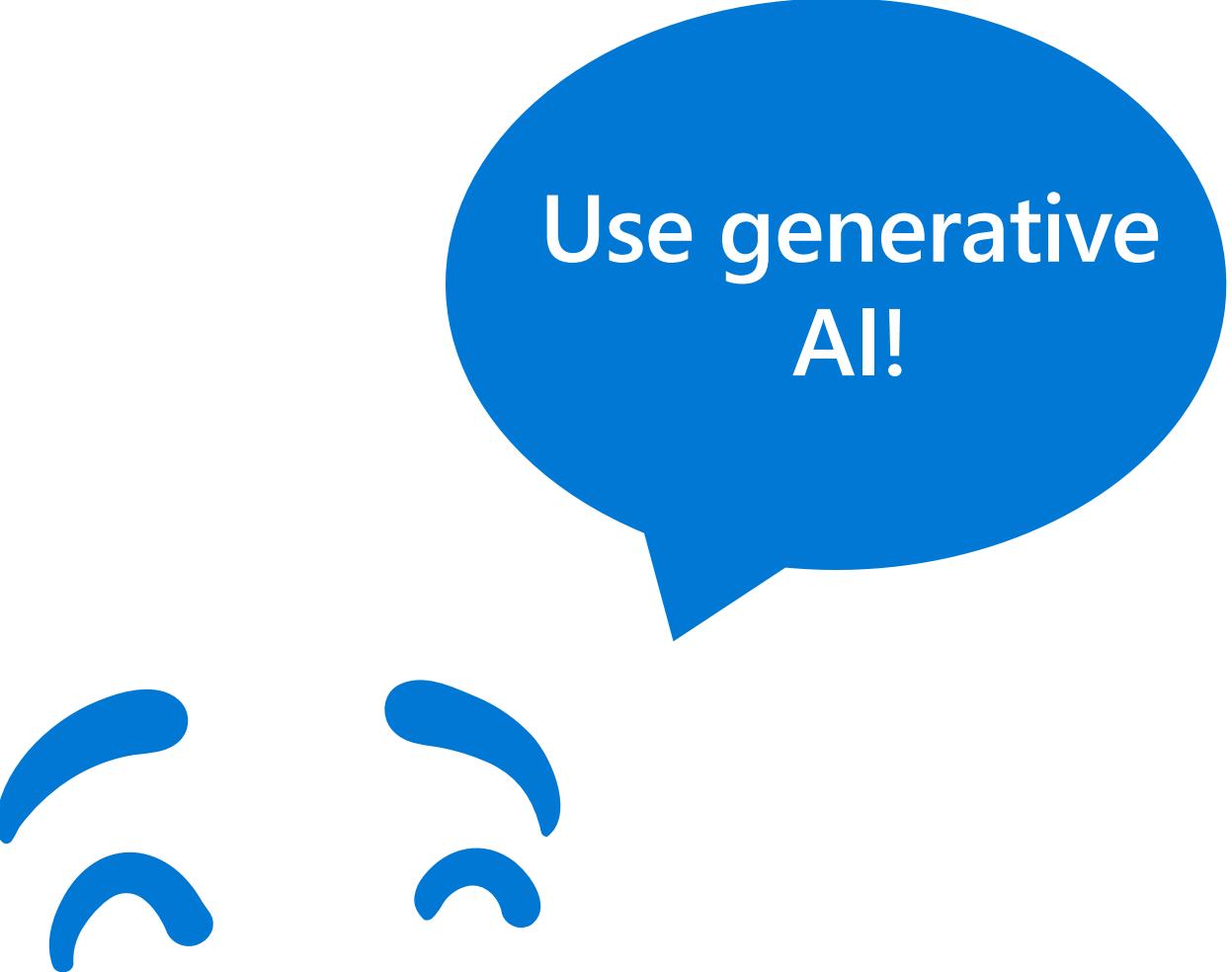


It's easy to know where a conversation begins and ends...



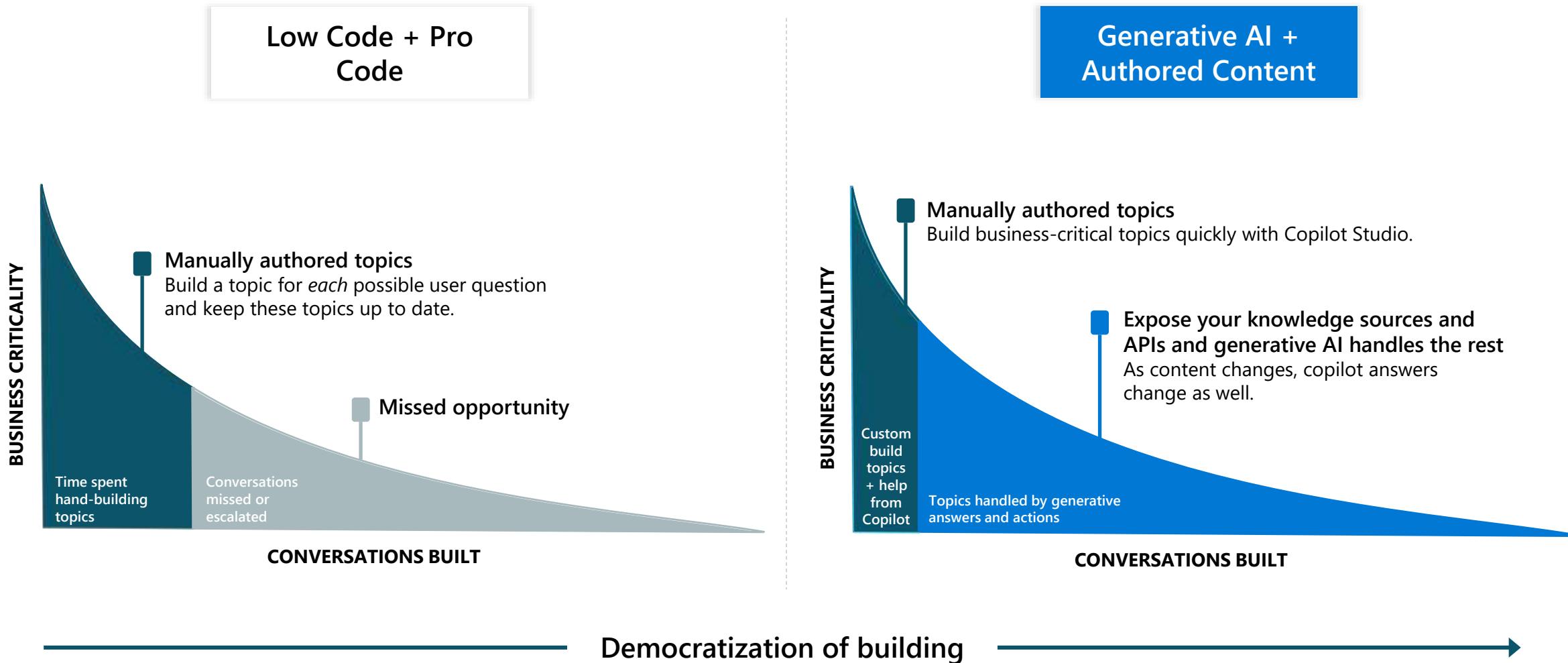
The middle is the hard part...





Use generative
AI!

Generative AI is changing conversational AI



Generative AI in Copilot Studio | Powered by Azure OpenAI Service

CONNECT AND EXTEND

M365 Copilot Azure OpenAI Studio Power Apps Power Pages Teams Dynamics 365

The diagram illustrates the integration of various Microsoft services through a central hub. At the top, a blue rounded rectangle contains icons for M365 Copilot, Azure OpenAI Studio, Power Apps, Power Pages, Teams, and Dynamics 365. Below this, a large white box features a central circular icon with a refresh symbol. The box is divided into sections: 'Generative Conversations' (dark blue header), 'Generative Assistance' (light blue header), 'TO ANSWER' (light blue header), 'TO ACT' (light blue header), 'TO BUILD' (light blue header), 'Generative Answers' (with a screenshot of a multi-turn conversation interface), 'Generative Actions' (with a screenshot of a mobile app interface), and 'Generative Builder' (with a screenshot of a complex flowchart). The bottom section is organized into four columns: 'External' (3P Search APIs, External URL), 'Internal' (OneDrive URL, Documents, SharePoint URL), 'Tools' (Power Platform Connectors, Copilot Topics, Skills, Power Automate Flows), and 'Edit & Refine' (Topics, Trigger Phrases, Entities, Variables, Adaptive Cards, Branching).

Generative Conversations

Generative Assistance

TO ANSWER

TO ACT

TO BUILD

Generative Answers

Copilot Studio boosts conversational coverage by dynamically generating multi-turn answers based off an organization's content in real-time in response to unanticipated questions.

Generative Actions

Copilot Studio generates dialog and takes action through dynamically chaining existing building blocks which can handle queries that were not anticipated or previously built.

Generative Builder

Copilot Studio Copilot assistant helps build, design and modify Copilot topics through natural language.

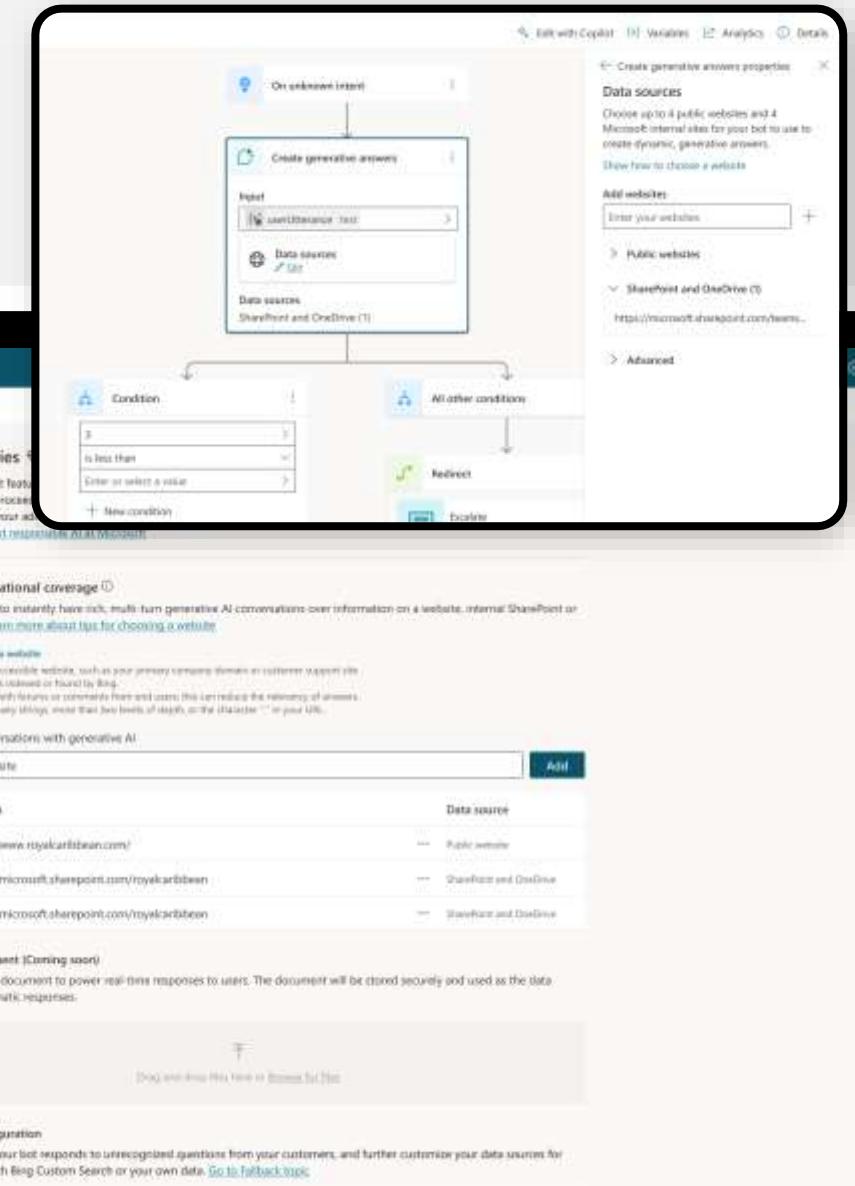
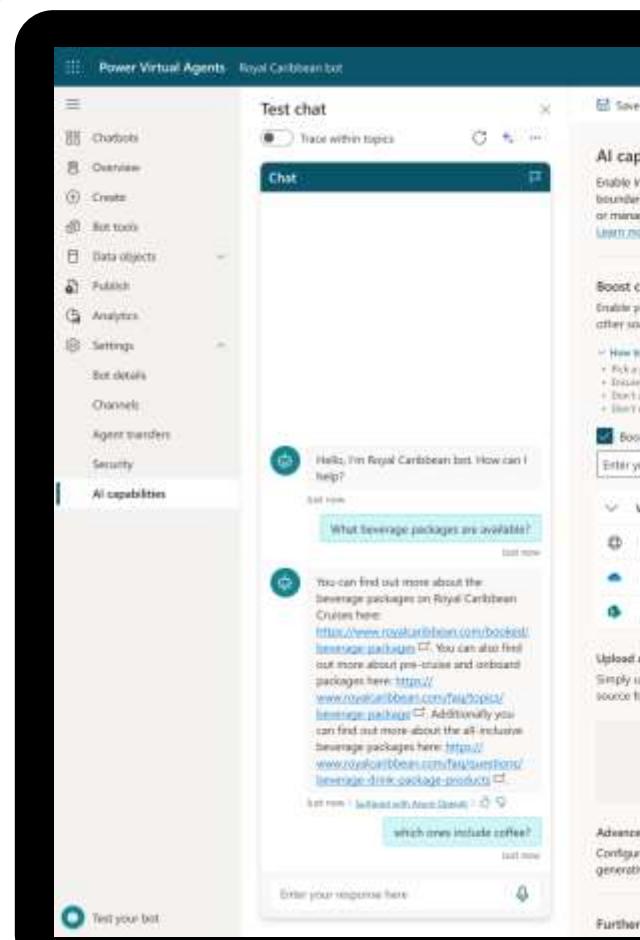
External	Internal	Tools	Edit & Refine
3P Search APIs External URL	OneDrive URL Documents SharePoint URL	Power Platform Connectors Copilot Topics Skills Power Automate Flows	Topics Trigger Phrases Entities Variables Adaptive Cards Branching

Generative answers

Enable multi-turn chat over your own internal and external knowledge sources and sites with generative answers

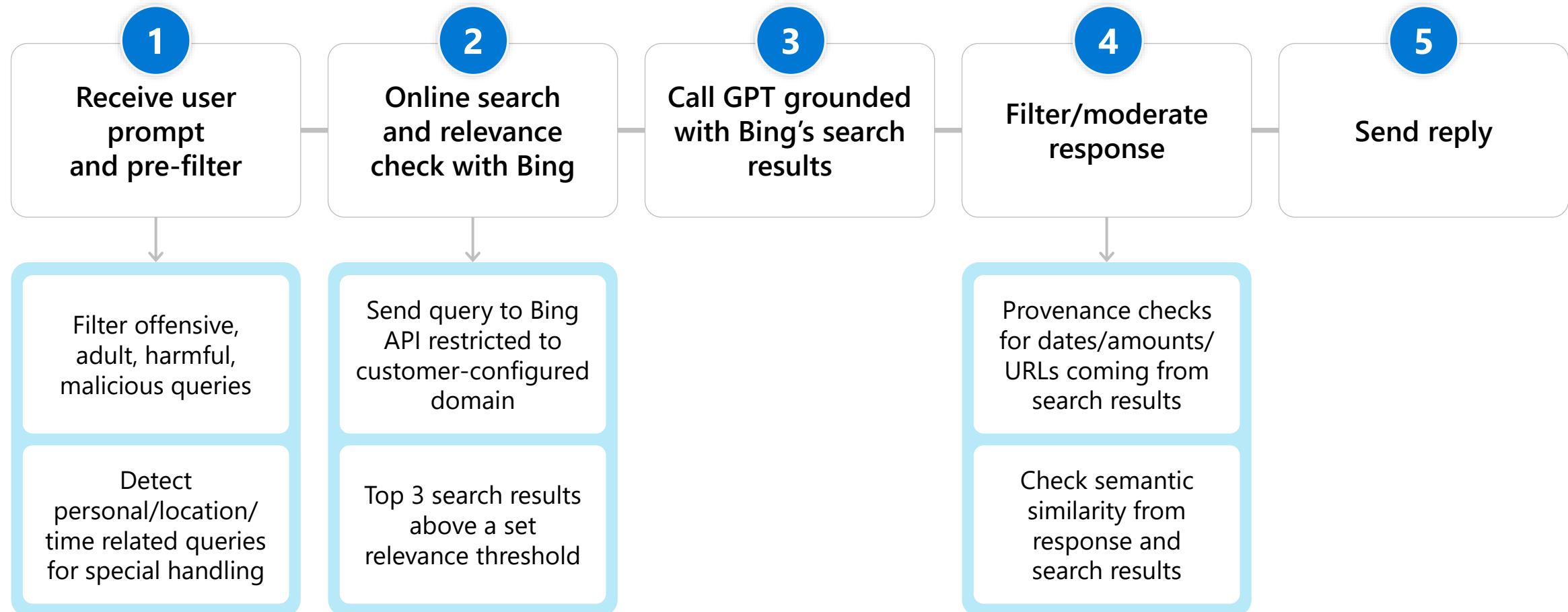
Bots can answer thousands of questions out of the box in seconds

You can even pull data from an API or other backend system and enable generative chat over it



Public Preview

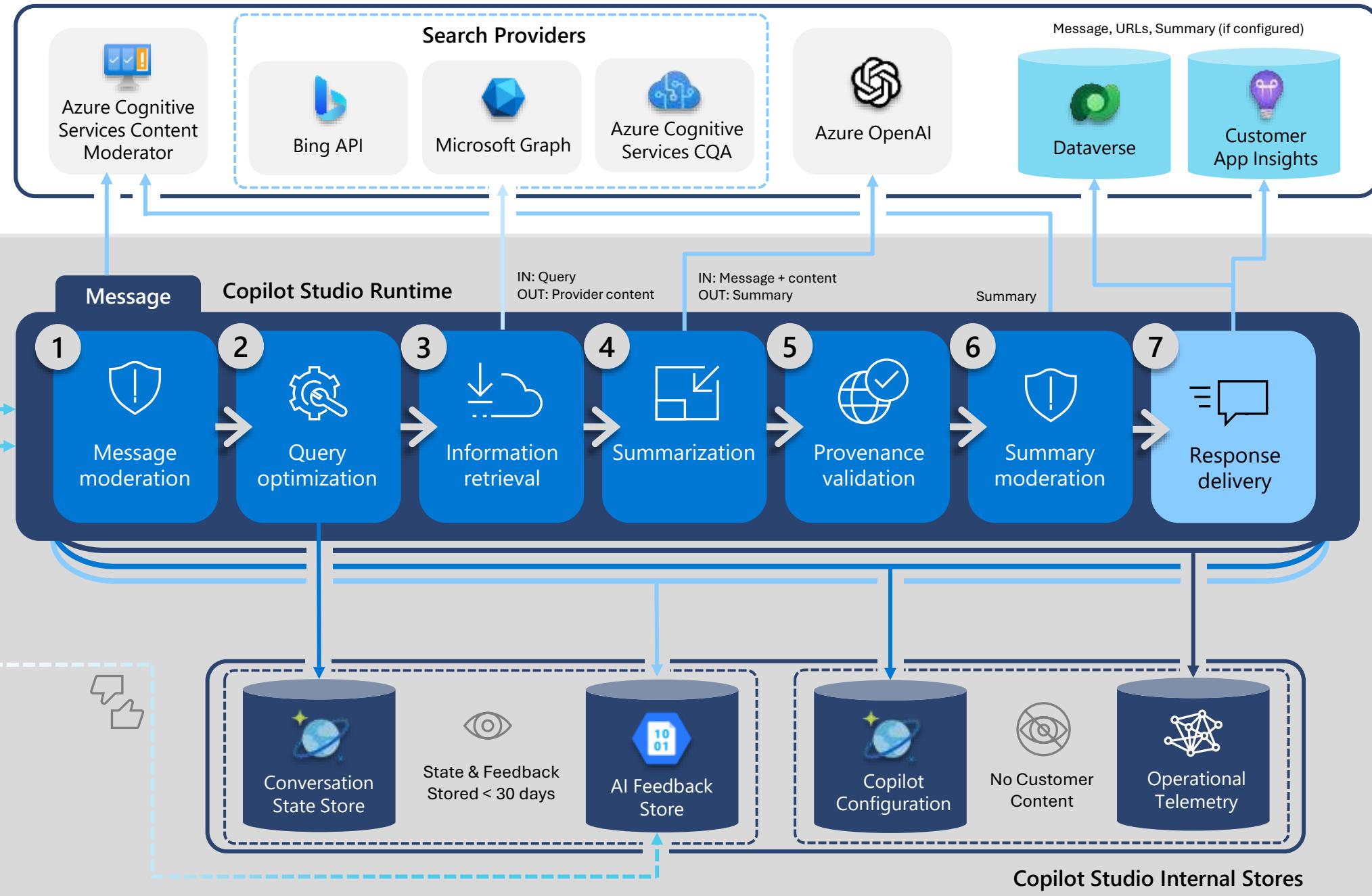
Generative Answers: How does it work?





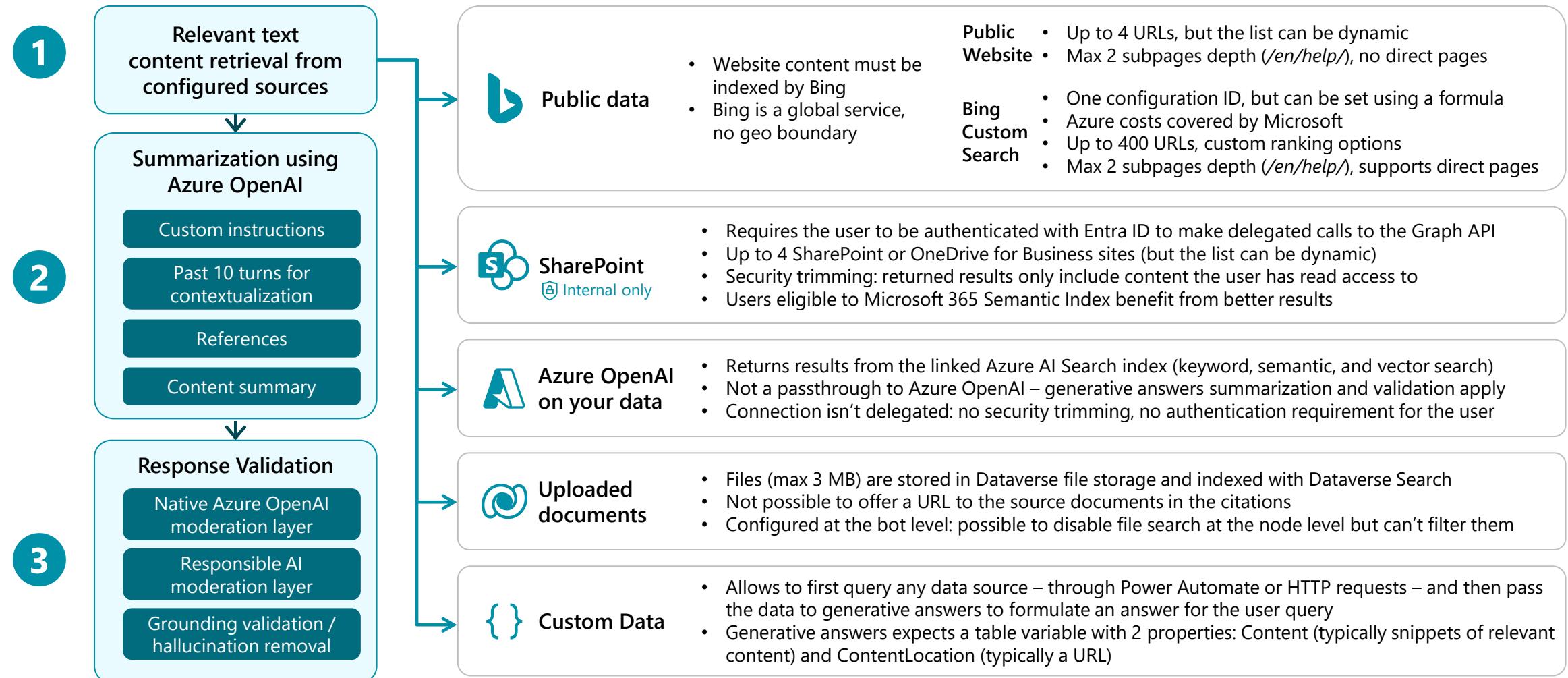
Microsoft Copilot Studio

Generative Answers Architecture



Generative answers considerations

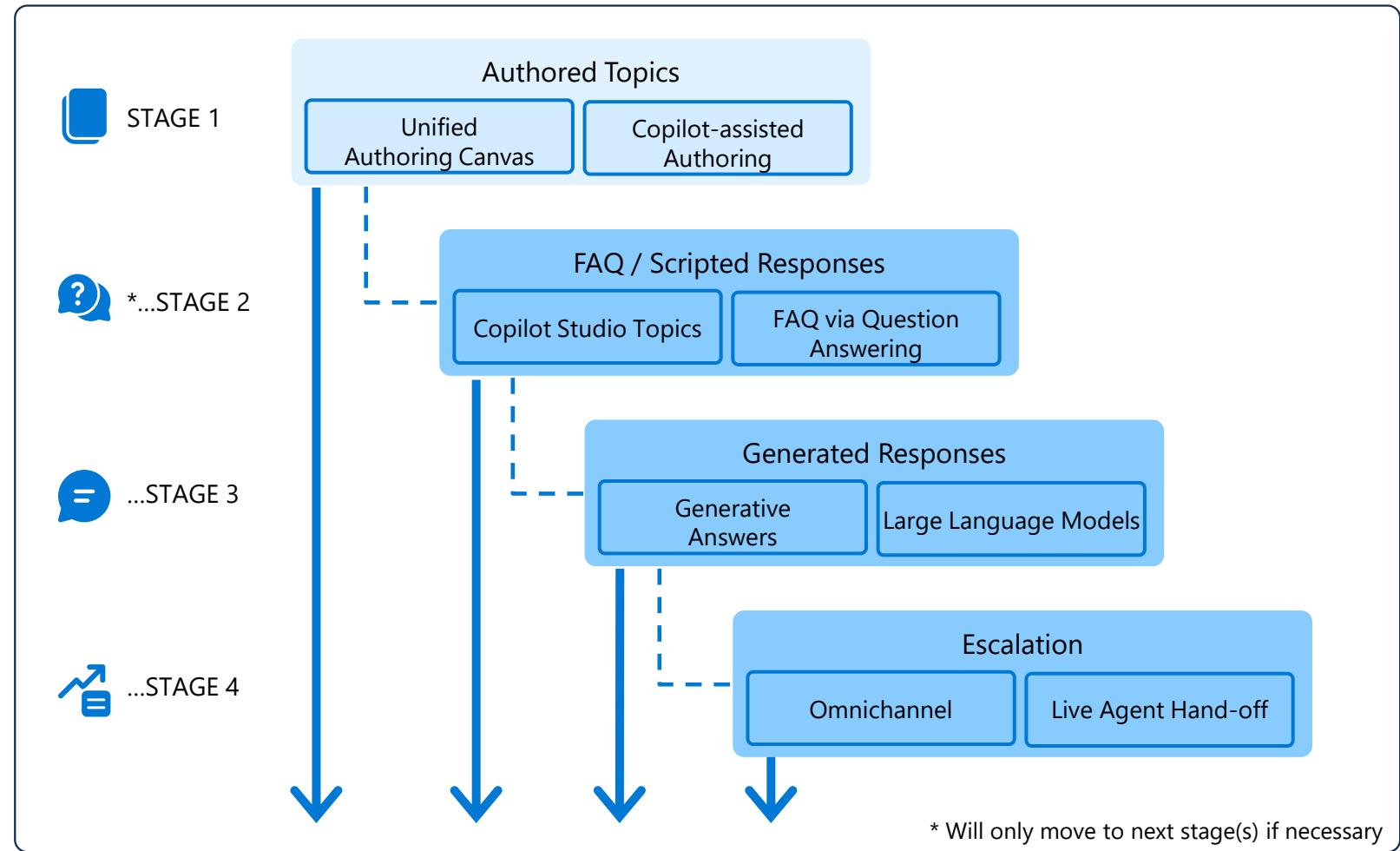
Generative answers processes and data sources



New design patterns with generative AI

New paradigm in topic responses

- This shows how generated responses are plugged into a dialog manager (Copilot Studio) to ensure that you remain in control of the user experience while allowing for authored experiences that are key functions of your copilot, scripted responses that are key for managing the answers you want scripted (such as marketing-controlled responses) work in conjunction with generated responses allowing the enterprise to remain in full control of the experience.
- This allows for an end-to-end enterprise conversational platform to build effective and managed experiences that delight customers, while reducing the overhead and cost of maintaining fully scripted experiences of the past.



Additional recommended content

Appendix section on this deck

Learn about alternative scenarios about how to infuse generative AI into topics.

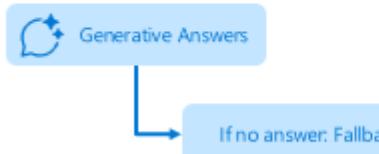
Infusing generative AI into topics example

Finding the right place for generative AI in your new or existing copilots

- Generative answers unlock new use cases for copilots where dialog paths no longer need to be fully anticipated.
- By plugging generative answers into your internal and external data sources, the copilot can search and summarize answers for user queries.
- It's not an 'either' choice: you can configure generative answers wherever you choose in your topics, and the data sources can both be dynamic, hard coded, or enriched with context variables.
- It's still a good idea to have generative answers also configured in the Conversational boosting topic that triggers before Fallback, to try to catch and answer user queries with broader data sources before they get to Fallback.
- While planning for generative answers, it's important to plan for follow-up questions (should they remain in context of the previous answer or trigger a new topic?) and how you will measure, track, and validate that the generated answers are accurate and answer the user questions.

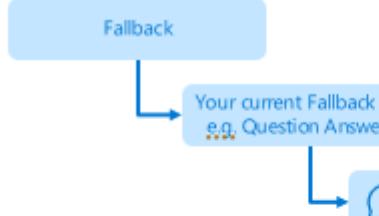
Pattern #1:

Placing Generative Answers as the first level of unknown intent logic before Fallback.



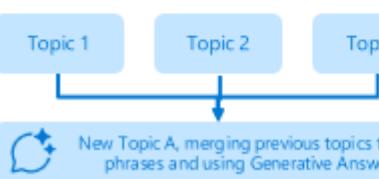
Pattern #2:

Enriching your existing Fallback



Pattern #3:

For simple, single-turn question & answer topics, group them into a single or multiple new topics with their past trigger phrases



Generative actions runtime

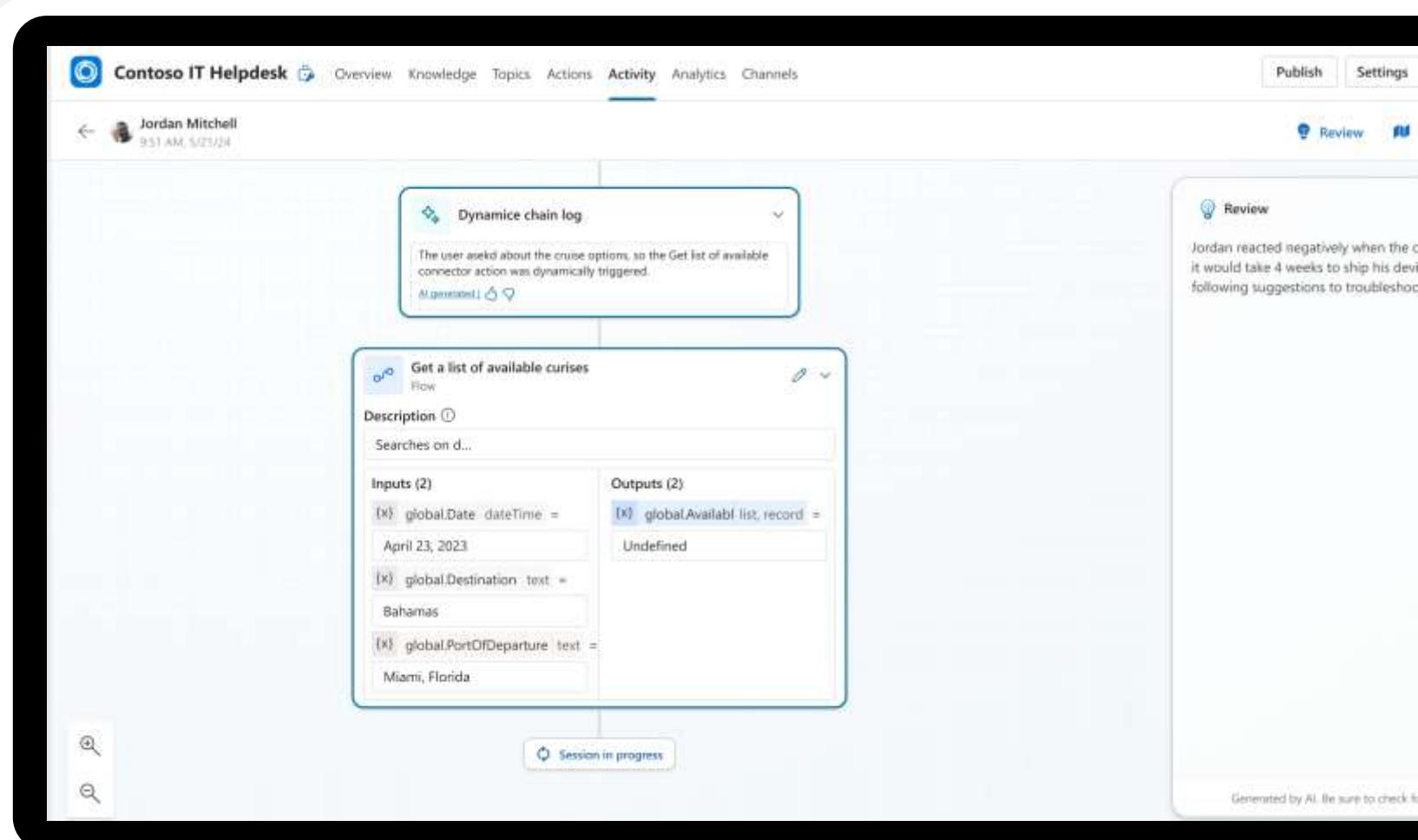
Test and trace feature to see it in action

Dynamically chains plugins together to produce actionable customer responses

Handle multi-intent queries that were not anticipated or built by the user

Automatically slot-fill further details to get the information needed for the task

Powered by the Azure OpenAI Service with “LangChain” concepts



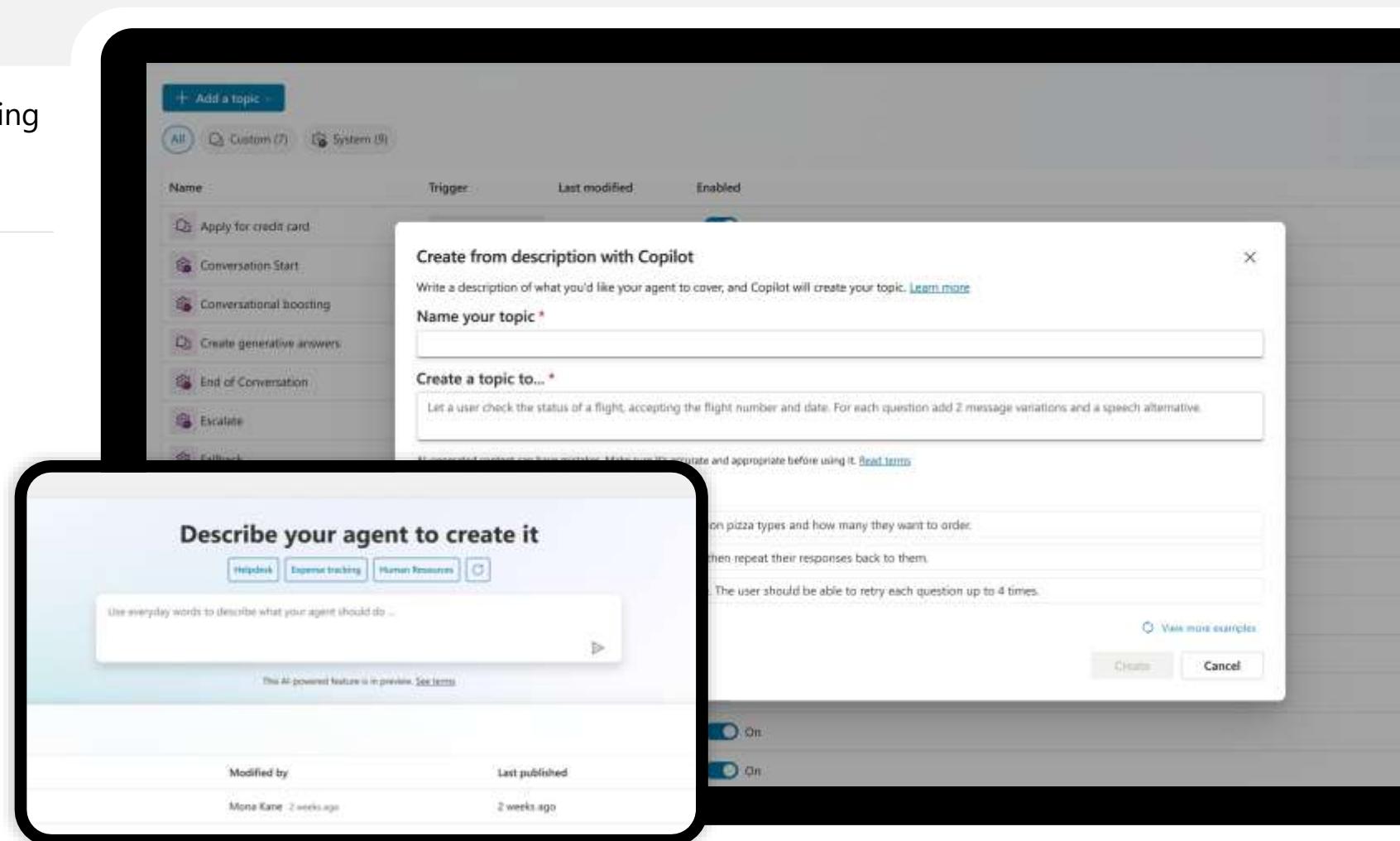
Generative building

Use AI assistance to build and modify agents - all through natural language

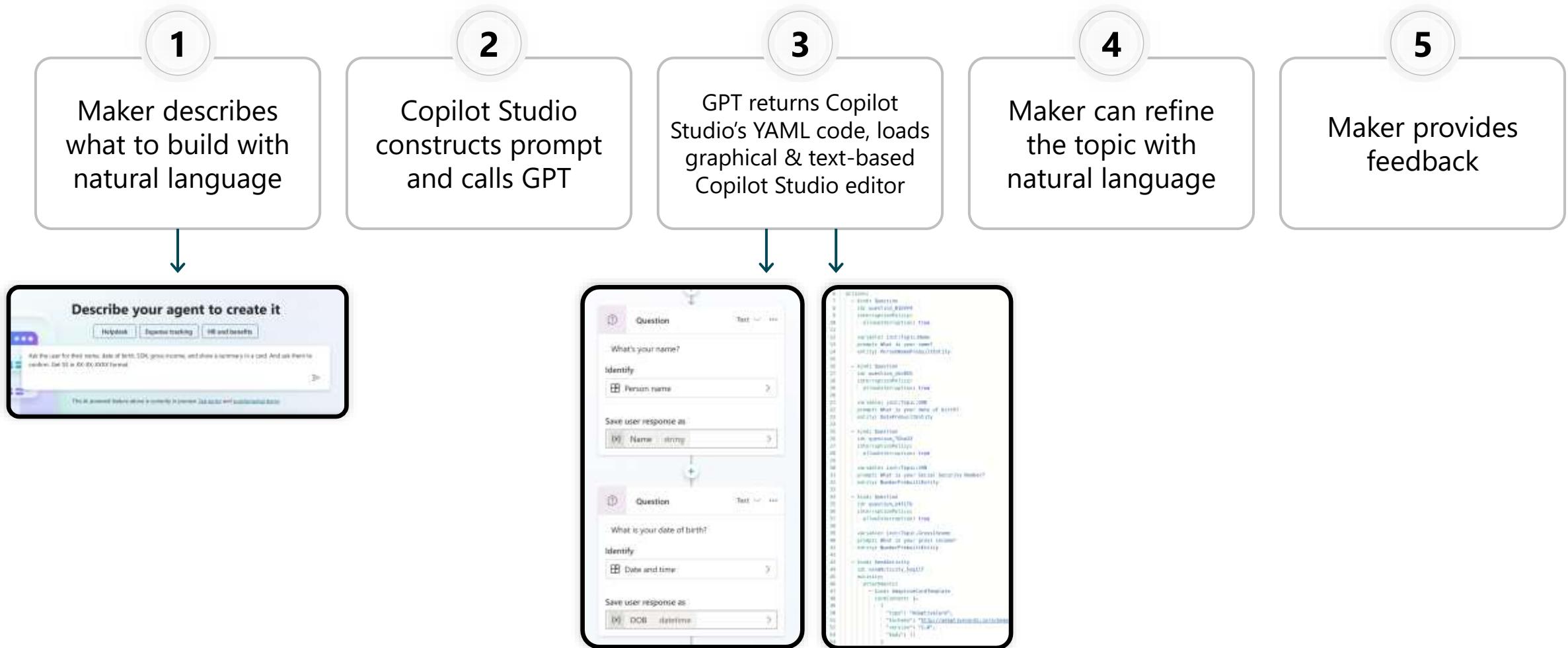
Build a complete custom agent by describing what you want your agent to do in natural language

Use the in-product embedded Copilot experience for:

- Topic creation
- Topic iteration
- Response generation
- Adaptive Card generation
- Topic improvement suggestions
- Suggested trigger phrases, topic names, topic descriptions
- Transcript generation
- Topic suggestions



How does generative building work?



Building copilots agents

Building copilot agents pillars



Microsoft Copilot Studio

Build copilots agents, your way

Design

Enhance

Manage

What's in Copilot Studio?



Agent Building Studio

Makers of all skill levels can use low code and AI to create their own agents and extend Microsoft 365 Copilot

Workspaces



Create

Quickly get started using natural language or an agent pre-built for you



Library

View your full list of custom agent components that enable knowledge and actions



Agents

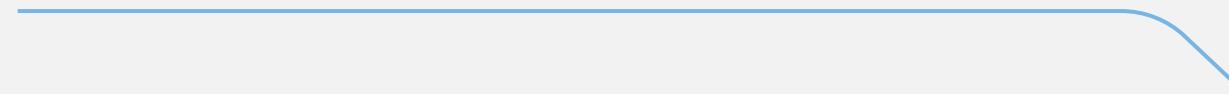
Connect to your org's knowledge, create topics, add actions, view analytics, choose which channels to deploy to and more



Admin Studio

Deploy agents securely using central administration, built-in security roles, and simple management across environments to maintain compliance and governance.

Design



Design powerful, connected agents

Handle complex queries with ease

Design intelligent conversations with greater control over the LLM such as robust variable and dialog management, logic, and responses.

Design personalized, responsive interactions

Engage employees or customers with rich, dynamic interactions that remember user content and context.

Customize your copilot how you want

Build custom plugins, connectors, and prompts, and surface your business data where you need it.

Connect to your organization's knowledge bases

Use generative AI to dynamically respond using your organization's real-time content.

Create automated workflows

Use Power Automate to trigger automation across your business with UI, API, DPA, and RPA automation capabilities.

Escalate to live agents when needed

Continue the conversation with full context with an end-to-end customer engagement platform.

Build the way you want

Users of all skill levels can create and test together

Preview

Templates

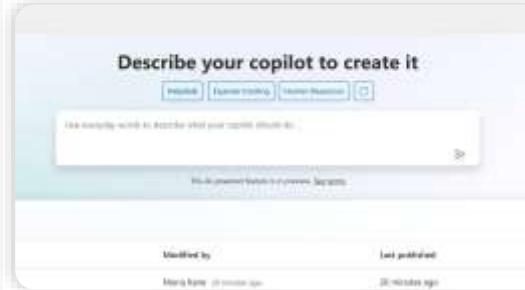


Get started quickly

Choose from a diverse set of pre-built scenarios across popular industries and functions.

Preview

Natural language



Build conversationally

Build copilots by engaging in a conversational, natural, human-like experience.

Visual canvas



Navigate a modern UX

Design your conversation by following the low code graphical interface.

Code



Switch to YAML

Share and re-use topic logic between developers and copilots in a side-by-side view.

Explore agents prebuilt for you

Choose from a variety of agents that are ready to deploy or customize further to fit your business needs

Copilot Studio

M365 Copilot Business Chat

Safe travels	Team navigator	Self-help	IT helpdesk	Case management	Idea Coach	Prompt Coach
Leave management	Awards & recognition	Weather	Wellness check	Benefits	Career Coach	Learning Coach
Inclusivity	Financial insights	Citizen services	Sustainability insights	+ more coming soon	Writing Coach	+ more coming soon

* Some listed options may only be available in preview

Customize your agent

Easily tailor your copilot's building blocks to meet your unique business needs in a comprehensive, end-to-end studio



Generative IVR

Attach your Copilot Agent to any **Dynamics Omnichannel workstream** now including IVR!

Single Copilot Studio project can **support multiple languages** for both **Voice** and **Chat** modalities

Optimize speech performance with **custom vocabulary** and **sensitivity settings**

Voice Optimized Generative Answers streamline responses for audio playback

Coming soon

Phone number
Choose a phone number to use with this channel. You can use an existing number, or get a new number.

Available phone numbers

Number ↑	Country/Region	Type
+10003414500	United States	Toll-free
+18883512200	United States	Toll-free
+19124217216	United States	Geographic
+19416672238	United States	Geographic

[Get phone number](#)

You'll be redirected to the phone number page where you can purchase a new number. After purchasing, return to the workspace to continue the voice setup for the new number.

Back Next

Learn more

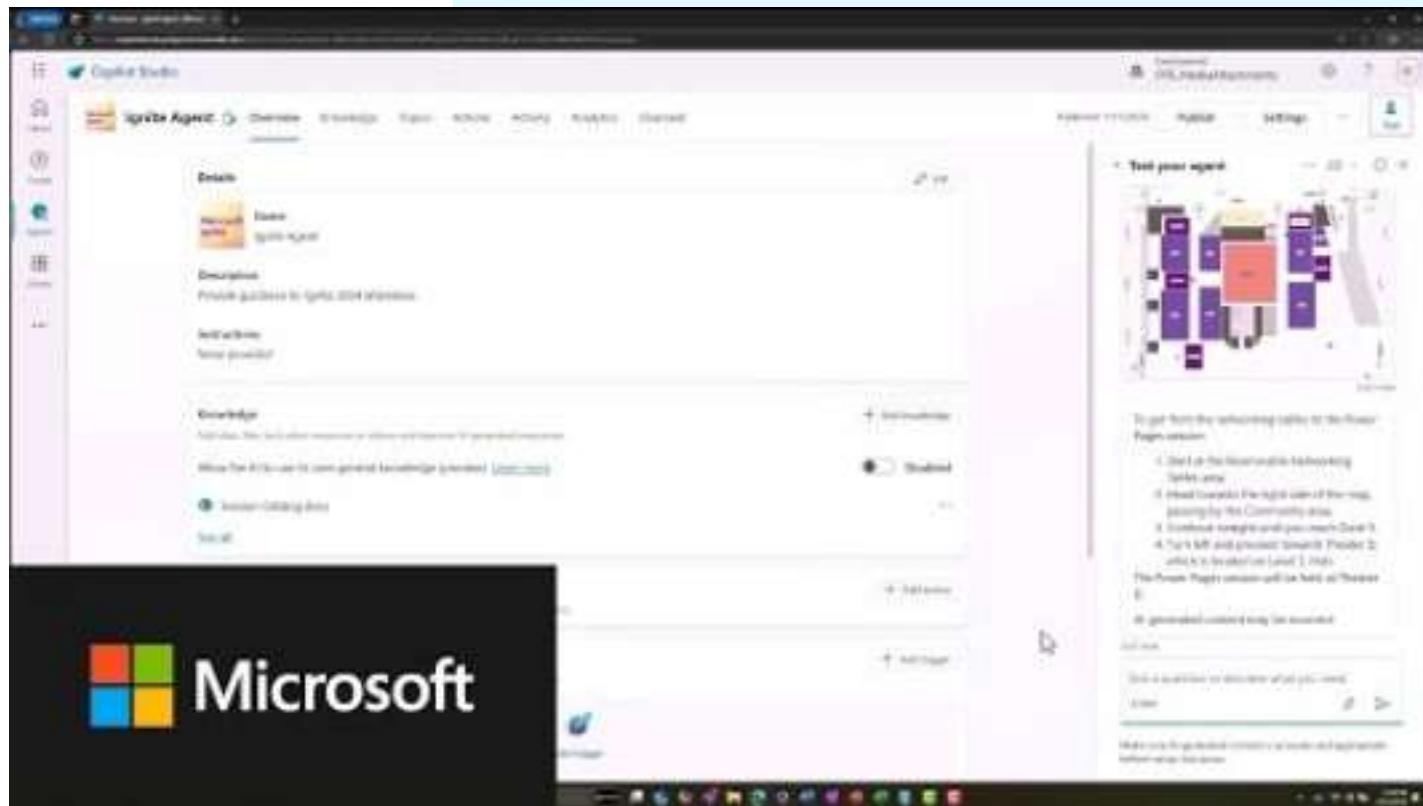
Coming soon

Multi-modal agents

Build transformative user experiences using Copilot Studio

Interact **contextually** using **voice, tap, clicks** or **images**

Embed the multimodal agent in your applications and websites



Additional recommended content

Appendix section on this deck

Learn about popular Copilot Studio authoring features.

Popular authoring features

Rich responses	Power Fx-based variables system	Code side-by-side	Event-driven & contextual triggering	Productivity
Rich responses Adaptive Cards Images Videos Quick Replies	Power Fx-based variables system <ul style="list-style-type: none">Power Fx integrated formula editor for variable managementList/record type supportCondition nodes with Power Fx formula supportIterate over a list with new Loop nodes	Code side-by-side <ul style="list-style-type: none">Move between a visual editor and codeShare and re-use topic logic between developers and agents	Event-driven & contextual triggering <ul style="list-style-type: none">Trigger an event if it detects a certain value has been receivedAdd more nuanced responses to a message when the agent runs into an issueAgents can stay within context when a user asks for help or more details	Productivity <ul style="list-style-type: none">Cut, CopyMulti-nodeEnhanced navigation

Creating an agent with generative orchestration

Knowledge

Add your **public and enterprise data** sources using copilot connectors.

Your copilot will be able to **dynamically generate multi-turn answers** in real time using your enterprise data.

Allows you to create an **immediately useful** agent.

Supported data sources include:

Public websites

SharePoint / OneDrive

Dataverse

Microsoft Fabric (coming soon)

File uploads

Microsoft Graph

Add available knowledge sources (Powered by Copilot connectors)

Users with edit permissions for this copilot can also reuse your connections for other topics within the copilot. [Manage security settings](#)

Keywords for the data you're looking for

Featured

- Add existing knowledge**
→ Converts previous data sources to knowledge for this copilot
- Public website**
Incorporate any relevant web content found on Bing
- Files**
Upload documents from your local computer

- SharePoint and OneDrive**
Securely integrate and manage internal data
- Dataverse**
Customize and deploy structured data tables
- Microsoft Fabric**
Accelerate data analysis with AI capabilities

Bring your enterprise data (16)

- Enterprise website (preview)**
- Azure DevOps (preview)**
- Custom connector (preview)**
- Jira (preview)**

- ADLS Gen2 (preview)**
- Oracle SQL database (preview)**
- ServiceNow (preview)**
- File share (preview)**

- CSV (preview)**
- Microsoft SQL (preview)**
- MediaWiki (preview)**
- Salesforce (preview)**

- Confluence (preview)**
- Azure SQL (preview)**
- Zendesk (preview)**
- Power Platform connector**

Better SharePoint Search

Lower latency & higher quality responses

New PDF parsing mechanism **reduces latency by 45%**

Improved chunking, document & passage selection logic
improves response quality by 40%

Significant quality improvements to the underlying search itself by transitioning **from keyword to semantic index**

15% more answers with relaxed summarization prompt

Microsoft Ignite

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Nov 18–22, 2024



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Development languages

Topics

[Filter by title](#)

Overview of Microsoft Search

Set up

Manage access to files and sites

US government environments

Microsoft Search FAQs

› Get insights

› Provide answers

› Data sources

› Microsoft Graph connectors

› Federated Search connectors

› Semantic index

Semantic index for Microsoft 365 Copilot

› Customize and configure

Learn /

Semantic index for Copilot

Article • 08/28/2024 • 4 contributors

In this article

[What is an index?](#)

[How the semantic index helps manage your data](#)

[Features](#)

[How the semantic index works](#)

[Show 15 more](#)

Semantic index is generated from content in [Microsoft Graph](#). It's used to aid in the generation of contextually relevant responses to user queries. It allows organizations to search for content based on vectors (mathematical representations of features or attributes) and return relevant results. Combined with enhancements across the Microsoft Graph, semantic index connects relevant information in your organization. It's built on Microsoft's comprehensive approach to security, compliance, privacy, and respects all organizational boundaries within the organization.

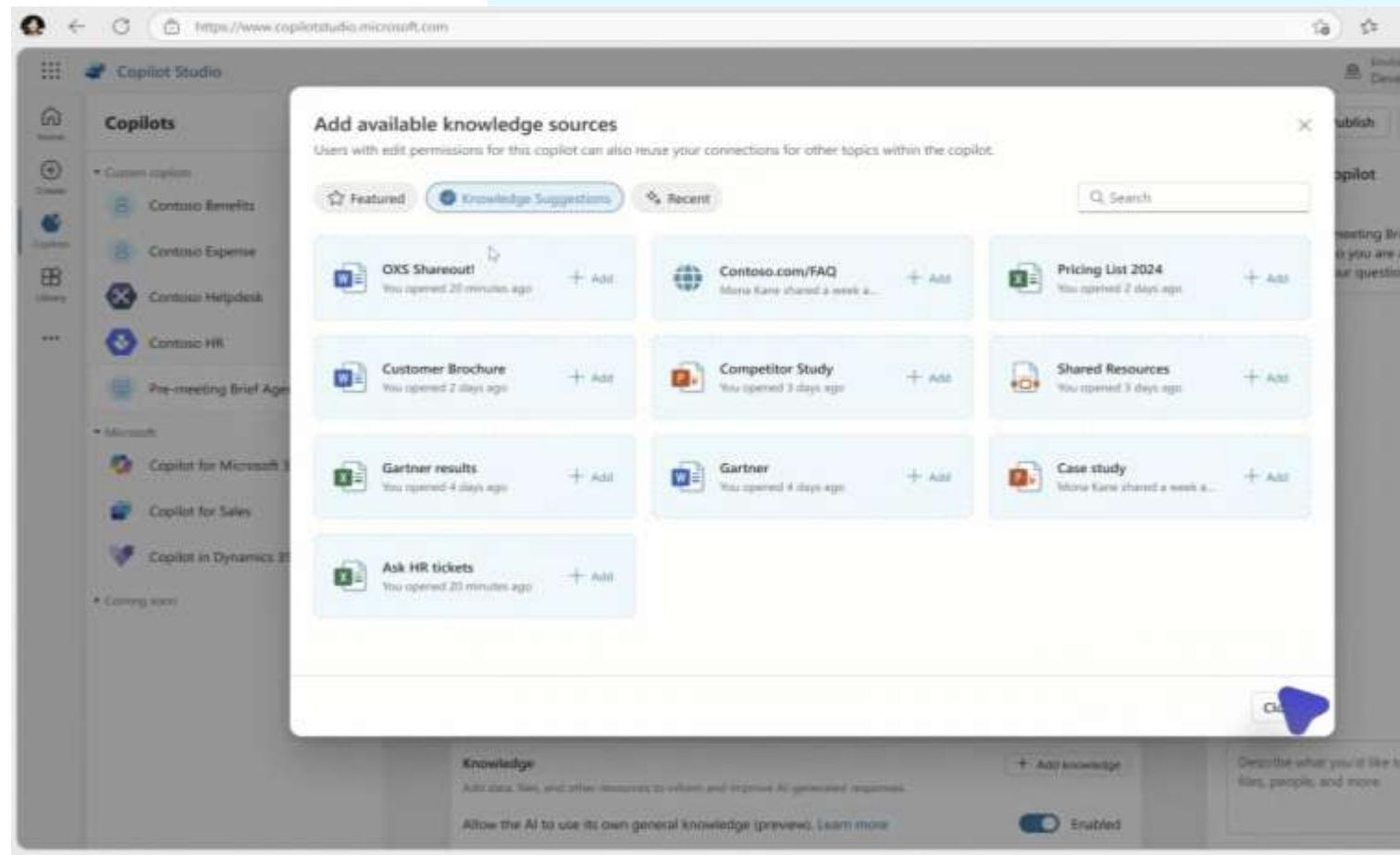
[Learn more](#)

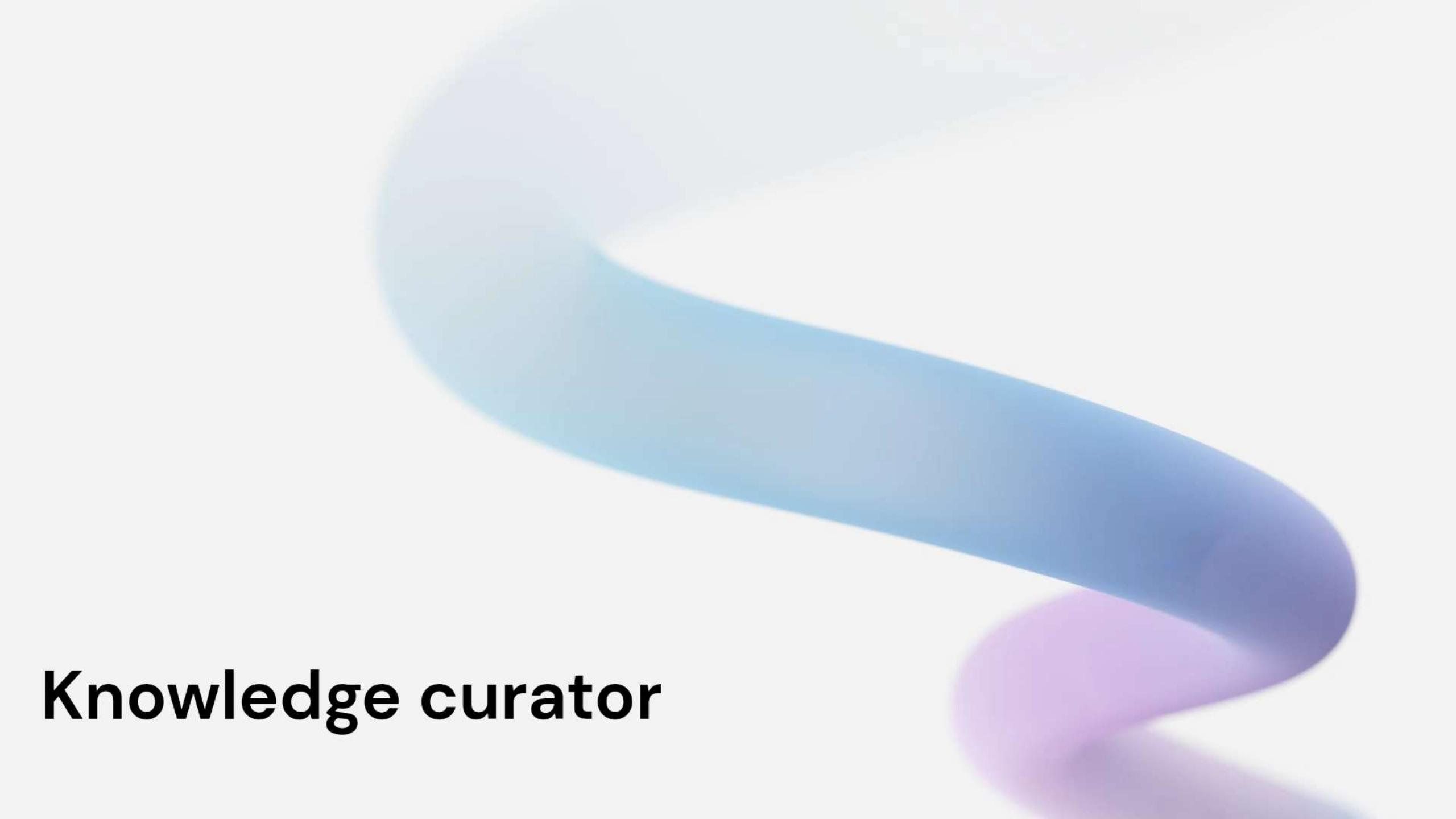
Knowledge Curation

Analyzes your knowledge base to provide **visibility** over which sources are being used and where there are **unanswered questions** and themes.

Provides a **guided way** to filter sources and even **add custom knowledge** to fill gaps in the knowledge base

Recommends knowledge from within your organization that is relevant to your copilot and scenario.



The background of the slide features a subtle, abstract design. It consists of two thick, curved bands that overlap each other. The top band is a light blue color, while the bottom band is a lighter shade of blue or purple. These bands curve from the top left towards the bottom right, creating a sense of motion and depth.

Knowledge curator

Actions

Easily connect to your key line of business systems.

Enable your agent to automate your business processes and complete tasks.

Types of actions:

Prebuilt connectors

Choose from 1400+ prebuilt Power Platform connectors to popular data sources and apps

Custom connectors

Create a custom connector for any publicly available API

Flows

Bring in automated workflows built using Power Automate

Prompts

Provide custom instructions to the GPT model using AI Builder

Skills

Add a bot built using Azure Bot Framework as a skill

Step 1 of 3: Choose an action
Create an action or browse through our list of actions you want to use to get information from external sources. [Learn more](#) X

Discover an action
Search for flows, skill actions, and commonly used connector actions

Search

11 actions found

Connectors Custom Connectors Flows Skills Dataverse

 Untitled Get information about industries, solutions, services and cont...	 Run a flow built with Power Automate for desktop Desktop flows
 Delete a row Excel Online (Business)	 Run script Excel Online (Business)
 Get a row Excel Online (Business)	 Run script from SharePoint library Excel Online (Business)

Cancel

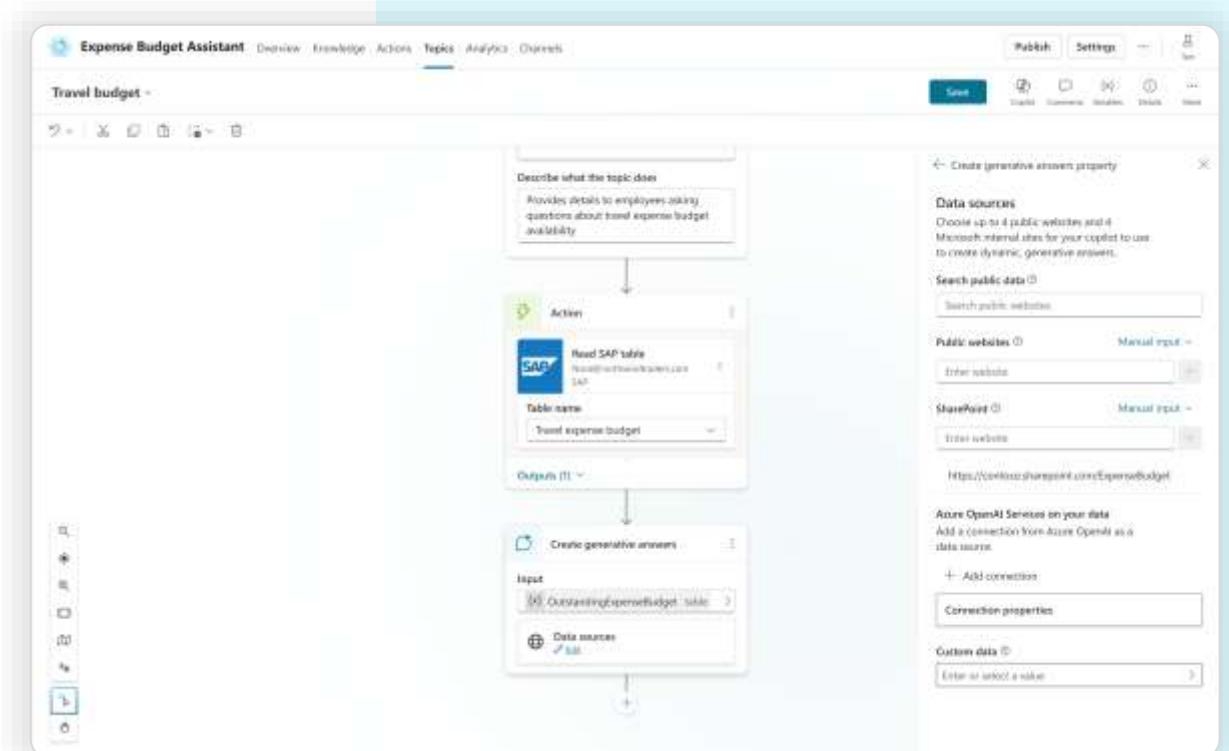
Logic

Have **complete control over critical scenarios** by designing specific step-by step topics.

Enable your agent to **automatically select the most appropriate action or topic** to respond to a user using generative AI.

Easily mix and manage both **generative and custom dialog** in one system.

Connect to your contact center so your copilot can escalate and hand off the conversation with full context to a live human agent.

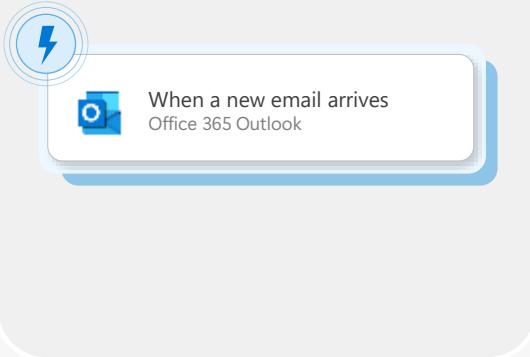


Example

Autonomous agent

1) Trigger >>>>>> 2) Instruction >>>>>> 3) Plan >>>>>> 4) Outcome

The agent automatically reacts to triggers

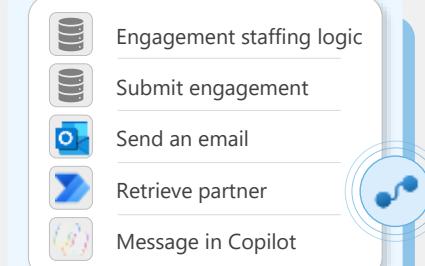


The agent follows instructions provided by the maker

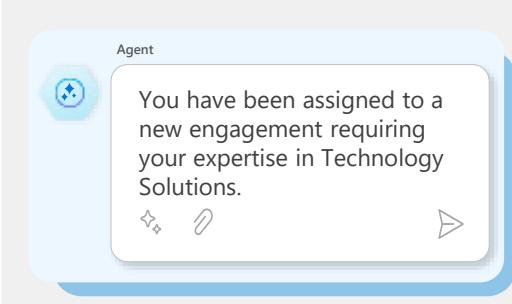
Instructions

- You are an agent that helps to evaluate and staff incoming engagement requests from clients.
- First, analyze the incoming email to extract key client details. Verify the engagement information and confirm the industry sector. Assess historical data and identify the required expertise. Assign a suitable partner and notify them. Log the engagement details and inform the engagement director.

The agent takes action using your data and systems



The agent generates a response



Autonomous agents

Handle variability and complexity at infinite scale

Independently begins work based on autonomous triggers

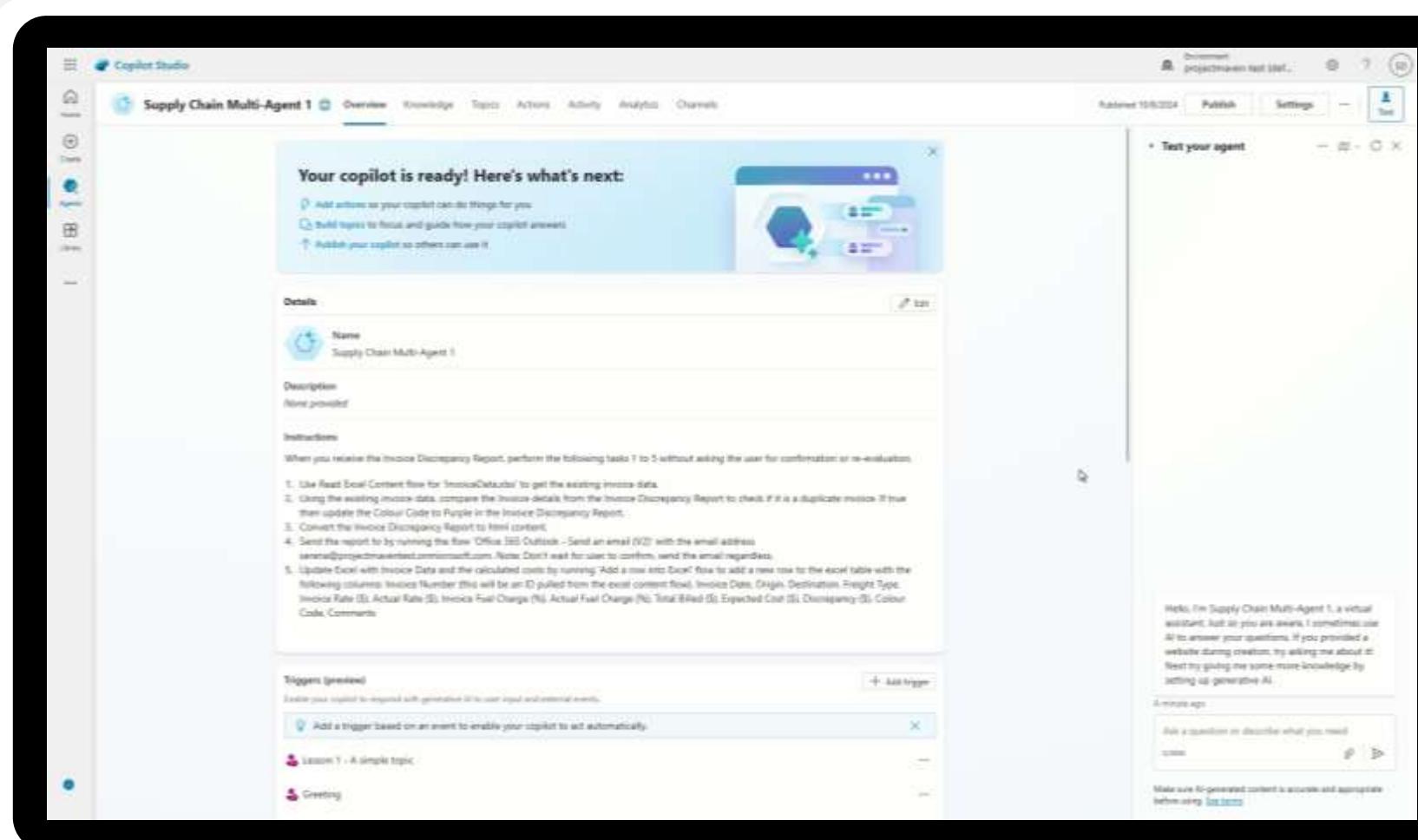
Automates long running processes

Dynamically reasons over its capabilities

Learns and improves

Follows human guard rails and asks for help

Orchestrates other agents





**Crie seu próprio agente
autônomo com Copilot
Studio**

Channels

Publish and deploy to your channels of choice with a single click.

Add your agent to a custom app built with Power Apps or a custom website built with Power Pages.

You can access even more channels through ISVs, including:



WeChat



WhatsApp
through Twilio



Google's Business
Messages



Apple Messages
for Business



Azure
Communication
Services



TeleSign



Custom

Expense Budget Assistant Overview Knowledge Actions Topics Analytics Channels

Your copilot was published at 9:42 AM on 3/30/2024! Your users will see the new content soon.

Publish status
Verify or modify the availability of your copilot

Published March 20, 2024

Channels
Configure your copilot channels to meet your customers where they are.

Teams Demo website Custom website Mobile app Facebook Twilio Skype Slack Telegram Direct Line Speech Email Line GroupMe

Customer engagement hub
Connect to a customer engagement app to enable your copilot to hand-off a chat session to a live agent or other copilot. [Learn more](#)

Dynamics 365 Customer Service Genesys Salesforce LivePerson ZenDesk Customer engagement hub

Extend Microsoft 365 Copilot

Copilot Studio agent builder allows you to build an agent directly in Business Chat and SharePoint

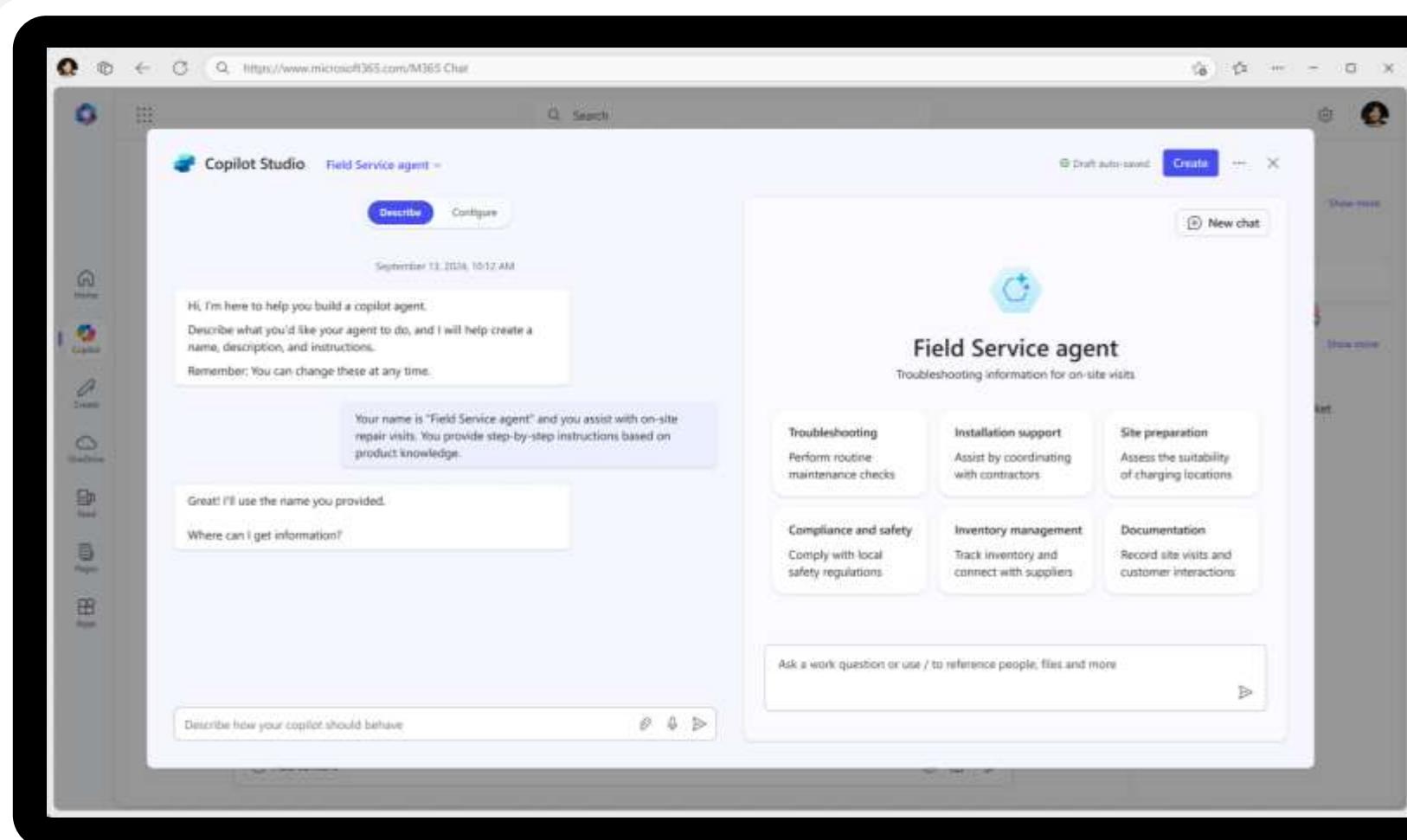
Empower end users to **build knowledge-only agents** using natural language

Get started quickly with **agents pre-built for you** in BizChat

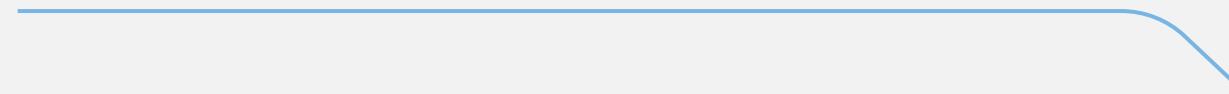
Take your agent a step further by **adding actions** in the full Copilot Studio experience

Seamlessly **share your agent** across your organization with shareable links

Ensure compliance with **centralized management tools**

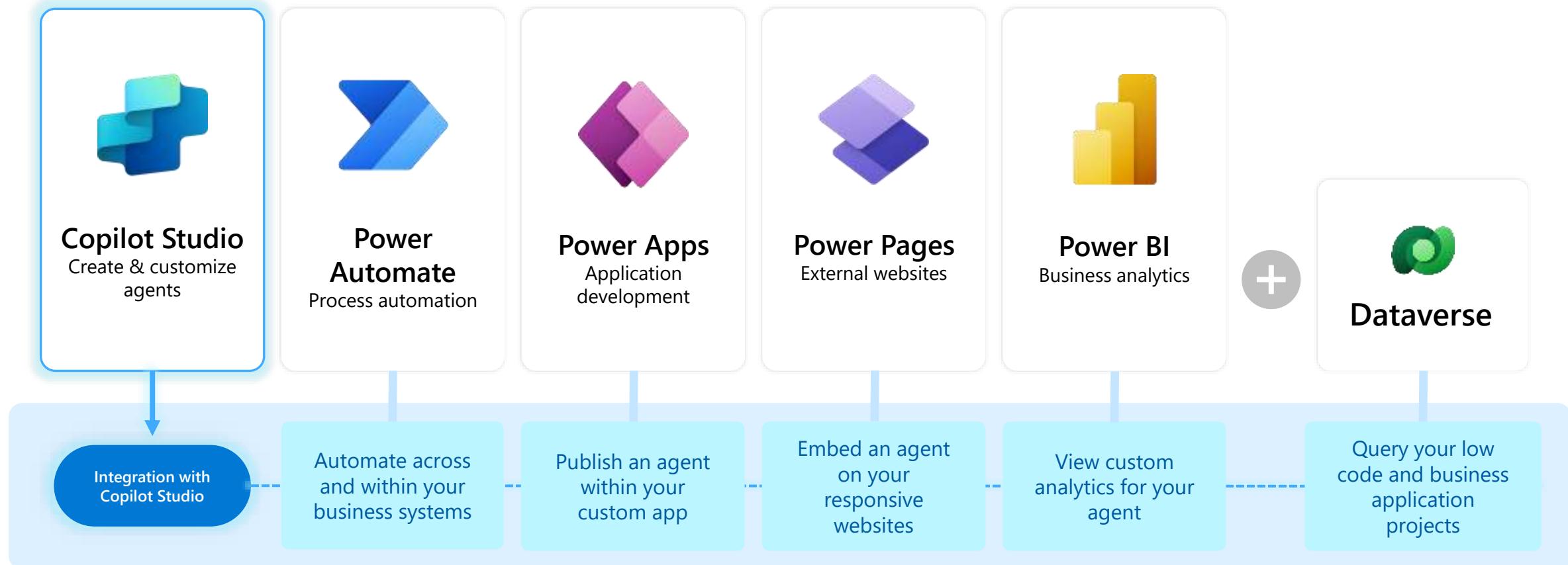


Enhance



Microsoft Power Platform

Accelerate app development, automate workflows, visualize data, and reduce repetitive tasks with AI-powered tools



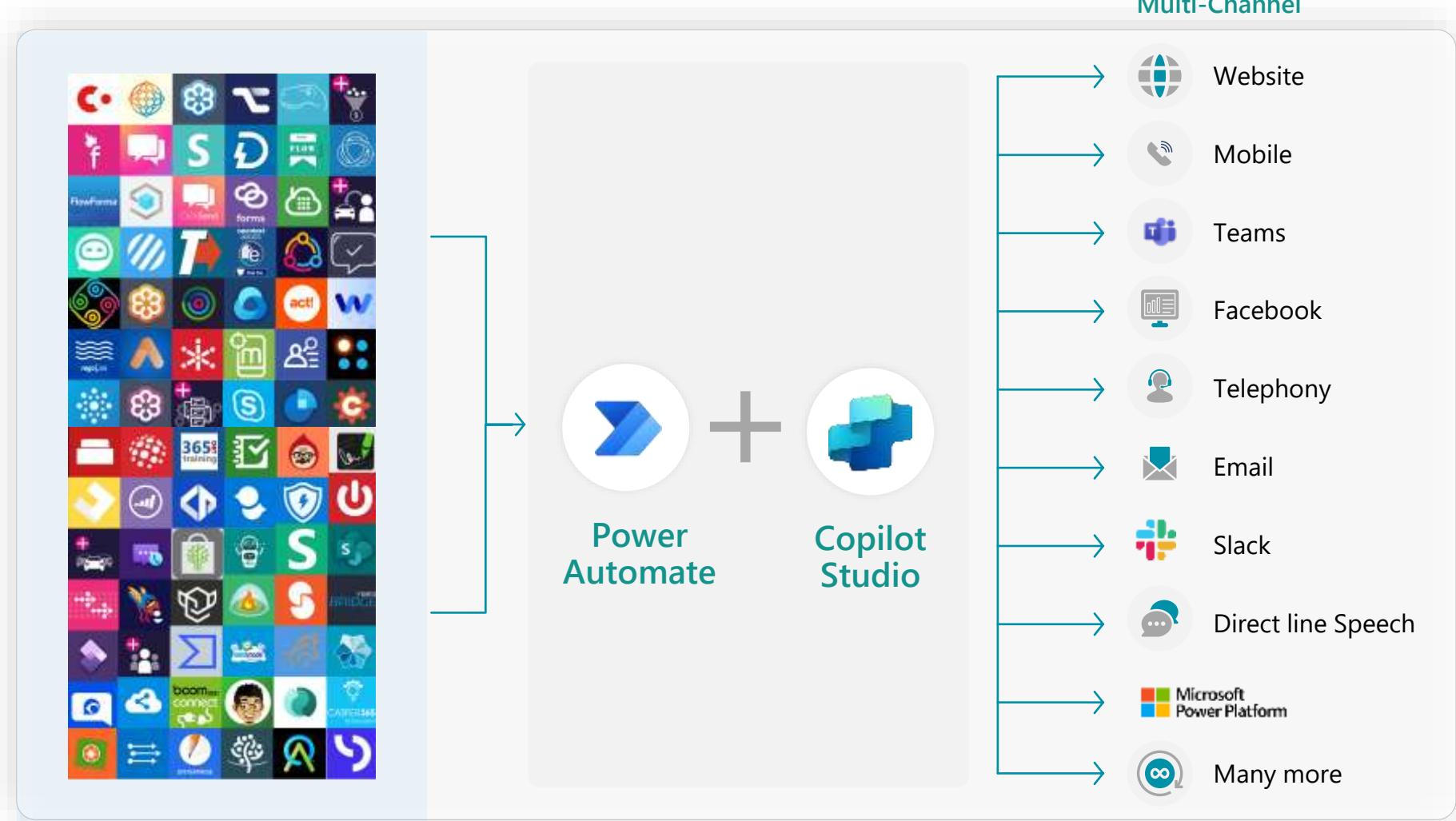
Power Automate and connectors

Integrate Copilot Studio into Power Automate to build, edit, and extend automation with 1,500+ pre-built connectors or custom APIs

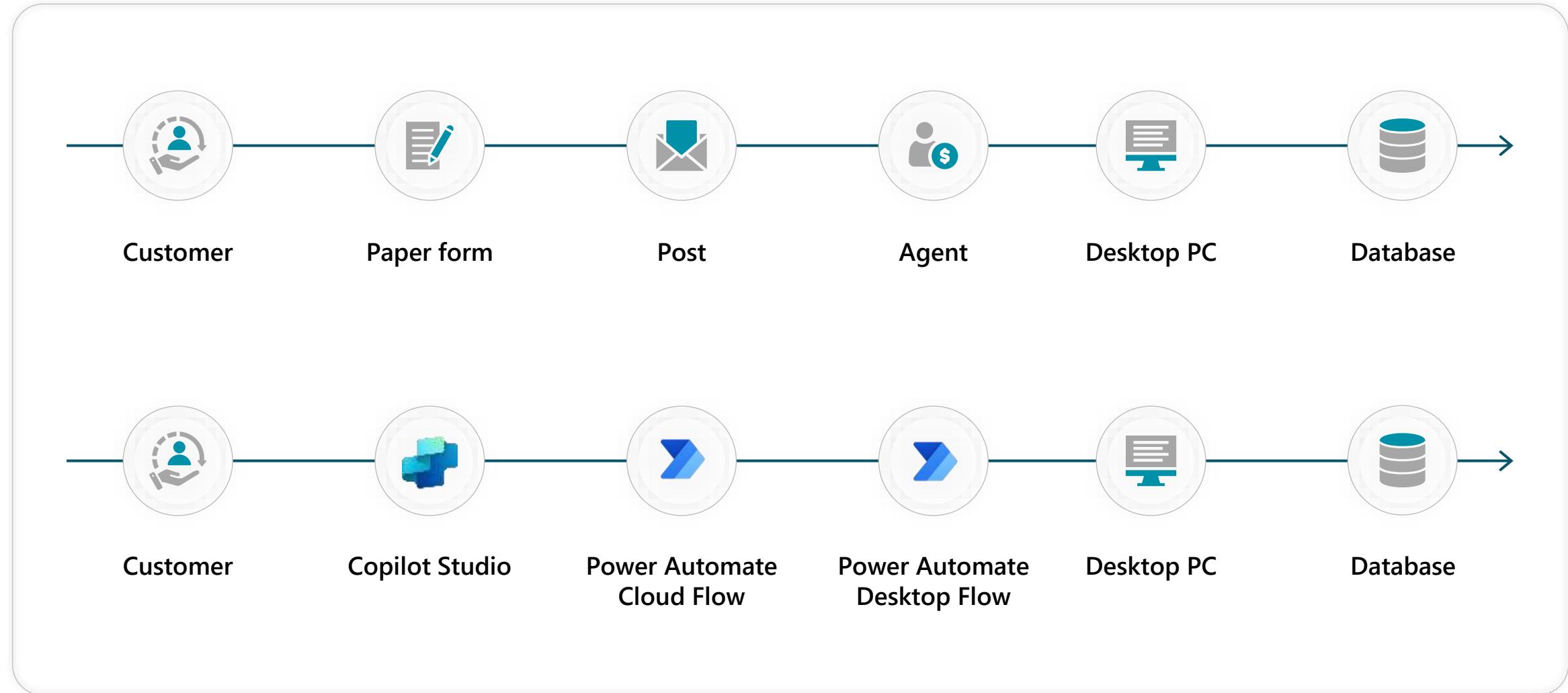
For a smooth user experience, cloud flows triggered by Copilot Studio execute quickly to minimize delays in response times

Cloud flows from Copilot Studio have a 100-second limit to return results before timing out

Make HTTP requests directly from Copilot Studio to bypass cloud flows and enhance efficiency



Add Robotic Process Automation into your chat





Prompt building with AI Builder

A single interface to build, design, and test generative AI Prompts that can be embedded across products

Add a prompt action

Action details

Create prompt

Select action parameters

Review and test

Publish

Prompt

Extract the specified / provided as a comma-separated list, and match it up with the Account.Account Name , paying special attention to preserving the respective data types, such as strings for text, numbers for quantities, and ISO 8601 dates for times. In the value's context. Adapt to multilingual content, accurately extract quantities and accurately reflects the value with its currency symbol or code, and represents other relevant information.

listing them at the same time. Inputs numerical amount all data. For each entity, Text

For example:

```
  "extracted_data": {  
    "[entityToBeExtracted":  entityToBeExtracted  
    "[entityToBeExtracted":  input text  
    "[entityToBeExtracted":  Data used (preview)  
    // Continue listing entities  
    ...  
  }  
}
```

Test prompt

All inputs and data are available for this step.

Prompt response

Waiting for response generation.

Back

Prompts are saved in AI Builder's prompt library and become a platform concept (supporting sharing, ALM, RBAC)

Prompts can be created and invoked in agents via topics or actions

Key capabilities:

- Multi-modal (images, files etc.)
 - Low-code multi-model selector (4o mini, 4o)
 - Native Dataverse table data
 - Templates available out-of-the-box

No code, low-code, and pro-code – all are welcome



Integrate with Azure AI Foundry

AI Search

Azure OpenAI's models enable you to build powerful conversational experiences over your data with Copilot Studio.

Analytics

Build custom analytics by moving your data into extended data pipelines.

API Calls

Copilot Studio supports any API / HTTP calls to Azure services.

Language Services

Connect Conversational Language Understanding, including dialog triggering, interruptions, did-you-mean, and slot filling.



Application Lifecycle Management

Works with Azure Devops for full ALM and solution management.

Telemetry

Use Azure app insights for custom telemetry on copilot usage.

Bot Framework

Access Bot Framework Composer capabilities natively in Copilot Studio, call existing Azure Bot Framework skills, and update and extend bots.

Knowledge Base

Bring Azure Custom Question Answering into your agent.

CQA integration

Customize your agent to provide answers from your specific knowledge base

Tailor responses based on specific languages in CQA

Multilingual base model available in over 70 languages, including 12+ Indic languages

Combine the accuracy of CQA with the simplicity of Copilot Studio to create an agent:

- Leverage Fallback Topics for Logical Flows
- Enhanced Natural Language Processing (NLP)
- Seamless Integration and Easy Configuration
- Rapid Iteration and Continuous Improvement

← Search connectors and actions

Triggers Actions Help

Generate answer from Project Language - Question Answering

Generate answer from provided text Language - Question Answering

Get Project Metadata Language - Question Answering

Don't see what you need?

Help us decide which connectors and triggers to add next with [UserVoice](#)

Azure Custom language understanding integration

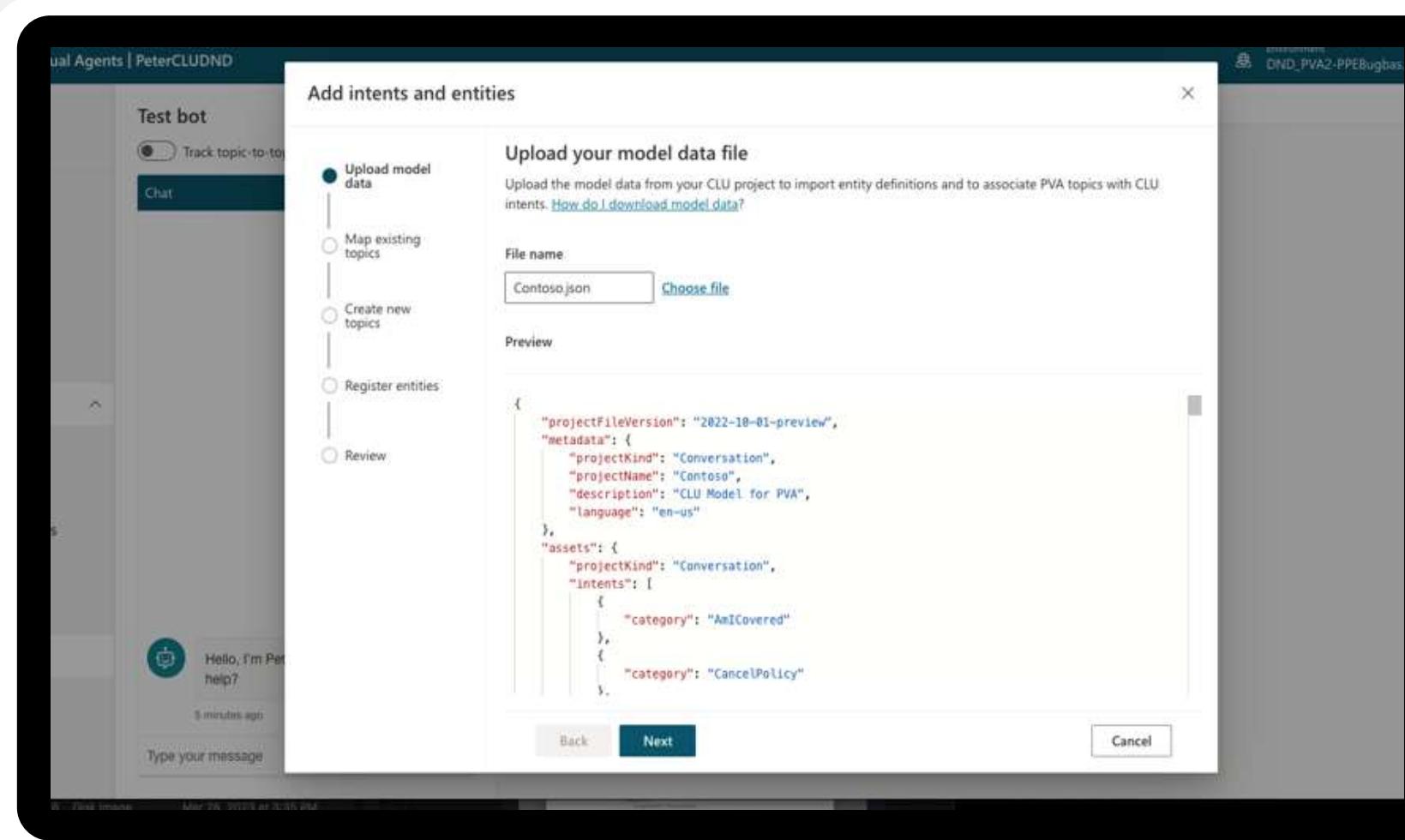
Customize your conversational language models to your specific use case

Tailor responses based on specific languages in CLU

- Multilingual base model available in over 70 languages, including 12+ Indic languages

Blend the power of CLU with the simplicity of Copilot Studio to do more with your chat bot:

- Enhanced Natural Language Processing (NLP)
- Improved Intent Recognition and Entity Extraction
- Seamless Integration and Easy Configuration
- Rapid Iteration and Continuous Improvement



Bot Framework as skills

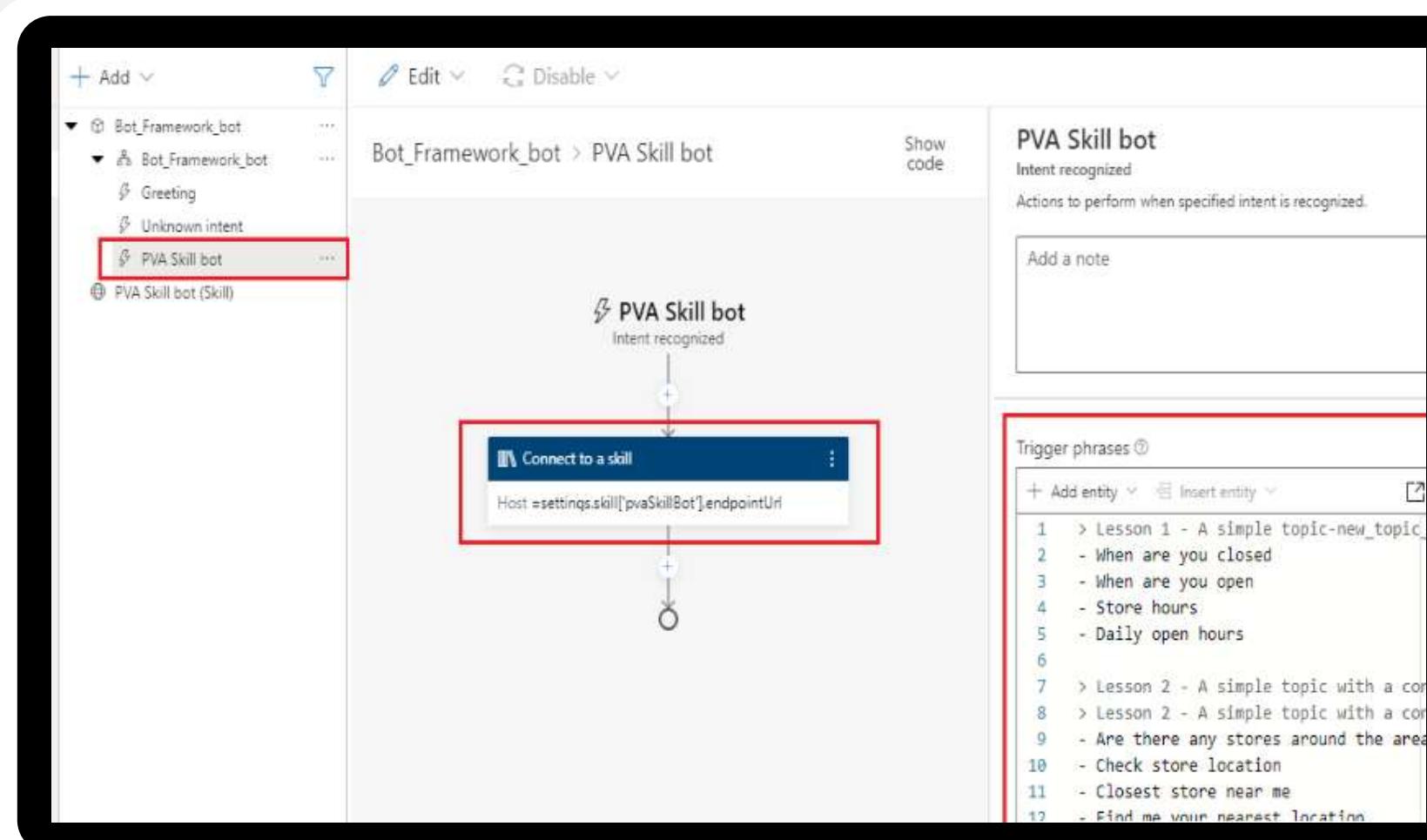
Extend Bot Framework bots with Copilot Studio functionality

Manage which Copilot Framework bots can use a Copilot Studio Copilot as a skill

Add Copilot Studio bots as a skill in Composer and Copilot Framework SDK and easily download the Copilot skill manifest

Invoke Copilot Studio Topics from Copilot Framework bots - based on a user utterance

Create bots collaboratively and easily connect the Copilot ecosystems



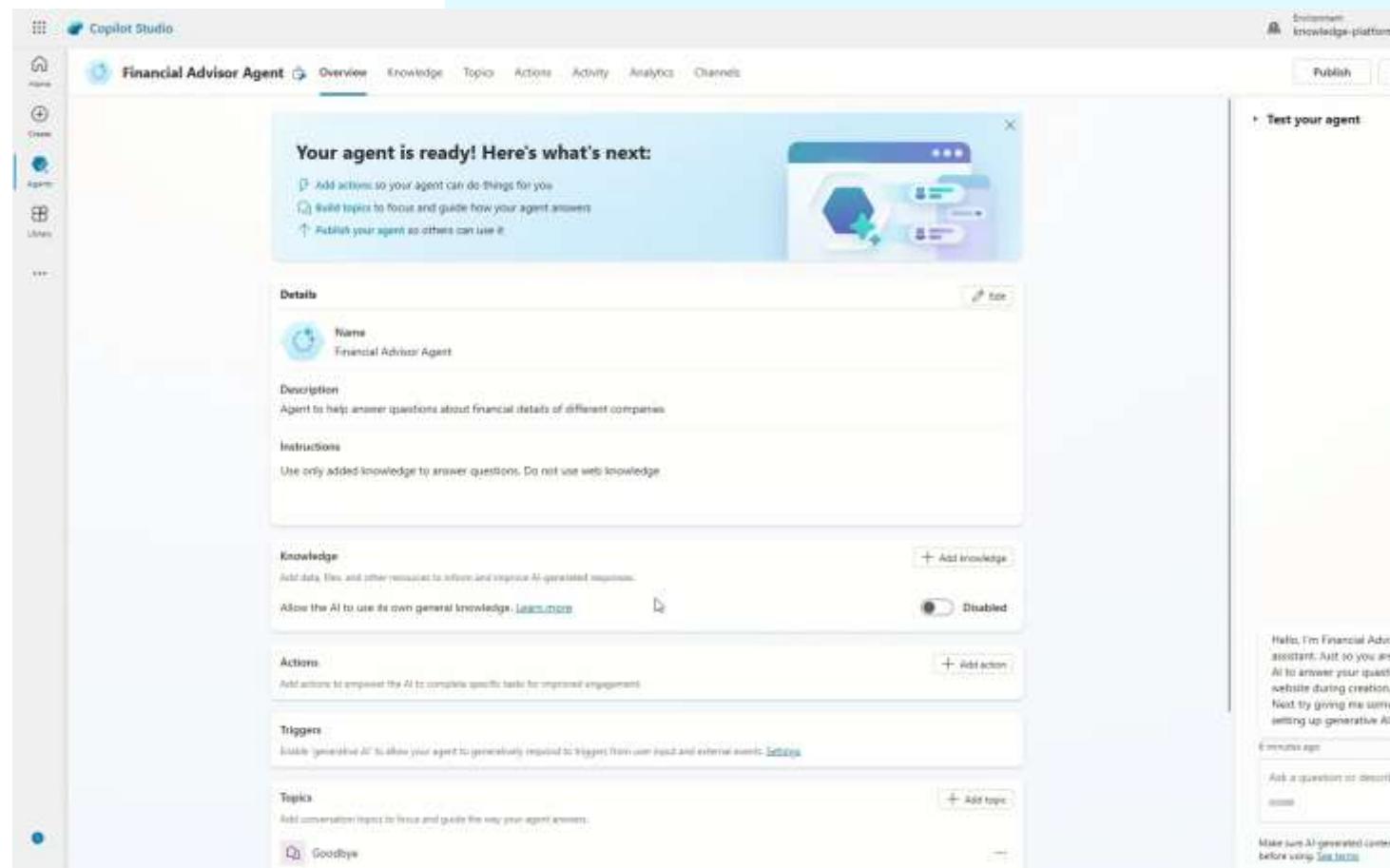
Coming soon

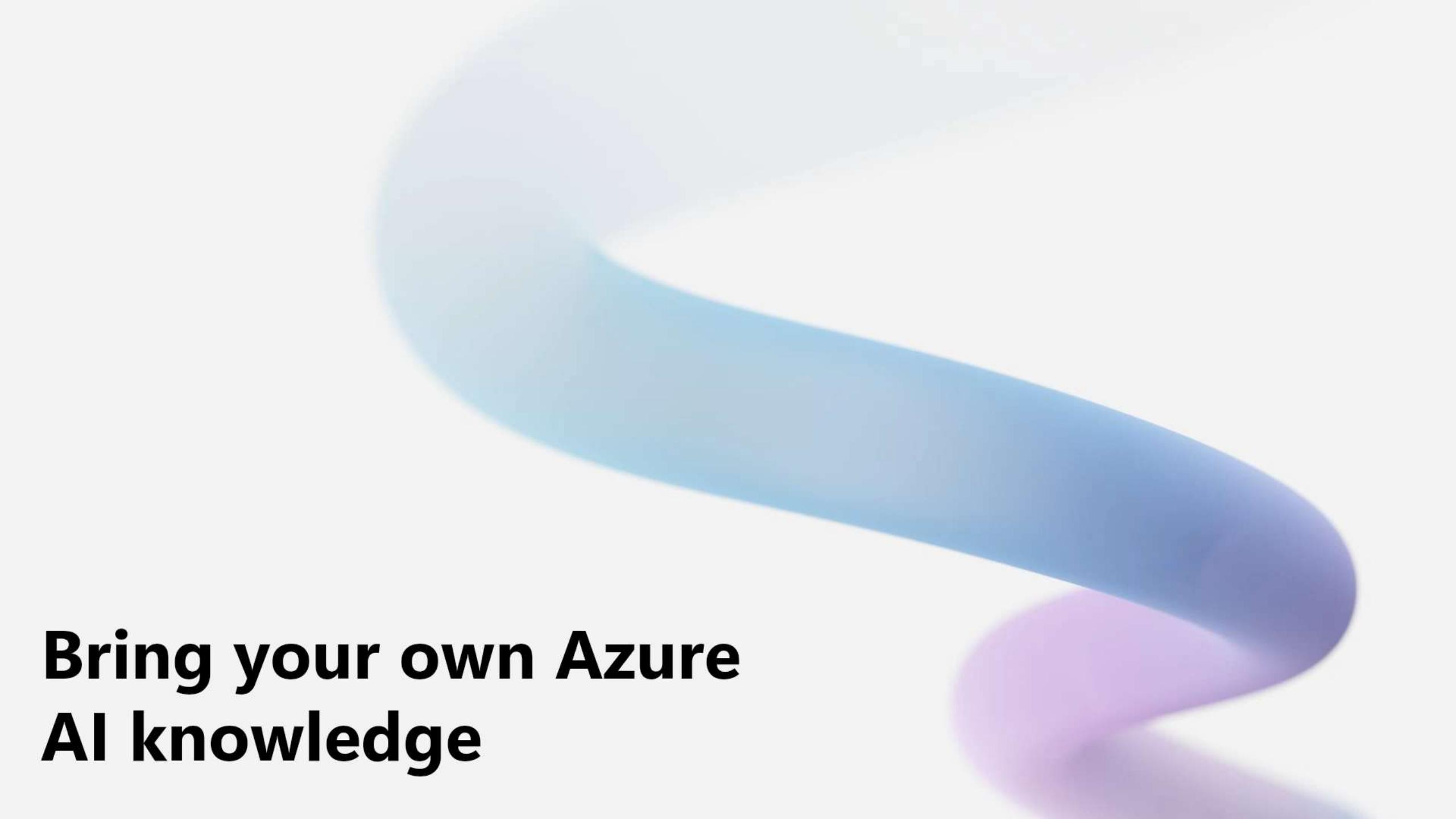
Bring your own Azure AI Knowledge

Leverage and **unlock your knowledge** in **Azure AI Search** for your agents

Utilize **custom RAG** built in **Azure AI Studio**

Easy intuitive experience with no-code



The background of the slide features a large, abstract graphic element consisting of two thick, curved bands. The upper band is a gradient of light blue to medium blue, while the lower band is a gradient of light purple to medium purple. These bands curve from the top left towards the bottom right, creating a sense of motion and depth.

**Bring your own Azure
AI knowledge**

Coming soon

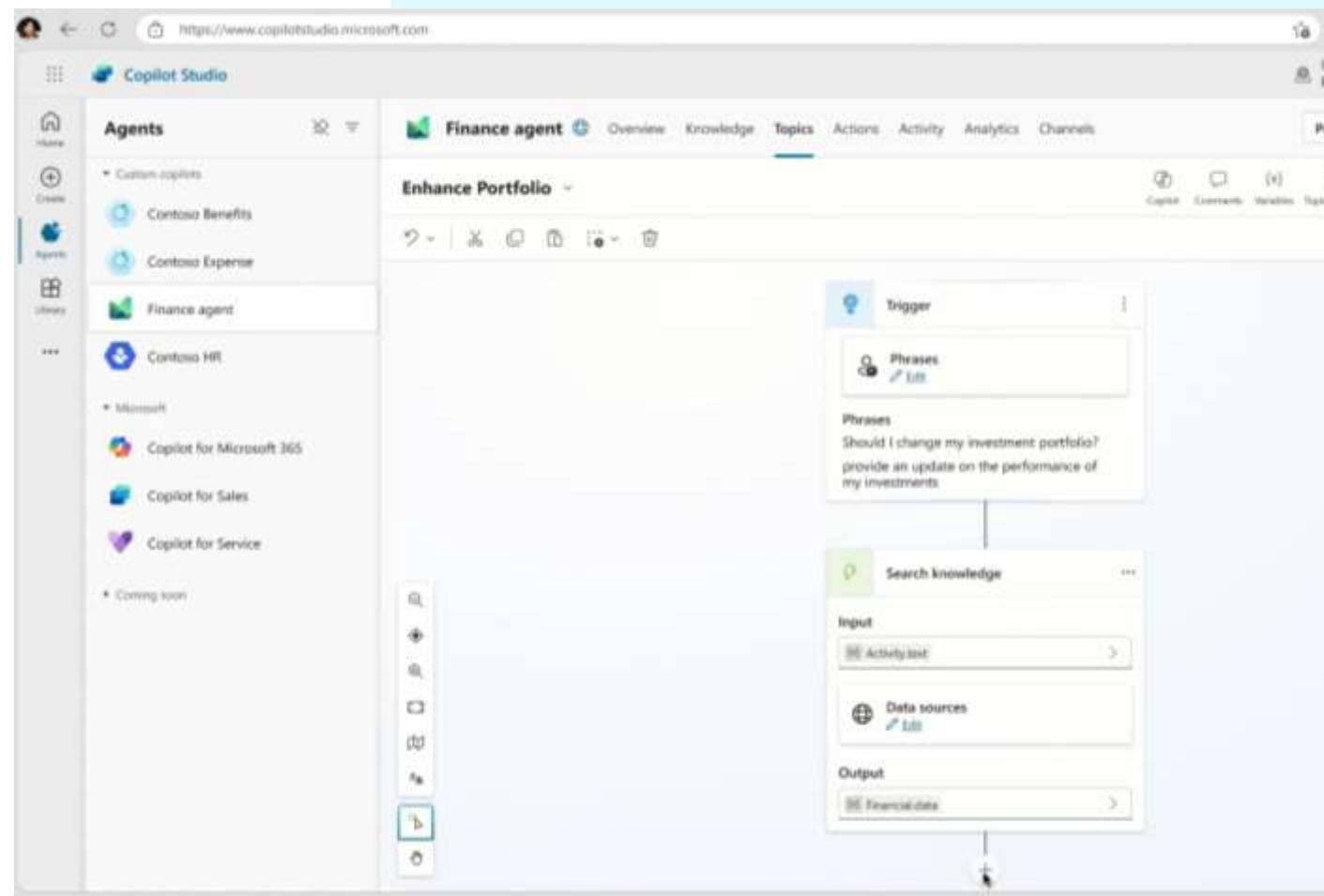
Bring your own model

Customers can use models they create or select in Azure AI in their copilots in Copilot Studio on demand for business needs.

New search node on your knowledge

Search and call custom models from within your topic

Allow more control and customization freedom.

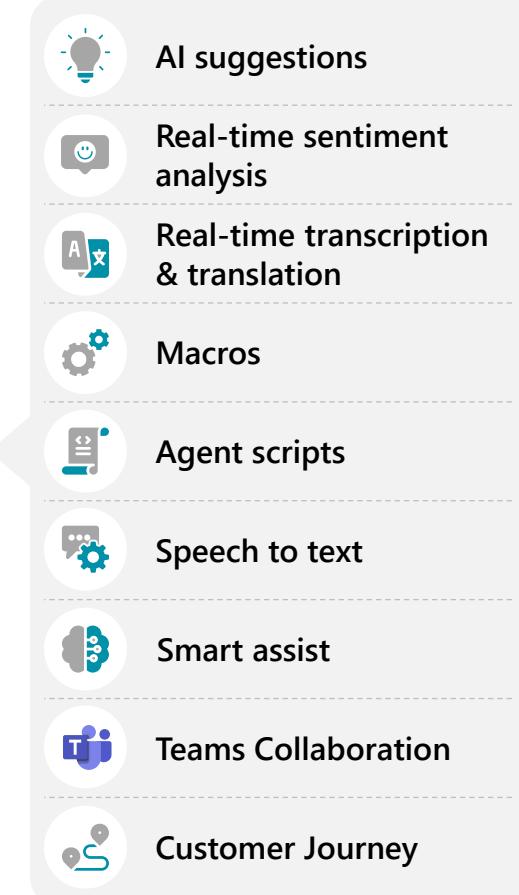
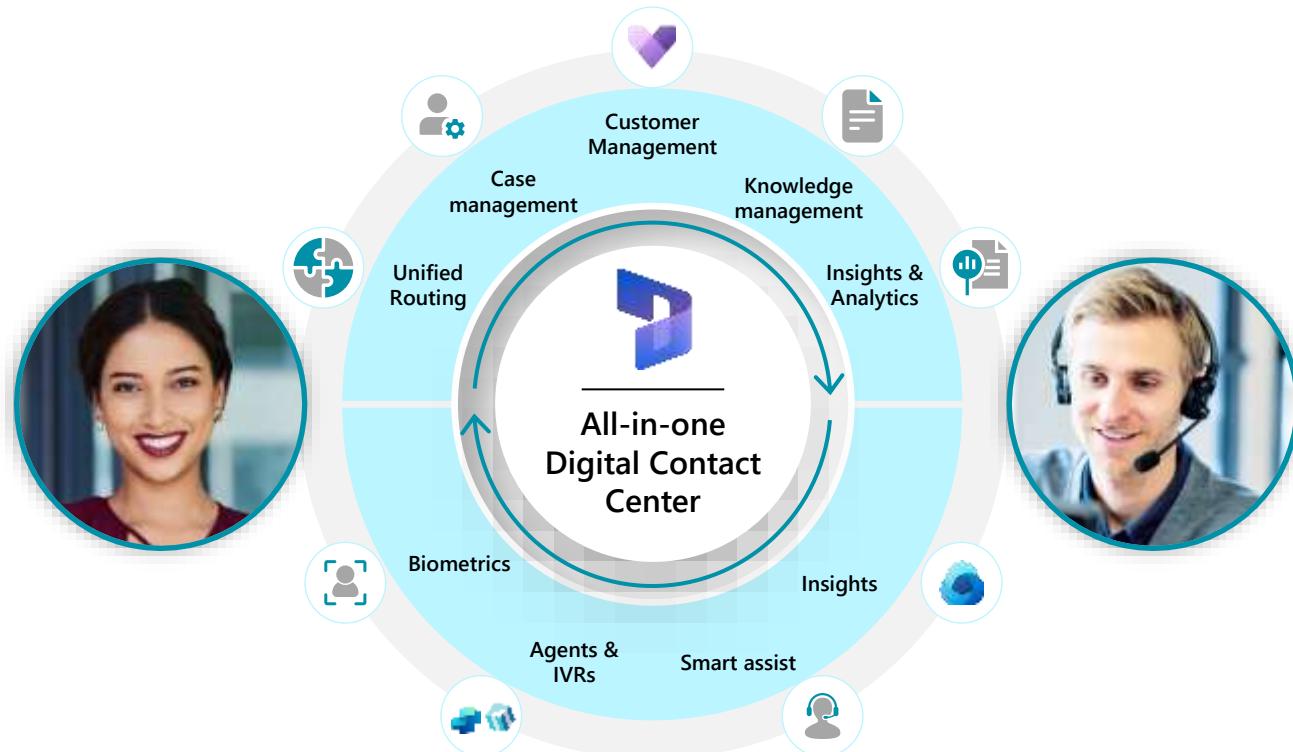
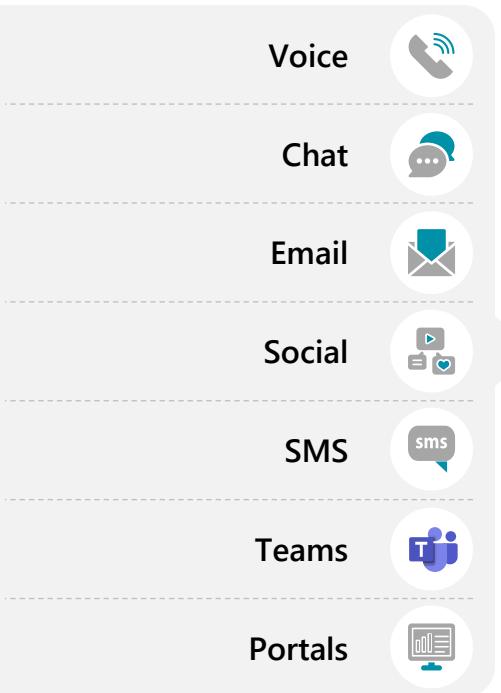


A large, abstract graphic element occupies the right side of the slide. It consists of two thick, curved bands that overlap. The top band is a light blue color, and the bottom band is a light purple color. Both bands have a slight gradient and a soft, blurred edges.

**Bring your own
model**

Digital Contact Center Platform

Everything you need to deliver outstanding customer care



Telephony integration

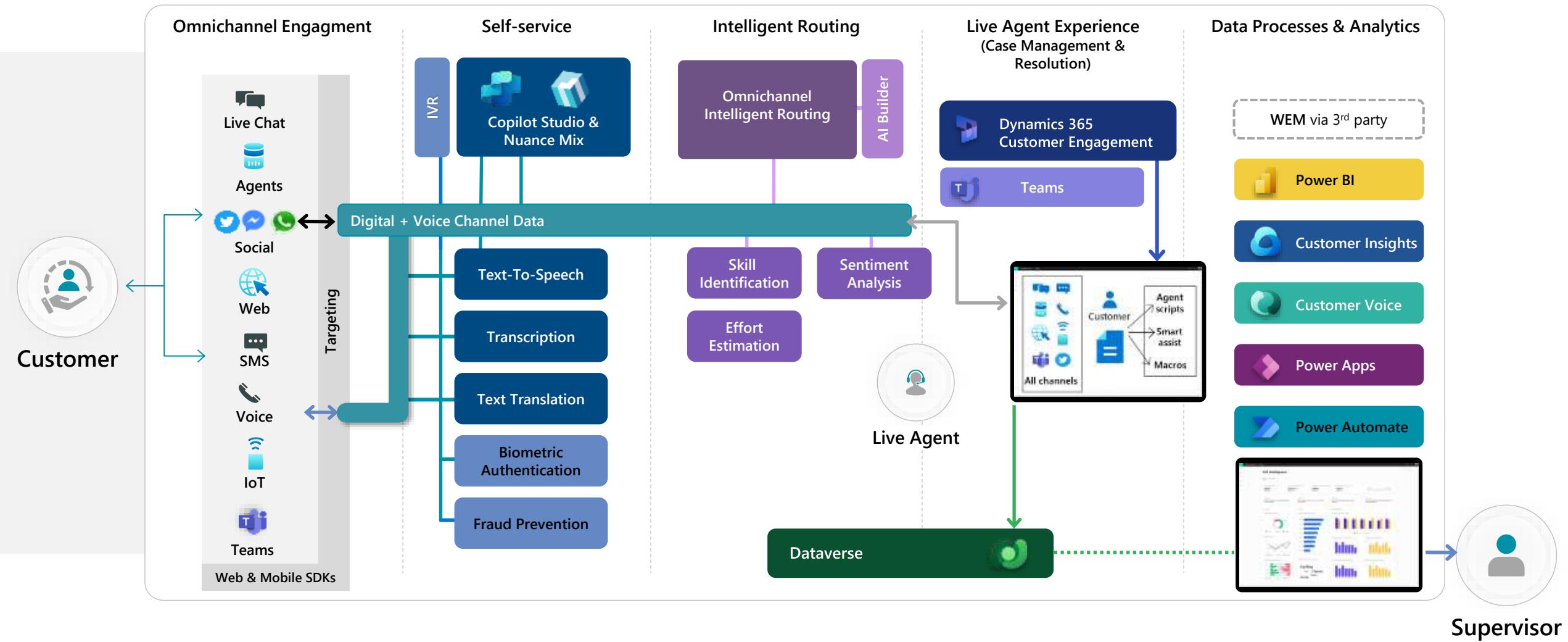
Copilot Studio & D365 Contact Center

- Build IVR dialog with Copilot Studio
- Natively integrated with Digital Contact Center
(Requires D365 contact center)
- 1st party telephony via Azure Communication Service or bring your own phone number
- 1st party speech to text and text to speech via Azure Cognitive Service

Copilot Studio & 3P contact center

- Build IVR dialog with Copilot Studio via event extensibility
- Integrates with 3rd party contact center such as Genesys via 3rd party solution AudioCodes
- AudioCodes provides telephony, speech-to-text and text-to-speech integration

Microsoft Digital Contact Center Platform



Manage

Administration & Management



Infrastructure management

No infrastructure to manage

No services to stand up

Available in geo-distributed multi-tenant SaaS



Global by default

Available worldwide in many commercial clouds (23 data centers)

Available in government clouds

Supports 19 languages



Compliance

Supports many Compliance offerings like HIPAA, HITRUST, FedRAMP, PCI, SOC, ISO & more



Security & governance

Govern using unified Power Platform admin center

Data encryption – data stays secure while at rest and in transit

Data loss prevention

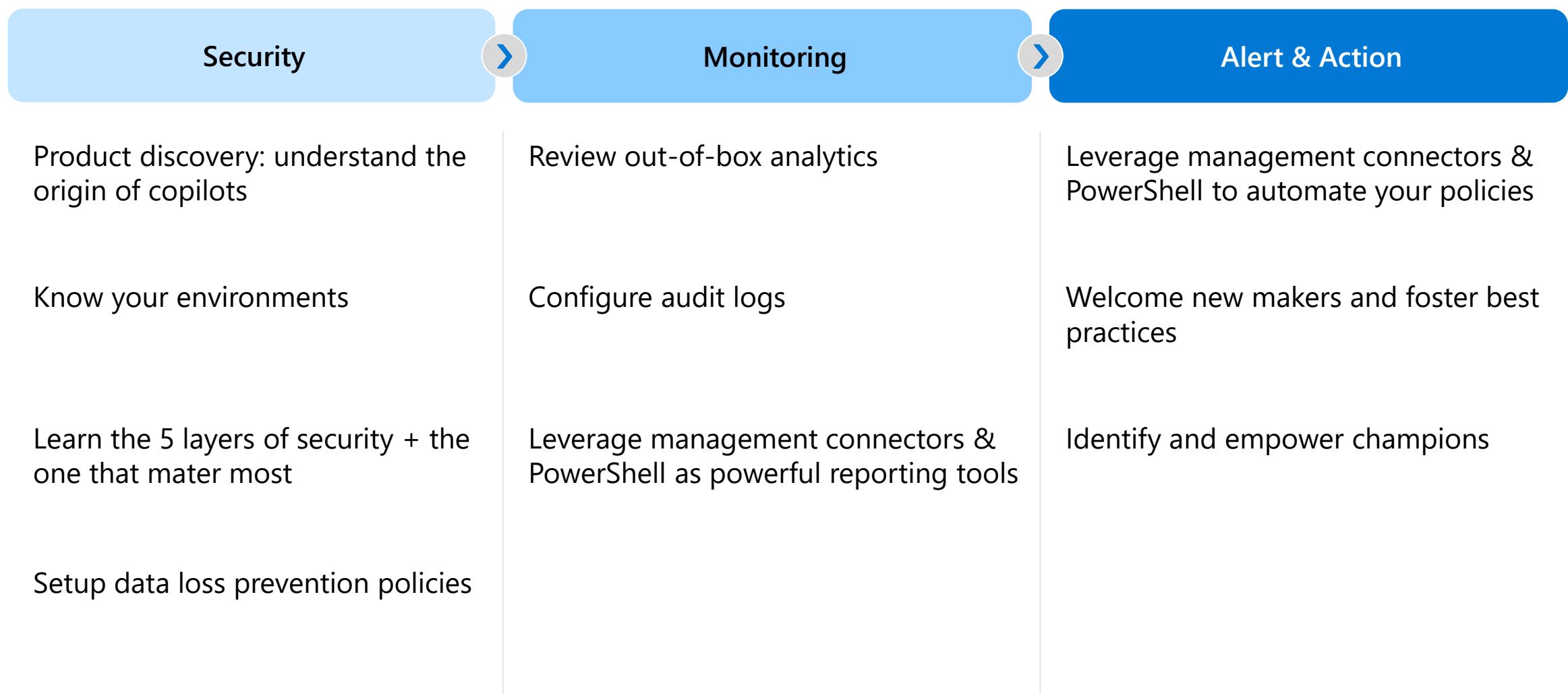
Customer Lockbox

Compliance offerings

Copilot Studio is a Core Online Service, as defined in the Online Services Terms (OST), and is compliant with or covered by

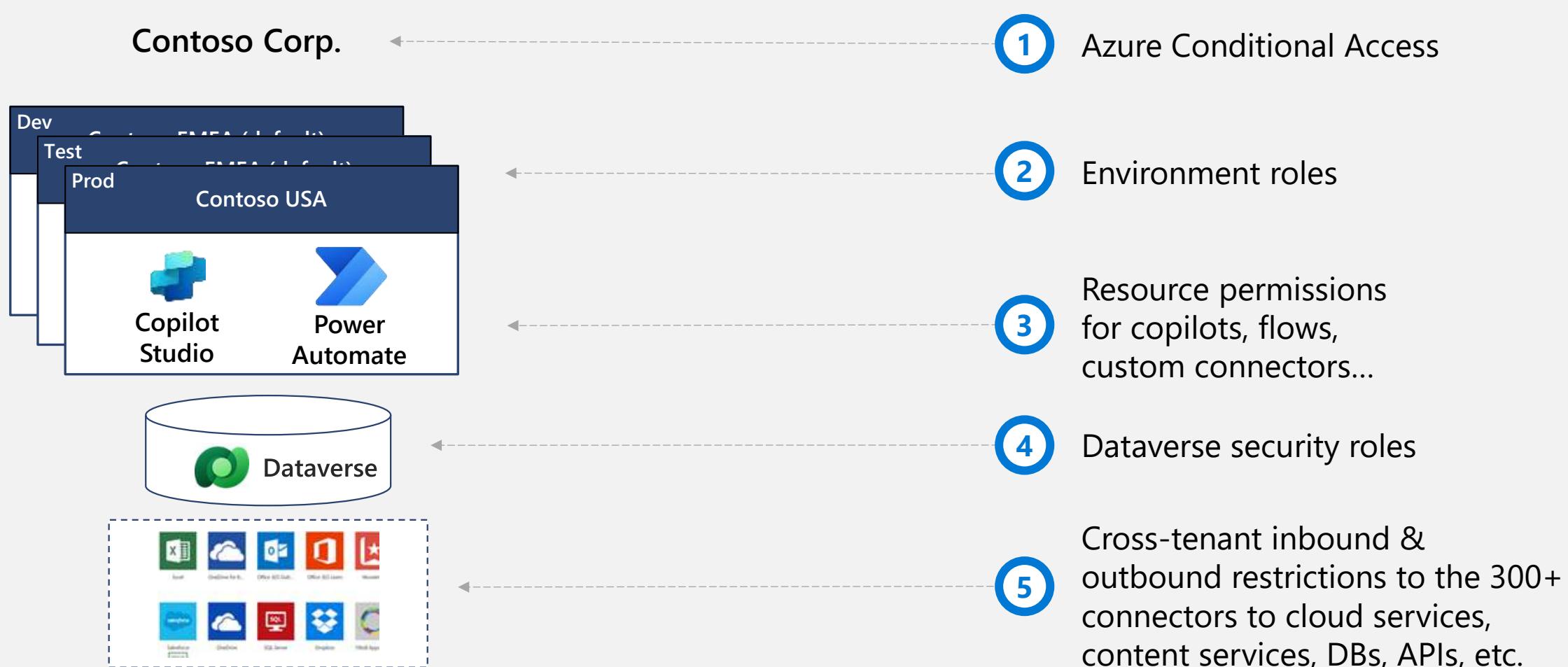
- Federal Risk and Authorization Management Program (**FedRAMP**)
- Health Insurance Portability and Accountability Act (**HIPAA**) coverage
- Health Information Trust Alliance (**HITRUST**) Common Security Framework (**CSF**)
- System and Organization Controls (**SOC**)
- Various International Organization for Standardization (**ISO**) certifications
- Payment Card Industry (**PCI**) Data Security Standard (**DSS**)

Optimal Governance Is a Multi-Step Approach



Manage/Security

Power Platform security layers



Security and administration controls

✓ Available security, governance and AI controls at the tenant, environment, or copilot level

	Copilot Studio features controls	Copilot Studio maker access controls
TENANT	<ul style="list-style-type: none">✓ Data loss prevention (DLP) policies can be enforced for Copilot Studio and applied to all environments to:<ul style="list-style-type: none">• Allow/block unauthenticated usage.• Allow/block individual channels.• Allow/block individual connectors.• Allow/block connecting to skills.✓ Allow/block publishing of copilots that use generative AI.✓ Allow/block M365 Copilot Conversational Plugins.	<ul style="list-style-type: none">✓ Allow/block access to the Copilot Studio authoring web app (i.e., copilotstudio.microsoft.com) can be controlled by:<ul style="list-style-type: none">• Assignment/removal of a Copilot Studio User License to an individual user or to an Entra ID group.• Allow/block self-service trials for the tenant.✓ Allow/block access to the Copilot Studio Teams app (i.e., aka.ms/CopilotStudioForTeams)
ENVIRONMENT	<ul style="list-style-type: none">✓ Data loss prevention(DLP) policies can be scoped to exclude specific environments to allow required capabilities (e.g., allow unauthenticated usage).✓ For environments outside of the U.S. region:<ul style="list-style-type: none">• Allow/block generative AI features.• Allow/block the public data source (i.e., Bing).	<ul style="list-style-type: none">✓ Allow/block environment access with security groups.✓ Allow/block permissions to create, read, update or delete copilots through security roles. Dataverse tables:<ul style="list-style-type: none">• Chatbot (<i>bot</i>)• Chatbot Subcomponent (<i>botcomponent</i>)• Conversation Transcript (<i>conversationtranscript</i>)
COPILOT	<ul style="list-style-type: none">✓ Individual bots can be exempted from DLP policies.✓ Enable/disable dynamic chaining at bot level✓ Enable/disable generative answers at bot level.✓ Enable/disable intelligent topic authoring at user level.✓ Set bot authentication (None – if allowed, Only for Teams/Power Apps, and Manual – i.e., app registration)✓ Enforce Direct Line Web Channel security at bot level.	<ul style="list-style-type: none">✓ Share/unshare copilots with other users for authoring.✓ Users with a System Administrator or System Customizer roles can read and update all bots and transcripts.

- Data loss prevention (DLP) policies can be configured at tenant-level to apply either to all environments, only specific environments, or all environments except specific ones. DLP policies can enforce authentication, disable specific channels (e.g., Direct Line, Teams, Omnichannel, Facebook), block specific connectors, or block the use of skills. Individual copilots can be exempted from DLP policies.
- The publishing of copilots using generative AI features such as generative answers can be completely blocked at the tenant level.
- For environments outside of the U.S. region, generative AI features can be blocked at the environment-level. The public data source (Bing) can also be individually disabled.

Useful resources:

- [Security and governance in Copilot Studio](#)
- [Enforce DLP policies for Copilot Studio](#)
- [Exempt a copilot from DLP policies](#)
- [Assign Copilot Studio user licenses](#)
- [Control user access to environments](#)
- [Manage app permissions in Microsoft Teams to block the Teams app](#)
- [Disable self-service trial sign-ups: set AllowAdHocSubscriptions to \\$false](#)
- [Share a copilot for collaborative authoring](#)
- [Configure web channel security](#)

DLP Policies and Copilot Studio

The Power Platform Data Loss Prevention Policies also apply to Copilot Studio

- The regular connectors in the connector library can still be assigned to business, non-business, or blocked
- In addition, there are some Copilot Studio-specific connectors we can block (see image)

Assign connectors ①				
	Name	Blockable	Endpoint configurable	Class
Connectors for non-sensitive data. Connectors in this group can't share data with connectors in other groups. Unassigned connectors will show up here by default.				
	Skills with Copilot Studio	Yes	No	Built-In
	Chat without Microsoft Entra ID authentication in Copilot Studio	Yes	No	Built-In
	Microsoft Teams channel in Copilot Studio	Yes	No	Built-In
	Direct Line channels in Copilot Studio	Yes	No	Built-In
	Facebook channel in Copilot Studio	Yes	No	Built-In
	Omnichannel in Copilot Studio	Yes	No	Built-In
	Knowledge source with SharePoint and OneDrive in Copilot Studio	Yes	Yes	Built-In
	Knowledge source with public websites and data in Copilot Studio	Yes	Yes	Built-In
	Knowledge source with documents in Copilot Studio	Yes	No	Built-In
	Application Insights in Copilot Studio	Yes	No	Built-In

Example: Require end-user authentication

- When you create a new copilot, the **Authenticate with Microsoft** authentication option is turned on by default. The copilot automatically uses Microsoft Entra ID authentication for Authenticate with Microsoft without requiring any manual setup and only lets you chat with your copilot on Teams. However, copilot makers in your organization can select the **No authentication** authentication option to allow anyone with the link to chat with your copilot.

The screenshot displays two windows side-by-side. On the left is the 'Authentication' dialog from the Power Platform admin center, and on the right is the 'Edit Policy' page.

Authentication Dialog:

- Title:** Authentication
- Description:** Verify a user's identity during a conversation. The copilot receives secure access to the user's data and is able to take actions on their behalf, resulting in a more personalized experience.
- Learn more:** [Learn more](#)
- Choose an option:**
 - No authentication: Publicly available in any channel. Basic copilot setup with no authentication action or authentication variables.
 - Authenticate with Microsoft: Entra ID authentication in Teams and Power Apps. Only Teams and Power Apps channels are available; all other channels will be disabled. [Learn more](#)
 - Authenticate manually: Set up authentication for any channel. Supports Microsoft Entra ID or any OAuth2 identity provider. Available in any channel. [Learn more](#)
 - Require users to sign in

Edit Policy Page:

- Title:** Power Platform admin center / Edit Policy
- Policy name:** Copilot not agent
- Default connector:** Chat without Microsoft Entra ID authentication in Copilot Studio
- Assign connectors:** Business (0) | Default (0) | Blocked (0)
- Connector details:** Chat without Microsoft Entra ID authentication in Copilot Studio (Name: 1, Block: Yes, Endpoint config: None, Publisher: Microsoft)
- Actions:**
 - Move to Business
 - Block** (highlighted with a red box)
 - Configure connector >

Authentication & channel security

Authentication

Verify a user's identity during a conversation. The bot receives secure access to the user's data and is able to take actions on their behalf, resulting in a more personalized experience. [Learn more](#)

Choose an option

No authentication

Basic bot setup with no authentication action or authentication variables.

Only for Teams

User ID and User Display Name authentication variables available. Automatically sets up Azure Active Directory (AAD) authentication for Teams. All other channels will be disabled. [Learn more](#)

Manual (for any channel including Teams)

Support AAD or any OAuth2 identity provider. Authentication variables are available including authentication token.

Enter the information provided by your Identity Provider (IdP), and then test the connection. For single sign-on with AAD include the token exchange URL. [Learn more](#)

Require users to sign in

Save

Close

- Authentication allows users to sign in, giving your copilot access to a restricted resource or information. Users can sign in with Microsoft Entra ID, or with any OAuth2 identity provider such as Google or Facebook.
- With Direct Line-based security, you can enable access only to locations that you control by enabling secured access with Direct Line secrets or tokens.
- Copilot Studio supports single sign-on (SSO), which means copilots can sign the user in.
- SSO needs to be implemented on your web pages, mobile applications.
- For Microsoft Teams, SSO is seamless if you select the "Only in Teams" authentication. It can also be configured with Manual AAD v2, but in this case the Teams app must be deployed as a zip file, not with the 1-click Teams deployment from Copilot Studio.

Questions to discuss:

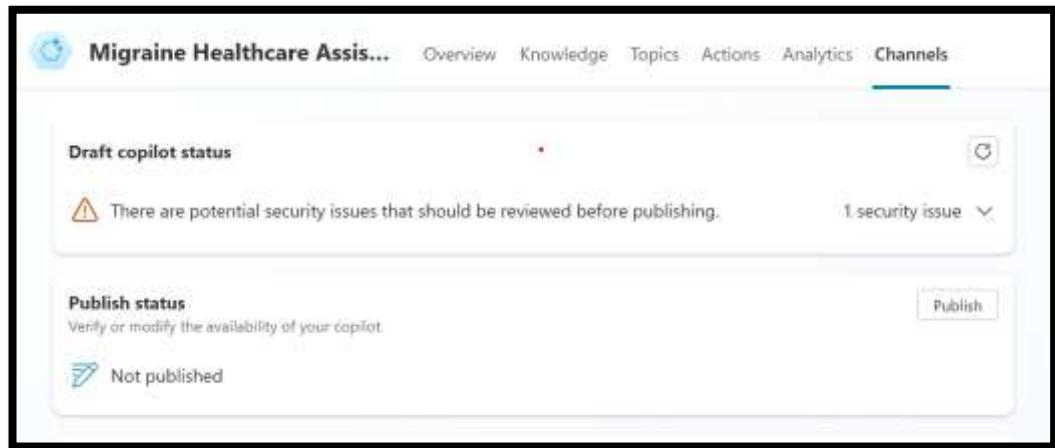
- Is the copilot working unauthenticated, authenticated, or both?
- If yes, what is the authentication service?
- Do you need to enforce web and Direct Line channel security?

New features

Generally available

Safer defaults

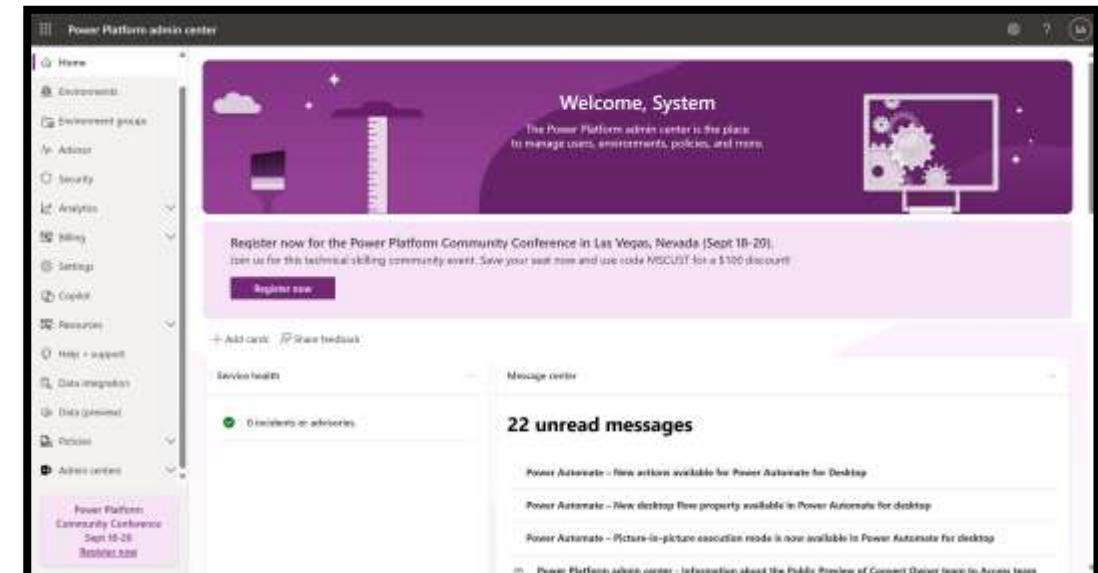
Apply safer defaults and provide in-product communication if those defaults are changed by makers. For example: all copilots are now created requiring authenticated access, and makers no longer have access to transcripts by default.



Generally available

Granular controls

Provide granular governance levers that give admins more control on the copilots in their tenants. Granular controls include: generative AI, Knowledge, App Insights, & Authentication.



New features

Generally available

End user and maker authentication opportunities

Default experience going forward for copilots that are configured with authentication is to add these objects in the end-user authentication setting

Prompt users of the copilot to login when they encounter actions that need more permissions

Step 1 of 3: Choose an action
Create an action or browse through our list of actions you want to use to get information from external sources. [Learn more](#)

End user authentication

User authentication

User authentication
 Copilot author authentication

Describes the purpose of the connector action 0/2000 maximum characters

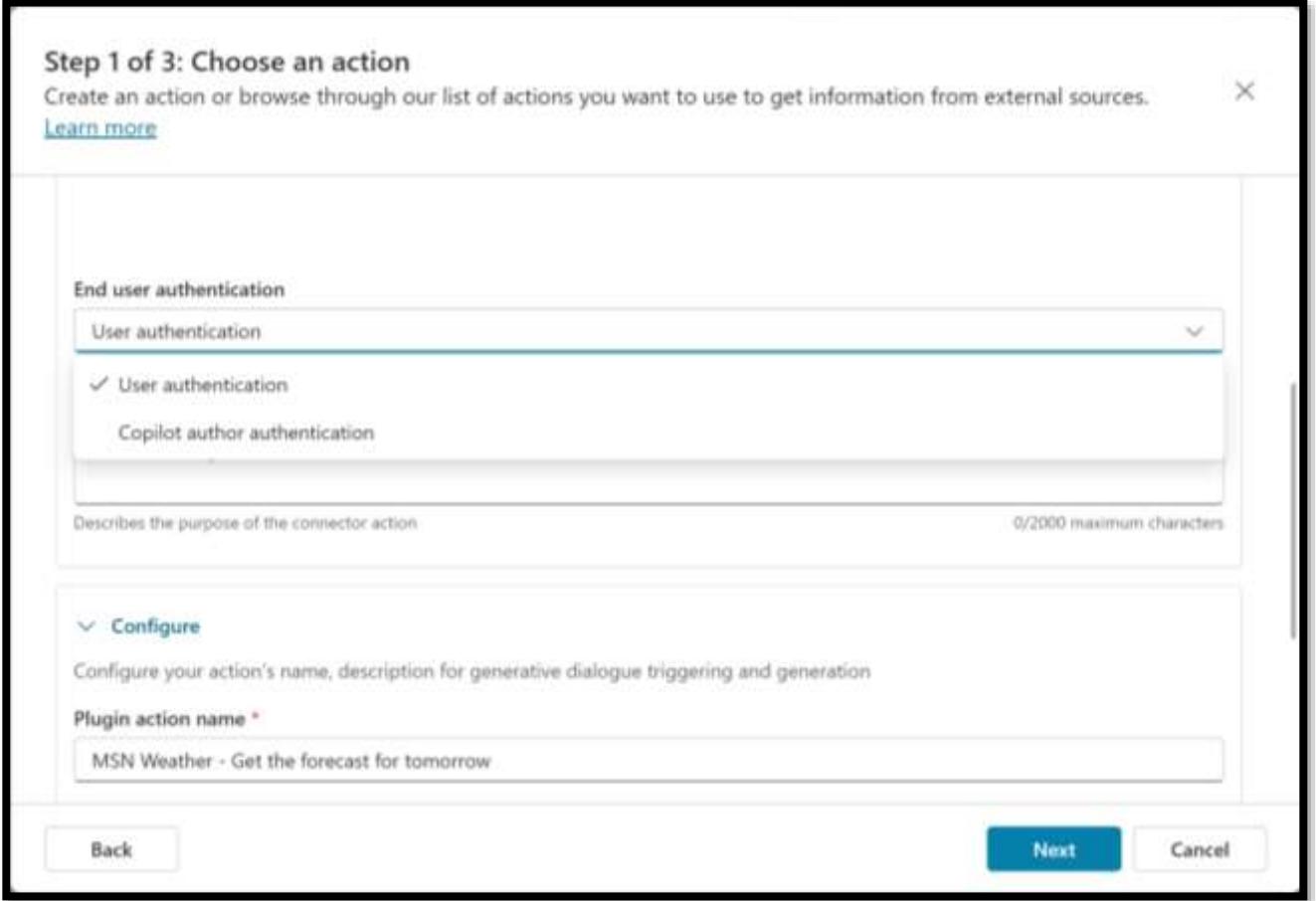
Configure

Configure your action's name, description for generative dialogue triggering and generation

Plugin action name *

MSN Weather - Get the forecast for tomorrow

Back Next Cancel



New features

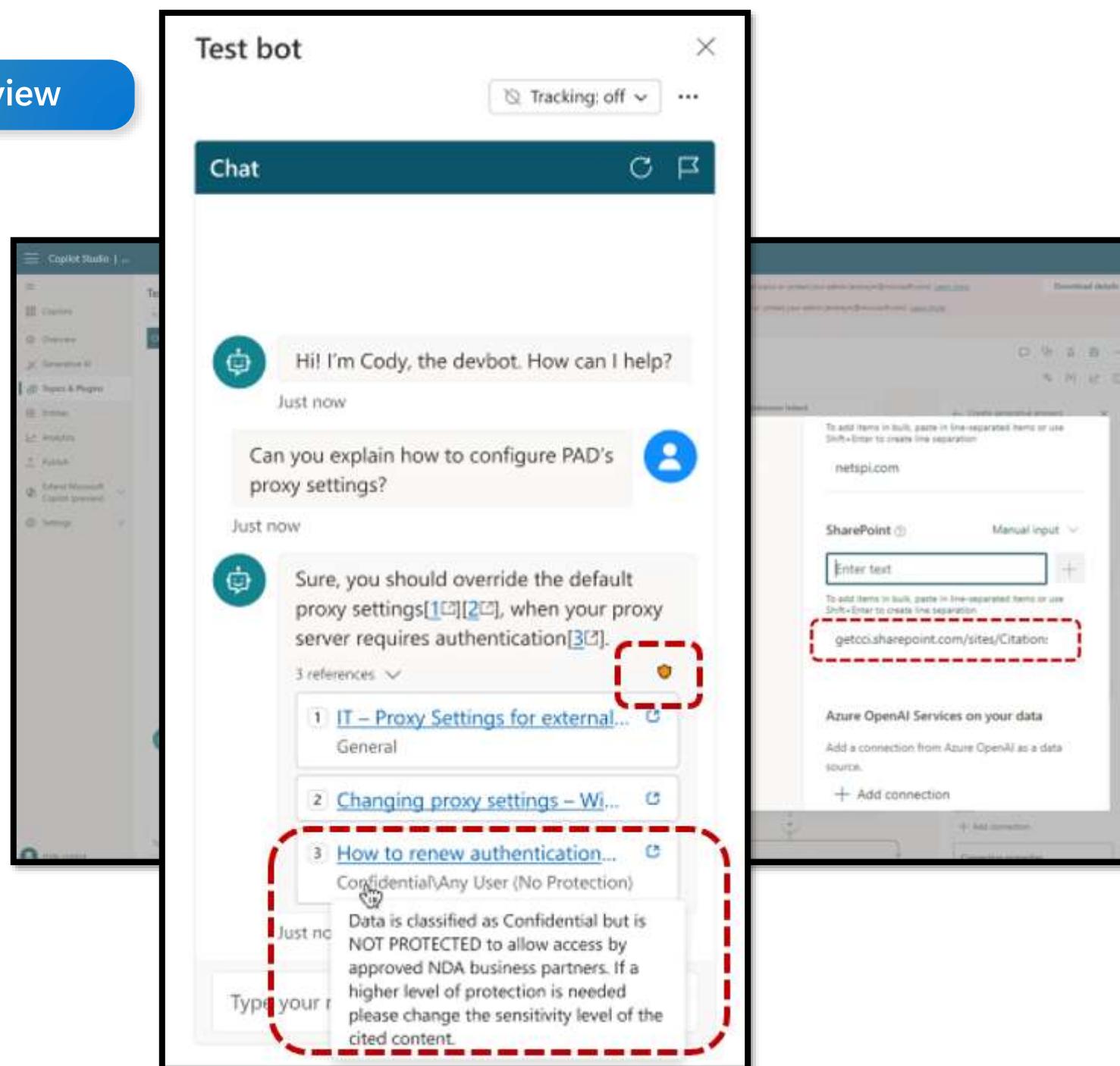
Public preview

Sensitivity labels in responses prevent oversharing

Users can see the sensitivity of the document referenced in the custom copilot output.

Copilot conversation inherits the most restrictive sensitivity labels from the references used to formulate a response.

Custom copilots honor the rights management control associated with sensitivity labels



New features

Copilot hub

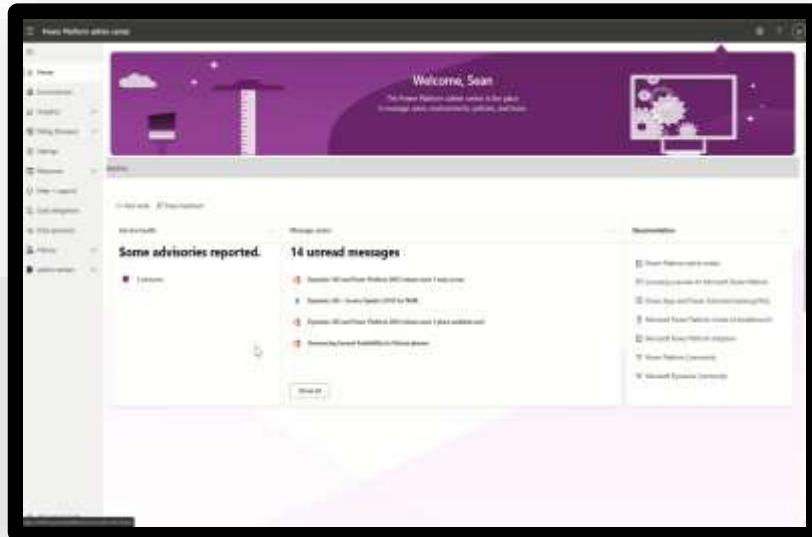
Provides a location for documents, insights, and governance for Microsoft Copilot in Power Platform. With simple access to Copilot resources, admins can learn, prepare, configure, deploy, and measure usage of generative AI features across their organizations.

The screenshot shows the Power Platform admin center interface with the Copilot hub selected. The left sidebar includes options like Home, Environments, Environment groups, Security, Copilot (selected), Analytics, Billing, Settings, Resources, Help + support, Data integration, Data, Policies, Admin center, and Copilot. The main content area has tabs for Summary, Readiness, Usage, and Governance, with Readiness selected. It displays a video thumbnail titled "Learn how Copilot works", a "Copilot usage by product" section with charts for Copilot Studio, Power Apps, Power Automate, and Power Pages, and a "Content moderation" section with a bar chart for total requests. On the right, there's a "What's new" section listing recent updates like "Copilot brings the power of intelligence to your favorite Power Apps" and "AI-generated app descriptions now GA".

Manage/Monitoring

The right tools for your governance requirements

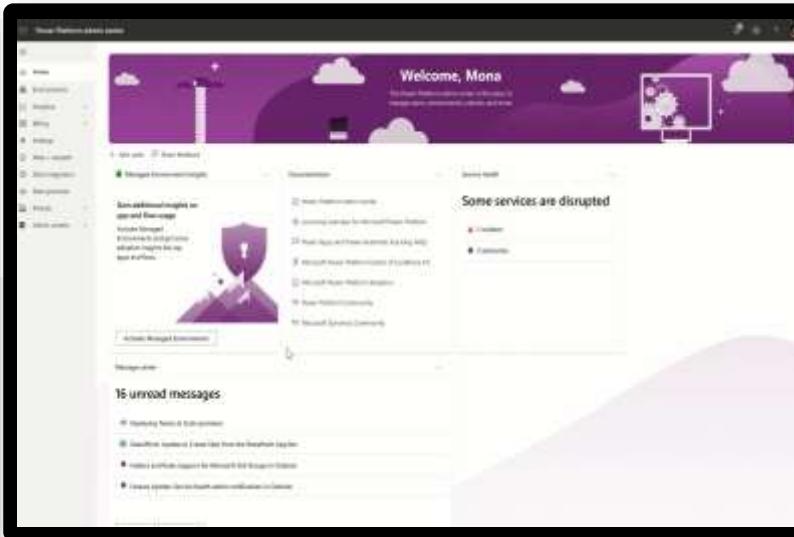
Power Platform Admin Center



Standard governance offering:

- **Build** guardrails around data, apps, and environments
- View analytics on low code assets across your organization

Managed Environments for Power Platform



Premium governance offering:

- **Enable** governance-at-scale without additional IT resources
- Proactively build and enforce best practices while gaining key insights and analytics

Center of Excellence Kit



Extensible governance add-on:

- **Enhance** your governance journey with powerful open-source tools
- Drive innovation and improvement faster

Center of Excellence

- As organizations use Microsoft Power Platform to enable citizen developers across their organizations, they also seek capabilities to govern and monitor usage.
- The Microsoft Power Platform CoE Starter Kit is a collection of components and tools that are designed to help organizations develop a strategy for adopting and supporting Power Platform.

CoE Starter Kit features for Copilot Studio

- Keep track of the number of conversations per copilot over time, with daily aggregates.
- Allocate a number of conversations per environment
- Receive capacity email alerts when environment add-ons get near or over their allocated number of conversations.
- Get an overview dashboard of Copilot Studio usage in a tenant over time as well as an all-up conversation consumption versus allocation.

Questions to discuss:

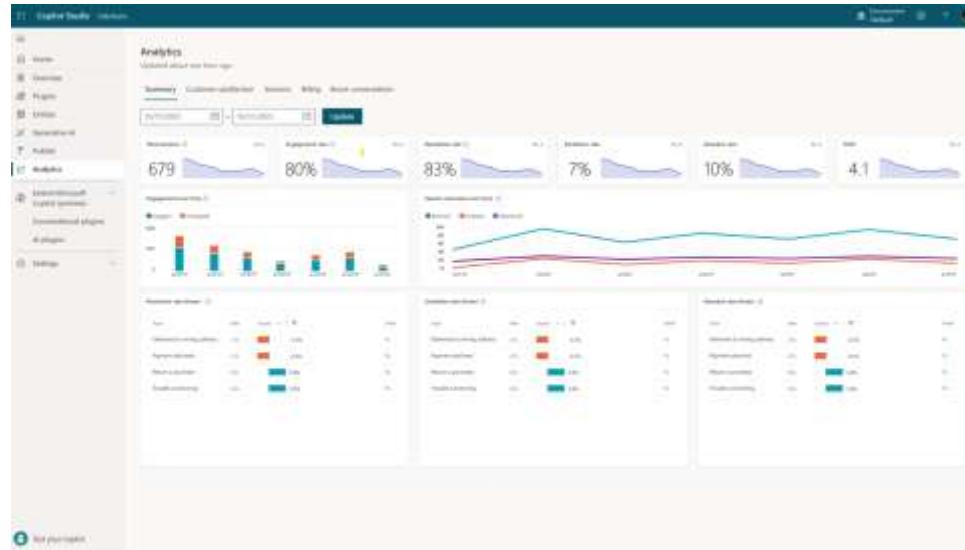
- Do you plan to use the Center of Excellence Starter Kit to monitor your copilots in your tenant?
- Do you have specific governance requirements such as charge-back models?
- Do you allow users to create copilots using Copilot Studio for Teams?
- Do you allow users to create Copilot Studio trials or do you want them blocked?

The screenshot shows a Microsoft Power Platform dashboard titled "Production_CoEDashboard". The top navigation bar includes "File", "Export", "Share", "Chat in Teams", "Explore this data", "Get insights", and "Subscribe". On the left, a sidebar lists various Power Platform components: Home, Create, Browse, OneLake data hub, Apps, Metrics, Monitoring hub, Workspaces, Get Workspace, and Production_CoEDashboard. The main content area is titled "Power Virtual Agent Bots" and displays three summary cards: 8 # Bots, 8 # Published bots, and 8 # Bot makes. Below this is a table titled "Bot Details" with columns: Chatbot name, Maker Name, Environment Name, # Sessions, State, and Created On. The table lists several bot entries, including "AI Tour Copilot Demo", "Bot 1", "Customer Self Service 1 bot", "Customer Service Copilot Bot", "HR Copilot", "HR Copilot Dynamic Chaining", and "Sales Copilot Power Virtual Agents Bot". Each entry includes a "Published" status indicator and a timestamp.

Chatbot name	Maker Name	Environment Name	# Sessions	State	Created On
AI Tour Copilot Demo	System Administrator	DEV-Operations	6	Published	3/20/2024 10:00:00 AM
Bot 1	System Administrator	USR-admin	1	Published	10/11/2023 10:00:00 AM
Customer Self Service 1 bot	System Administrator	PRD-Dynamics 365	1	Published	4/24/2024 10:00:00 AM
Customer Service Copilot Bot	SYSTEM	PRD-Dynamics 365	1	Published	4/24/2024 10:00:00 AM
HR Copilot	System Administrator	DEV-Operations	72	Published	12/12/2023 10:00:00 AM
HR Copilot Dynamic Chaining	System Administrator	DEV-Operations	24	Published	12/13/2023 10:00:00 AM
Sales Copilot Power Virtual Agents Bot	SYSTEM	PRD-Dynamics 365	3	Published	12/4/2023 10:00:00 AM

Analytics strategy

Detail your strategy to monitor your copilot key performance indicators



For example:

- Initially, a few set of KPIs will be defined for the copilot success, essentially the engagement rate, resolution rate and the defection rate.
- In phase 1, assess the native dashboards, even though they're limited to 30-day of data.
- In phase 2, develop a Power BI report consuming the copilot and Conversation Transcript data directly from Dataverse. This will also be the opportunity to enrich copilot data with other business metrics such as sales or website traffic.
- In phase 3, move data to cheaper long-term storage option (e.g., Azure Data Lake) and update the Power BI report to point to these storage points

- Copilot Studio provides comprehensive out-of-the-box analytics that allow customers to understand a copilot's usage and key performance indicators.
- Customers can view reports related to:
 - ✓ Performance and usage.
 - ✓ Customer satisfaction.
 - ✓ Session information.
 - ✓ Topic usage.
 - ✓ Billed sessions.
- However, there are often scenarios where you'll need to create or use custom analytics. For example, you may need to:
 - ✓ Share analytics with non-makers or users.
 - ✓ Report on conversation transcripts data for a period longer than the default last 30 days.
 - ✓ Design a report not covered by out-of-the-box analytics.

Questions to discuss:

- Do you have an analytics strategy?
- Do you plan to develop your own custom analytics?
- If you are going to create your own reports, please detail how and where you plan to store the data.

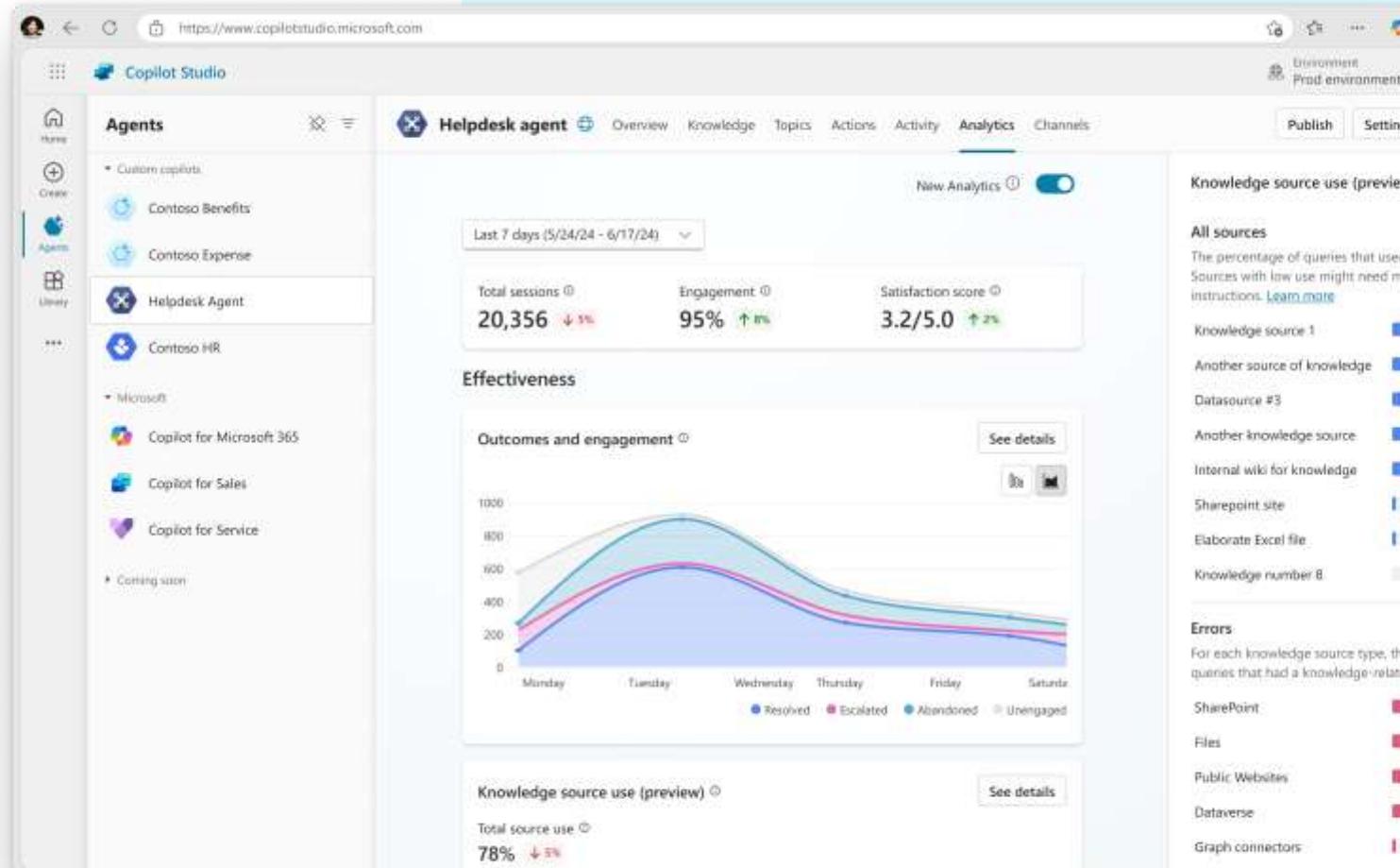
Improved analytics

Updated modern UI is **responsive** and **scalable**, supporting **advanced user interactions**.

Session data now **updates within an hour**, with **data retention extended to 90 days** for deeper trend analysis.

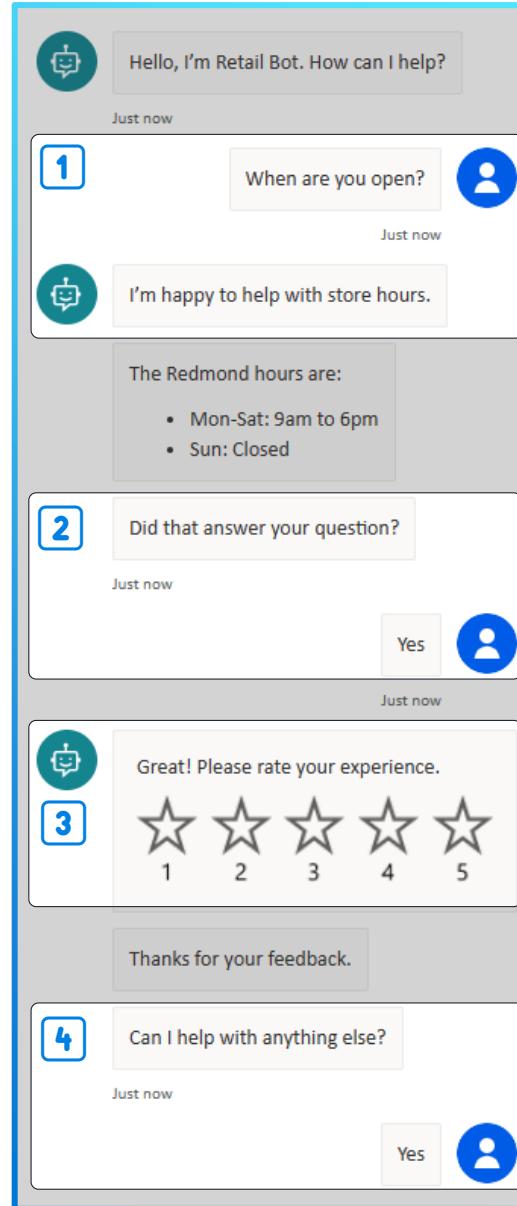
KPIs showing **engagement rate**, **satisfaction score**, **trend comparisons** and **detailed insights** through a side pane.

Knowledge section with **data performance metrics**, including **error rates** and **customer satisfaction feedback**.



Engagement and outcomes

- Tracking conversation engagement and outcomes is crucial to **measure the copilot performance metrics** and spot areas for improvements in the analytics dashboard.
- A **conversation** with a Copilot Studio copilot can generate one or multiple **sessions**.
- A conversation can have multiple sessions when a user has new questions after an initial conversation completed (❸).
- Sessions are either **Unengaged** or **Engaged**. Unengaged sessions always have an outcome of **None**.
- A session is engaged (❶) by either triggering a **custom topic** or the **Escalate** topic.
- Engaged sessions outcome can be either:
 - ✓ **Abandoned**
 - ✓ **Resolved**
 - ✓ **Escalated**
- It's important to end conversation with the **End of Conversation** topic (❷) so that the end-user can confirm their issue was resolved or not (and potentially escalate).
- The **Confirmed Success** topic displays a **CSAT survey** (❸) to capture a 0-5 score.
- A 'conversationOutcome' can also be set at the node level in the code editor view.



Questions to discuss:

How do you track engagement and session outcome? For example:

- Every conversation path, including Generative Answers ones, end with the End of Conversation topic.
- End of Conversation topic is customized to make the resolution validation as simple as possible for the end-user.
- Conversation outcomes are also set at specific node levels (in the YAML).



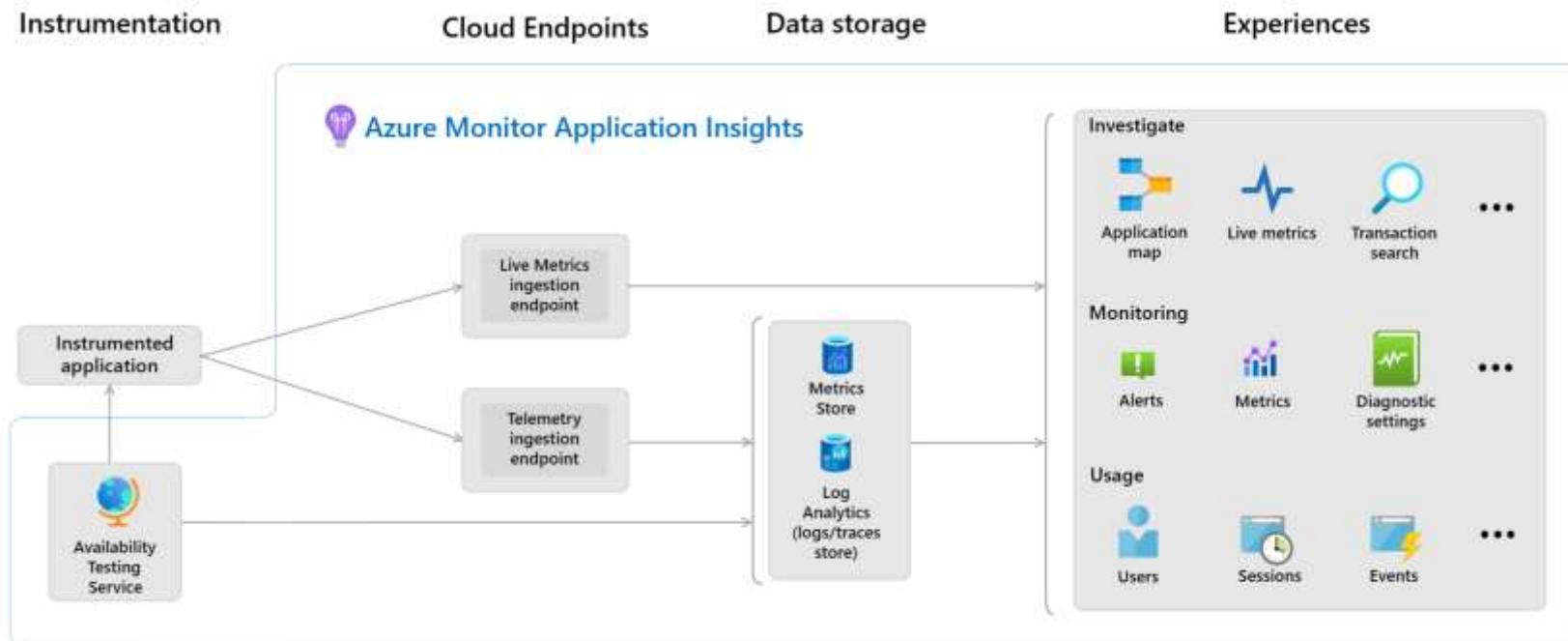
Improved analytics

Monitoring

In addition to the native analytics features within Copilot Studio, you can send telemetry data to Azure Application Insights.

In addition to the native analytics features within Copilot Studio, you can send telemetry data to Azure Application Insights.

- Telemetry offers insights into your copilot by tracking:
- Logged messages and events sent to and from your bot
- Topics to be triggered during user conversations
- Custom telemetry events that can be sent from your topics



Questions to discuss:

- How do you plan to technically monitor your copilots? Azure App insights?
- How do you plan to technically monitor your integrations and cloud flows?
- Do you have other technical monitoring requirements and plans? Like client load time

Azure Application Insights example

Monitoring generative answers results and moderation

The screenshot shows the Azure Application Insights search interface. On the left, a query is displayed:

```
customEvents
| where name == "GenerativeAnswers"
// | where cloud_RoleInstance == "MS Learn Chatbot" // Bot Name
extend cd = todynamic(customDimensions)
extend conversationId = tostring(cd.conversationId)
extend topic = tostring(cd.TopicName)
extend message = tostring(cd.Message)
extend result = tostring(cd.Result)
extend SerializedData = tostring(cd.SerializedData)
extend Summary = tostring(cd.Summary)
extend feedback = tostring(todynamic(replace_string(SerializedData, "$", "")).value)
project cloud_RoleInstance, name, timestamp, conversationId, topic, message, result, feedback, Summary
order by timestamp desc
```

The results table on the right displays the following data:

cloud_RoleInstance	name	timestamp [UTC]	conversationId	topic	message	result	feedback	Summary
MS Learn Chatbot	GenerativeAnswers	11/22/2023, 4:52:30.856 PM	302287e9-9ca7-44e2-860c-985...	Conversational	What is the patient discharge process?	Answered	The patient discharge process involves cohesive joint w...	
Microsoft Copilot Studio Demo	GenerativeAnswers	11/21/2023, 9:15:28.783 AM	ANGtaAV/vlu21EFxrlegV3n-us	SharePoint or OneDrive for Business	What is the patient discharge process?	Answered	The patient discharge process involves cohesive joint w...	
MS Learn Chatbot	GenerativeAnswers	11/20/2023, 3:31:36.750 PM	9094d8ba-d29d-46cf-bdea-645...	Conversational boosting	What is Copilot Studio?	Answered	Microsoft Copilot Studio is a platform that allows you to ...	
MS Learn Chatbot	GenerativeAnswers	11/20/2023, 3:14:22.060 PM	9094d8ba-d29d-46cf-bdea-645...	Conversational boosting	What is Power Virtual Agents?	Answered	Power Virtual Agents is a platform that allows you to cr...	
MS Learn Chatbot	GenerativeAnswers	11/20/2023, 3:13:04.886 PM	98787c69-ccea-45ab-878d-73f...	Conversational boosting	microsoft store	Filtered by High Content Moderation		
Microsoft Copilot Studio Demo	GenerativeAnswers	11/18/2023, 6:53:26.307 PM	FoeHwLxvYvJYFq52ye8vZ-us	SharePoint or OneDrive for Business	What is the patient discharge process?	Answered	The patient discharge process involves cohesive joint w...	
Microsoft Copilot Studio Demo	GenerativeAnswers	11/18/2023, 6:51:51.553 PM	e933479a-bb63-4221-a9e7-c4e...	SharePoint or OneDrive for Business	What is the patient discharge process?	Answered	The patient discharge process involves cohesive joint w...	
MS Learn Chatbot	GenerativeAnswers	11/18/2023, 12:18:38.803 AM	E4gKZ9mQMWCI210GAtlv3f-us	Conversational boosting	what is copilot?	No Search Results		
MS Learn Chatbot	GenerativeAnswers	11/16/2023, 11:28:00.962 PM	9juuiz7RlI5FdYf6asqSxS-us	Conversational boosting	copilot studio	Filtered by Open AI		
MS Learn Chatbot	GenerativeAnswers	11/16/2023, 11:27:43.621 PM	9juuiz7RlI5FdYf6asqSxS-us	Conversational boosting	what is copilot?	No Search Results		
Microsoft Copilot Studio Demo	GenerativeAnswers	11/16/2023, 9:36:46.399 PM	Cqz1Ukrp9Mml2WH03V4vtv-us	SharePoint or OneDrive for Business	What is the patient discharge process?	No Search Results		
MS Learn Chatbot	GenerativeAnswers	11/15/2023, 12:43:05.627 AM	ee81d804-feb6-4bac-acdf-b0d...	Conversational boosting	What is Power Apps?	Answered	Power Apps is a suite of apps, services, and connectors ...	
MS Learn Chatbot	GenerativeAnswers	11/15/2023, 12:42:43.349 AM	ee81d804-feb6-4bac-acdf-b0d...	Conversational boosting	what is power automate?	Answered	Power Automate is a service that allows you to automa...	

Governance applied to Copilot agents

Manage/Best Practices

Application lifecycle management (ALM)



First and foremost, ensure your team is checking into source control!



Copilot Studio ALM is like the rest of the Power Platform



Your copilot is packaged together with dependencies
(Power Automate Flows, connectors) into a solution



A solution file is a .zip! Unzip it and check it in!



Lots of further reading:

[Application lifecycle management \(ALM\) with Microsoft Power Platform](#)

Application Lifecycle Management

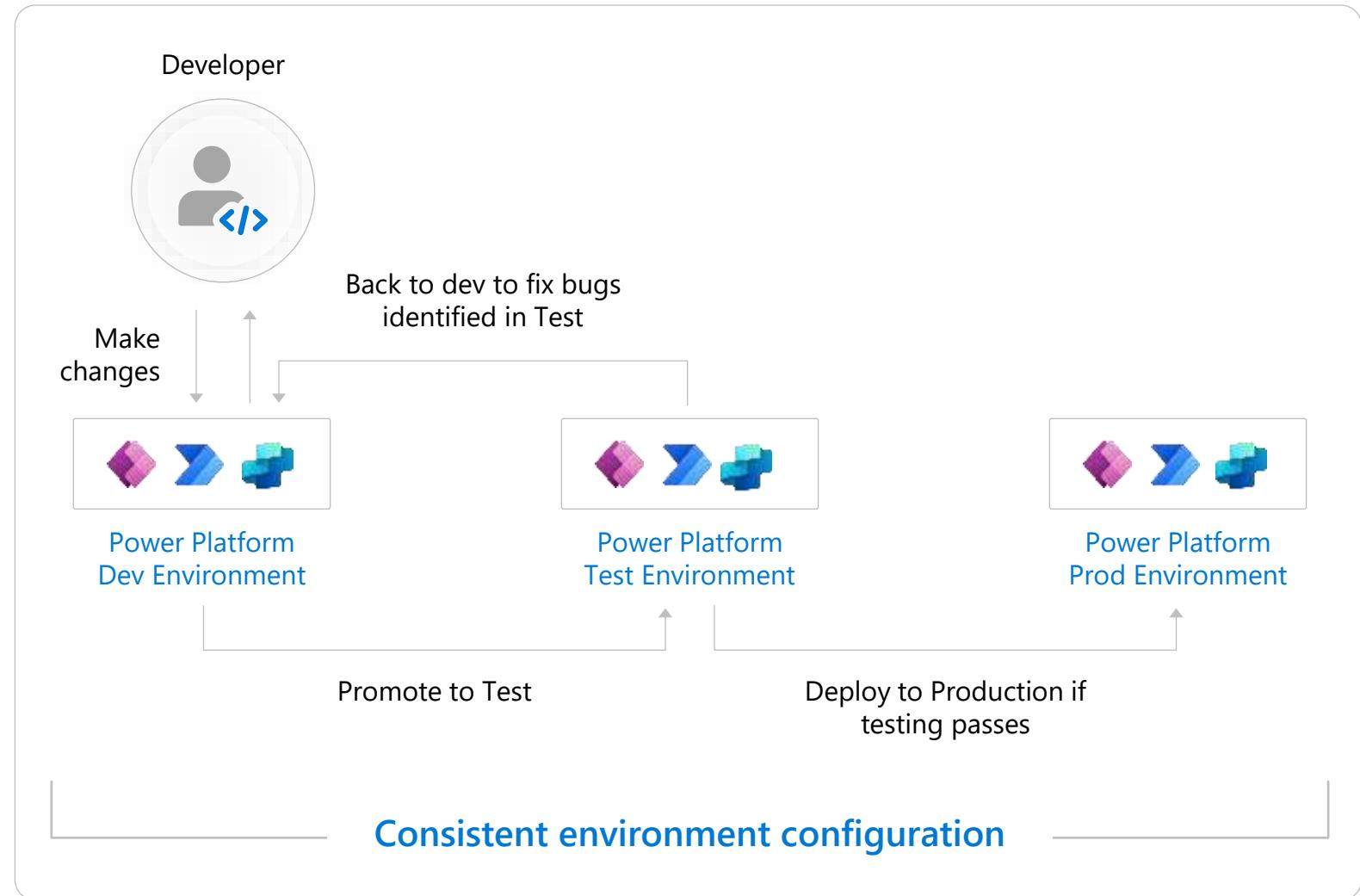
Customers have bot lifecycle management requirements - governance, development, and maintenance.

Customers can export and import copilots across multiple environments – development, test and production.

Learn more:

aka.ms/PVA/export-import

aka.ms/powerplatform/ALM



Security, copilot, & user management

Best practices to secure your Copilot Studio project

Assign licenses to users through Entra ID groups

Grant the 'Microsoft Copilot Studio User' license to users through a group instead of individual assignment.

Manage user access to environments through Entra ID groups

Only bot authors and a just-in-time admins should have access to your environments and data stores.

Manage security role assignment through Entra ID group teams

Within each Dataverse environment, leverage group teams to assign security roles to users.

Apply restrictive Data Loss Prevention policies to your environment

DLP policies can be applied to your environments to block all connectors that are not required by the project as well as any bot channel or setting that isn't useful for the project (e.g., unauthenticated use, use skills, etc.).

Review and only enable tenant, environment and copilot settings that are relevant

Tenant admins can disable publishing of GenAI-powered bots. Environment admins can disable GenAI features that require data movement outside of their region. Bot authors can require secured access for Direct Line. Internal chatbots can be limited for use by specific groups instead of being available to all.

Review and tighten security of all integrations

Connections should require strong authentication. Secrets should be stored in a secure location (e.g., Azure Key Vault). Leverage delegation, impersonation or filtering for data access in the context of an end-user.

Have a gated release process to production

Deploying changes from dev to test and to prod should require reviews and be part of a gated process.

Explore additional Power Platform, Dataverse and Entra ID security features

E.g., audit logs, customer-managed keys, customer lockbox, IP firewall, network isolation, multi-factor authentication, continuous access evaluation, etc.

- Entra ID groups should be leveraged to fully drive user license assignment, environment access, and security roles assignment.
- You should apply a most-restrictive approach by default and relax requirements on an exception basis.

Useful resources:

- [Assign licenses to a group](#)
- [Control user access to environments](#)
- [Use group teams to assign security roles](#)
- [Manage data loss prevention policies](#)
- [Disable the ability to publish copilots with generative answers and actions](#)
- [Configure data movement across geographic locations for generative AI](#)
- [Configure web channel security](#)
- [Share and collaborate on chatbots](#)
- [Connecting and authenticating to sources](#)
- [Use environment variables for secrets](#)
- [Authentication variables](#)
- [Pipelines in Power Platform](#)
- [Activity logging](#)
- [Customer-managed encryption](#)
- [Customer lockbox](#)
- [IP firewall](#)
- [Virtual networks](#)
- [Microsoft Entra ID security best practices](#)

Copilot Studio security roles



Overview of standard Dataverse security roles and impact on Copilot Studio

Security Role / Table	Chatbot bot	Chatbot Subcomponent botcomponent	Conversation Transcript conversationtranscript
System administrator	Org (CRUD)	Org (CRUD)	Org (CRUD)
System customizer	Org (CRUD)	Org (CRUD)	Org (CRUD) <small>Soon none</small>
Environment maker	User (CRUD)	User (CRUD)	None
Bot Transcript Viewer	None	None	User (Read)
Bot Author <small>(deprecated)</small>	User (CRUD)	User (CRUD)	User (CRU)
Bot Contributor <small>(deprecated)</small>	User (Read)	User (CRUD)	None
Omnichannel administrator	Org (Read)	None	None

How are Copilot Studio records secured in Dataverse?

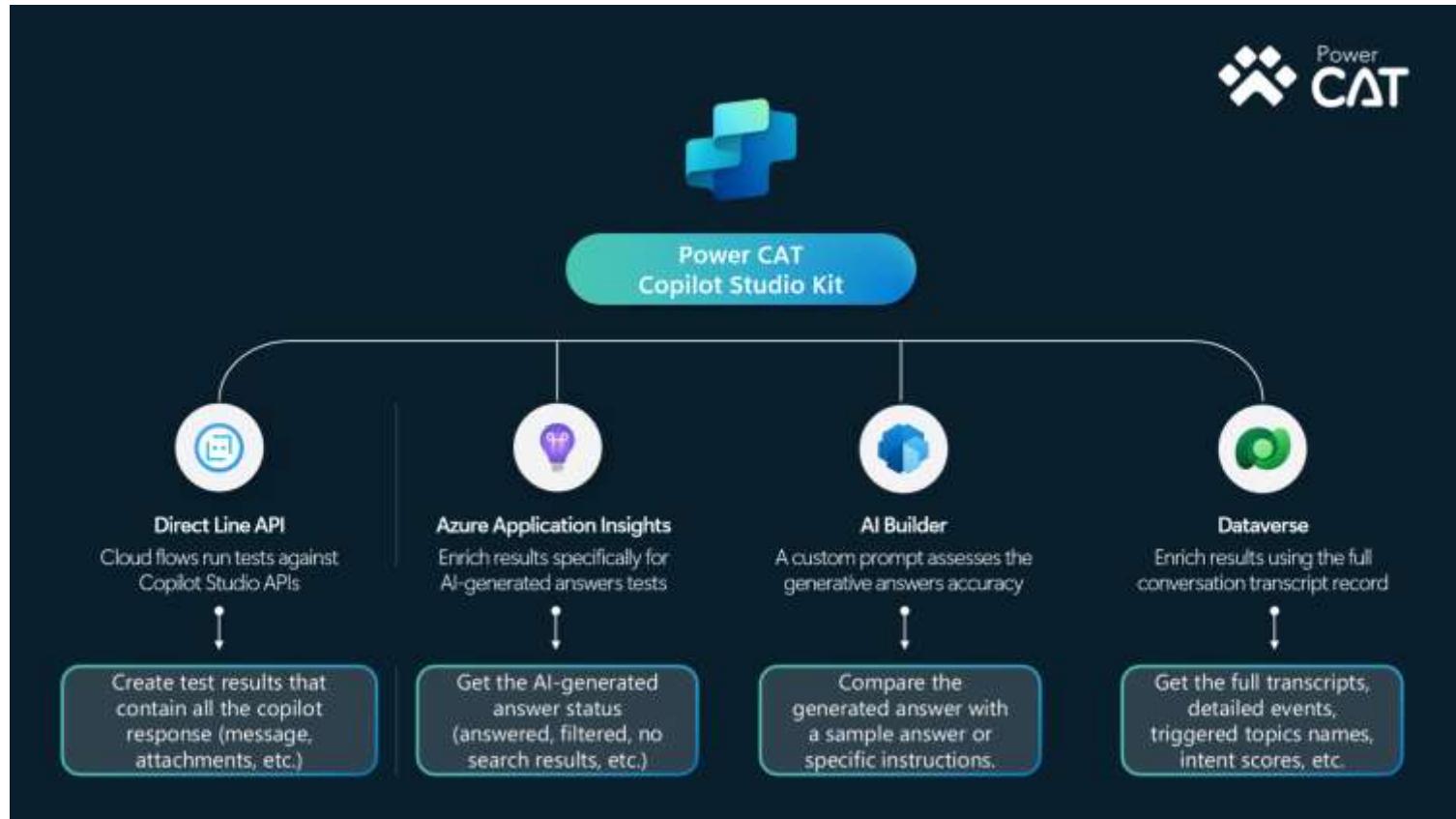
- When a chatbot is created, a team gets also created and the chatbot is shared with that team.
- Chatbot subcomponents (e.g., topics, entities, files, etc.) are shared with the same team.
- Conversation Transcripts are implicitly shared with their parent Chatbot's team, but only users that have a read access on the Conversation Transcript table can access them.

- These security roles grant permissions to Copilot Studio configuration and data tables in Dataverse.
- To start creating and working on copilots, users can be assigned the standard **Environment Maker** security role. With this role, users only see their own copilots or the copilots that have been shared with them. If too permissive, custom roles may also be used.
 - The Environment Maker role also lets users create other related Power Platform components (e.g., solutions, cloud flows, connection references, environment variables, etc.)
- To see transcripts, users must be granted at least one role giving read access to the Conversation Transcript table.

Useful resources:

- [Use group teams to assign security roles](#)
- [Security concepts in Dataverse](#)
- [Chatbot \(bot\) table/entity reference](#)
- [Chatbot subcomponent \(botcomponent\) table/entity reference](#)
- [conversationtranscript table/entity reference](#)

New! Power CAT Copilot Studio Kit



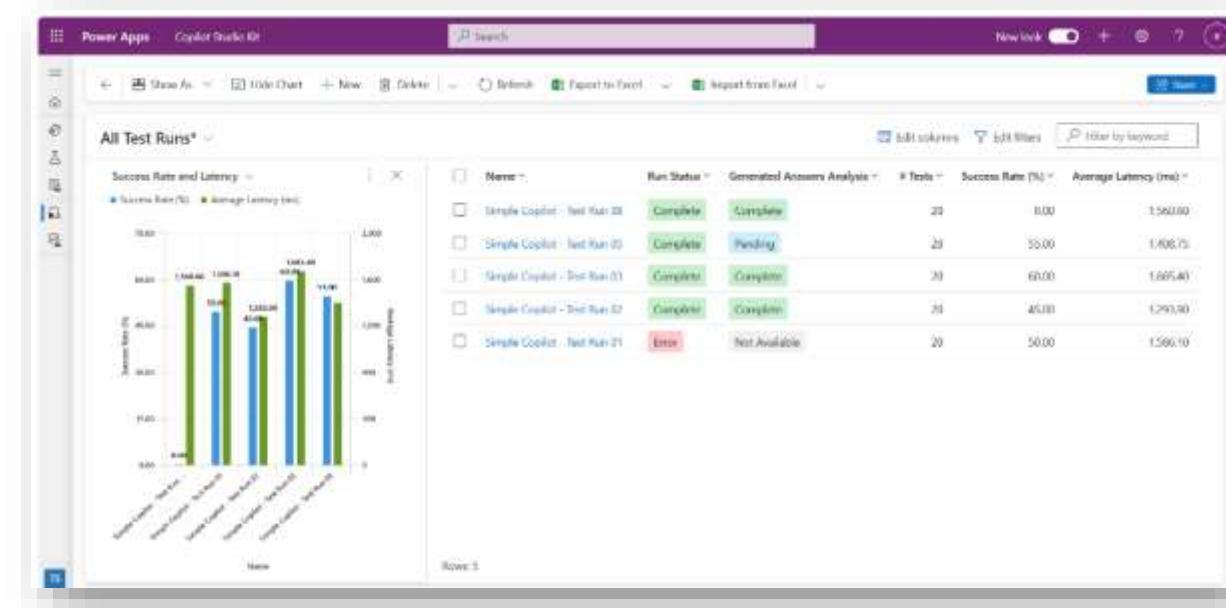
The **Power CAT Copilot Studio Kit** is a comprehensive set of capabilities designed to augment Microsoft Copilot Studio. The kit helps makers test custom copilots, use large language model to validate AI-generated content, and track aggregated key performance indicators.

New! Power CAT Copilot Studio Kit

By running individual tests against the Copilot Studio APIs (Direct Line), the copilot responses are evaluated against expected results. To further enrich results, additional data points can be retrieved from Azure Application Insights and from Dataverse, by analyzing Conversation Transcript records (to get the exact triggered topic name, intent recognition scores, etc.). For AI-generated answers, that are by nature non-deterministic, AI Builder prompts are used to compare the generated answer with a sample answer or with validation instructions.

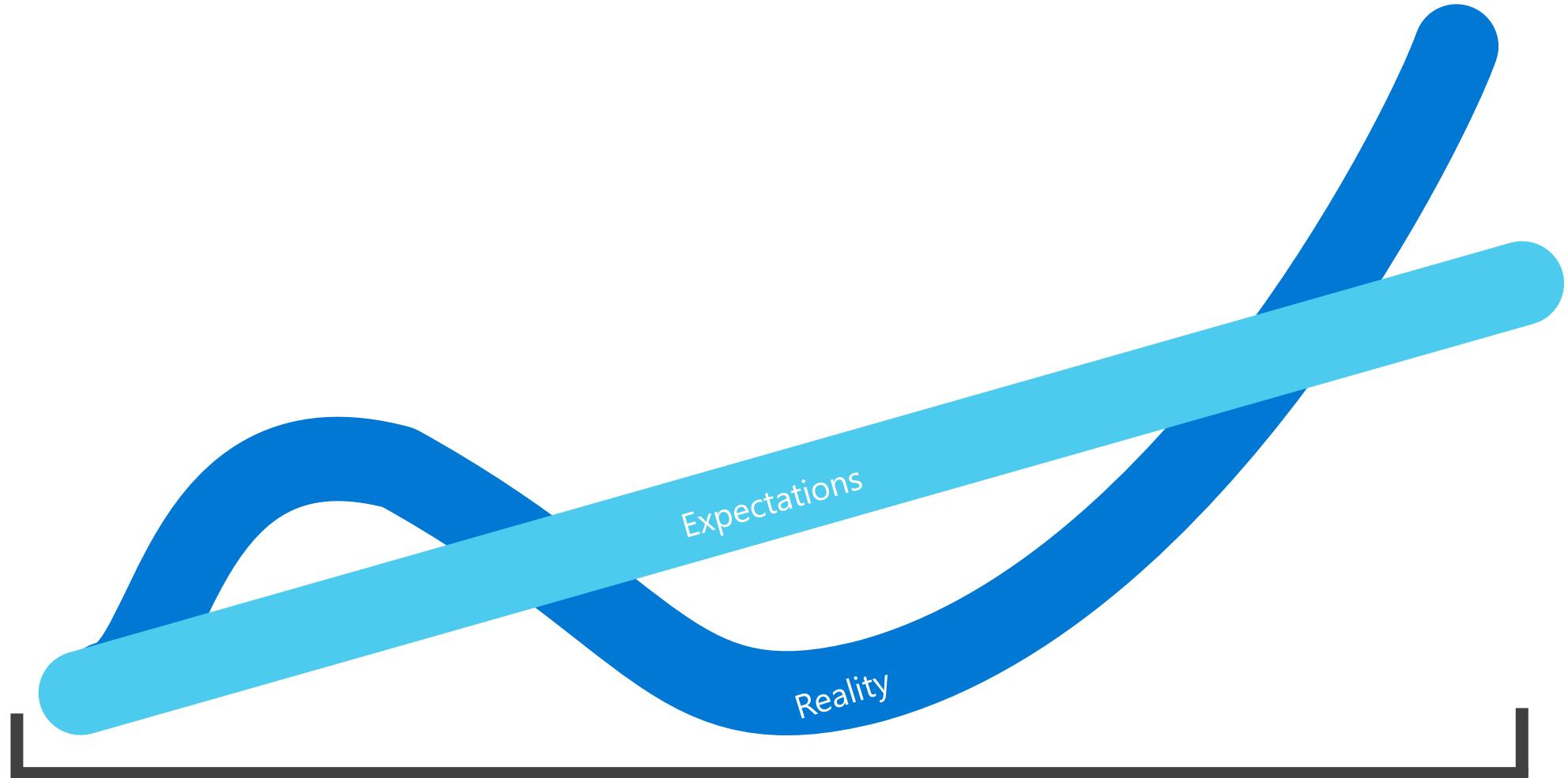
Today, the tool supports these types of tests:

- Response exact match.
- Attachments match.
- Topic match (requires Dataverse enrichment)
- Generative answers (requires AI Builder for response analysis, and Azure Application Insights for details on why an answer was or was not generated)



How to plan a copilot agent project

Copilot agent rollout



Questions to help you get started



- What does it mean for your agent to **truly answer** their questions?
- What are some **unexpected responses** your agent may encounter?
- What **data might you need** access to and need to integrate with various systems to do so?
- What **assumptions do your users have** when they engage with your agent?
- What **context do your users have** when talking with your agent, and does this solution fit that mental model?
- How can you design an agent that is **easy for your users** to navigate and find the answers they are looking for?



A photograph showing a person from the side, wearing glasses and a blue shirt, working at a desk. The desk is covered with architectural blueprints, a laptop, and various design samples like color swatches and fabric textures. The scene is set in a bright, modern office environment.

How to build effective conversational experiences?



Who is your “user”?



Things to keep in mind

- Who is your user?
- What types of conversations will your bot be having with this audience?
- And lastly where will these conversations take place?
- Don't forget who you're designing for

Users talking to agents

They know they're **not talking to a person.**

They know it's **not reciprocal.**

But their **emotional response** is very real.



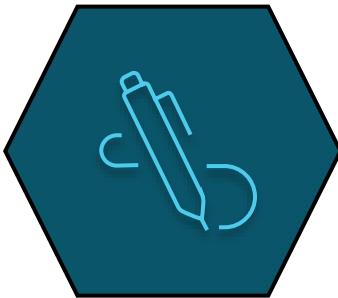
Useful conversational design best practices

- 1 Pick a scenario that will delight and will be requested repeatedly: is the scenario conversational?
- 2 Does the agent easily solve the user's problem with minimal back and forth turns?
- 3 Is the agent discoverable and easy to invoke?
- 4 Mimic human to human conversation in your design of the transcript
- 5 Prototype to uncover what is working
- 6 Create a test plan

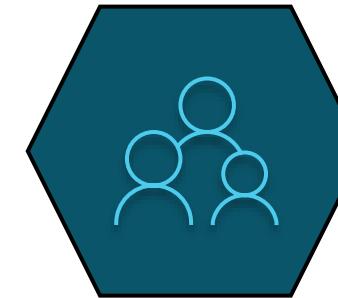
Useful conversational design best practices



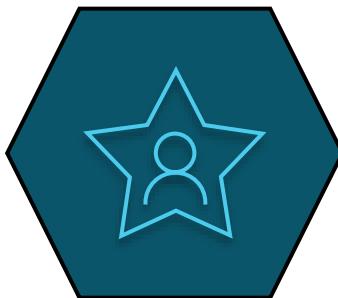
Understand your user



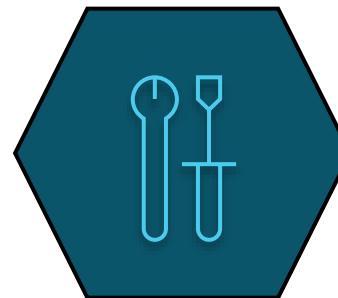
Keep it simple and clear



Be inclusive



Personality is important



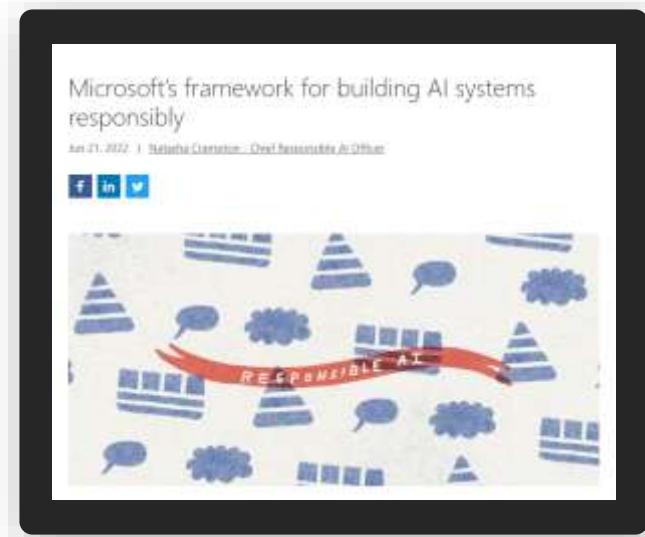
Use the right tools

Useful conversational design best practices

Align the agent with your organization's goals

- 1 Handling repetitive information requests when a skilled **human agent** is not required
- 2 Reducing the **time**, it takes to get answers to end users
- 3 Lowering **support call volume**, while also handling high call volume
- 4 Improving **support KPIs**
- 5 Using an agent as part of the **brand strategy**

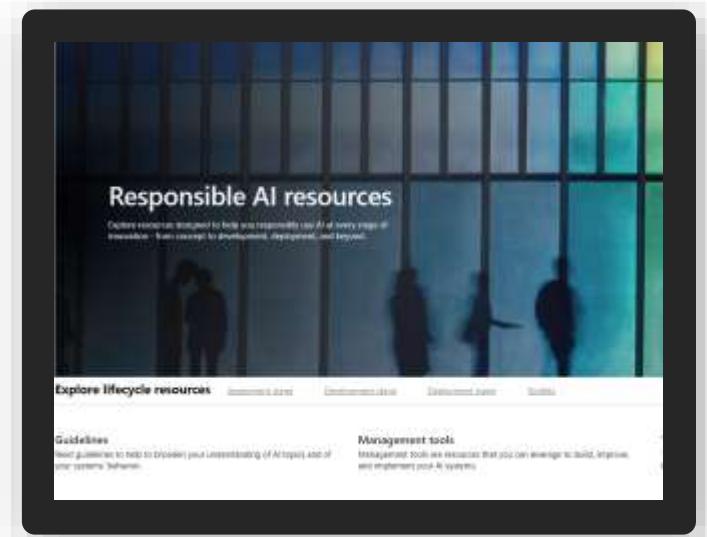
Ethical considerations



**Microsoft's framework
for building AI systems
responsibly**
aka.ms/MSFTAIFramework



**Responsible Conversational AI –
Microsoft AI Lab**
aka.ms/ResponsibleConvAI



**Responsible AI Resources –
Microsoft AI**
aka.ms/Responsible-AI-Resources

Additional recommended content

Copilot Studio implementation guide

Provides a framework to do a 360-degree review of your project. Through probing questions, it highlights potential risks and gaps, aims at aligning the project with the product roadmap, and shares guidance, best practices and reference architecture examples.

<https://aka.ms/CopilotStudioImplementationGuide>



Before you go

Plan your Power Platform adoption

Learn about your low-code maturity level

Learn how low-code can underpin your **successful digital transformation** and scale Microsoft Power Platform adoption to your **entire organization** with our adoption guide.

- Get guidance to help you **create** and **implement** the **business** and **technology strategies** to succeed with Power Platform.
- Learn about **themes, patterns, practices** and **behaviors** that underpin successful Power Platform implementations.
- Learn about how to **kickstart** your **Center of Excellence (CoE)**.

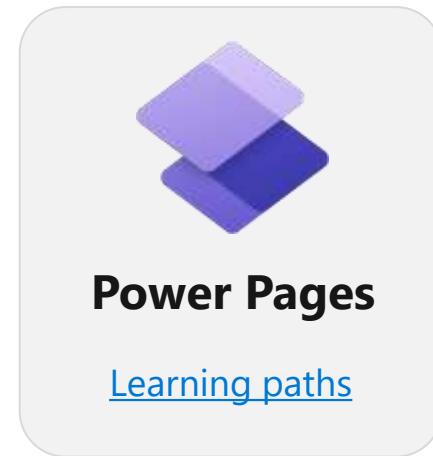
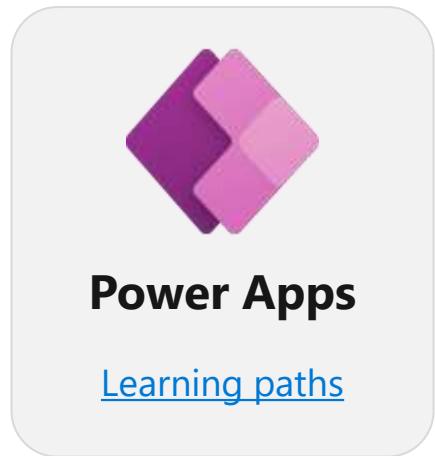
[Learn more!](#)

The screenshot displays the Microsoft Power Platform Adoption landing page. The main title is "Microsoft Power Platform Adoption". Below it, a subtitle reads: "Work together to meet challenges effectively with Microsoft Power Platform—analyze data, build solutions, automate processes, and create virtual agents." A purple button labeled "Adoption workbook >" is present. To the right, there's a mobile phone showing a "Good morning, Katie." message and a laptop displaying a Microsoft Teams interface. The bottom section of the page is divided into two main sections: "Adoption workbook" and "Adoption best practices". The "Adoption workbook" section includes social media sharing icons (Twitter, Facebook, LinkedIn) and a "Download workbook >" button. The "Adoption best practices" section contains descriptive text and a "Get the best practices >" button. The overall design is clean and professional, using a white background with dark blue and purple accents.

Get training

Use online resources or organize a “in a Day” workshops

Microsoft Learn have **online learning paths** from beginner to advanced level. **“In a Day”** workshops let you have a hands-on experience of building great business apps without writing code.

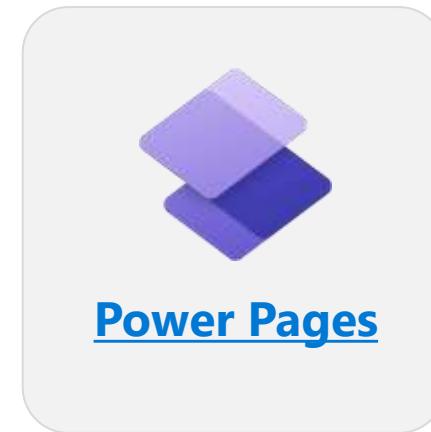
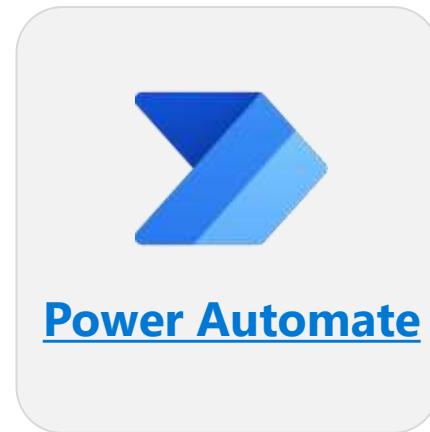
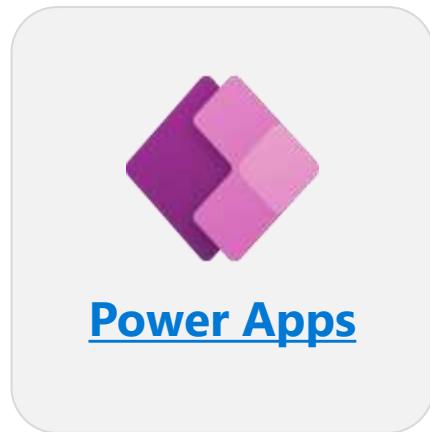


[Power Platform “In a Day”](#)
[workshops](#)

Establish guidelines and best practices

Use official documentation as a starting point

These guidelines provides **best practices**, **implementation**, and **architecture guidance** information from the **Microsoft teams** that works with our enterprise customers.



Establish guidelines and best practices

Address complex topics with Power Platform whitepapers

Get **in-depth information, solutions, and recommendations** to help you address complex scenarios and inform your decision-making.

Whitepaper	Description
Develop a tenant environment strategy to adopt Power Platform at scale	Shows you how to align your Power Platform tenant environment strategy with the product capabilities and vision.
Enterprise security with Power Platform	Shows you how to align Power Platform with your security practices.
Activating Managed Environments	Explores the features of Managed Environments in Power Platform.
Application modernization with Power Platform	Explores the benefits, strategies, and best practices of modernizing applications with Microsoft Power Platform.
Migrating apps and flows from the default environment	Outlines considerations and best practices for migrating apps and flows from the default environment.
Architecture white paper	Provides a comprehensive view of the capabilities of the Power Pages platform and how it scales, offer high reliability and availability, and protect business data
Security white paper	Describes how Power Pages offers enterprise grade security and the tools and capabilities

Establish guidelines and best practices

Power Platform Well-Architected

A framework that can improve the quality of your Power Platform workloads

- A set of **best practices, architecture guidance, and review tools** to help you make informed decisions about the design, planning, and implementation of Power Platform workloads.
- Based on the methodology and guidance of the [Azure Well-Architected Framework](#).
- Have an [assessment tool](#) to help **identify areas of enhancement** and **iteratively improve** your workloads.

[**Learn more!**](#)

The screenshot shows the homepage of the Power Platform Well-Architected website. The header features the title "Power Platform Well-Architected". Below the title is a brief description: "Microsoft Power Platform Well-Architected is a set of best practices, architecture guidance, and review tools to help you make informed decisions about the design, planning, and implementation of modern application workloads with Microsoft Power Platform." A button labeled "What is Power Platform Well-Architected?" is visible. At the bottom of the header, there are navigation links: "What's new", "Pillars", "Workloads", "Implementing recommendations", and "Assessment tool". The main content area has a dark blue background with white text. It features the heading "POWER PLATFORM WELL-ARCHITECTED" and the subtext "Design modern application workloads that are built to change and built to last." To the right, there is a diagram showing the relationship between "Power Platform Well-Architected" and four pillars: Reliability (blue), Security (orange), Operational Excellence (green), and Performance (yellow). A note at the bottom states: "Power Platform Well-Architected helps you design your modern application workloads to both meet current requirements and adapt to future needs and challenges. Start with the pillars, and then align".

Continue sua jornada de **conhecimento**

Demonstrações técnicas de Power Platform

Eventos no **Microsoft Teams** conduzidos pelos especialistas em Power Platform da Microsoft Brasil. Para participar procure seu **gestor(a) de conta** (AE) ou **especialista** (SSP).



Desenvolvimento de aplicativos

Tópicos

- Canvas Apps
- Microsoft Dataverse
- Model Driven Apps
- Power Pages

Duração

03 horas

[Saiba mais](#)

Governança e ALM

Tópicos

- Governança
- Segurança
- Monitoramento
- Centro de Excelência (CoE)
- ALM/DevOps

Duração

03 horas

[Saiba mais](#)

Hiper automação

Tópicos

- Process e Task Mining
- Cloud flows (DPA)
- Desktop flows (RPA)
- Gerenciamento e monitoramento
- Hosted machines (VMs SaaS)
- Automações e integrações

Duração

03 horas

[Saiba mais](#)

Criando copilots com Copilot Studio

Tópicos

- Ecosistema Microsoft de copilots
- Visão geral do Copilot Studio
- Recursos baseados em IA generativa
- Automações e integrações

Duração

03 horas

[Saiba mais](#)

Continue sua jornada de **conhecimento**

Power Platform Connect

Site mantido pelos especialistas em **Power Platform** da **Microsoft Brasil**. Nele você encontrará:



Biblioteca de conteúdo

Coleção de links oficiais das soluções que compõem a Power Platform

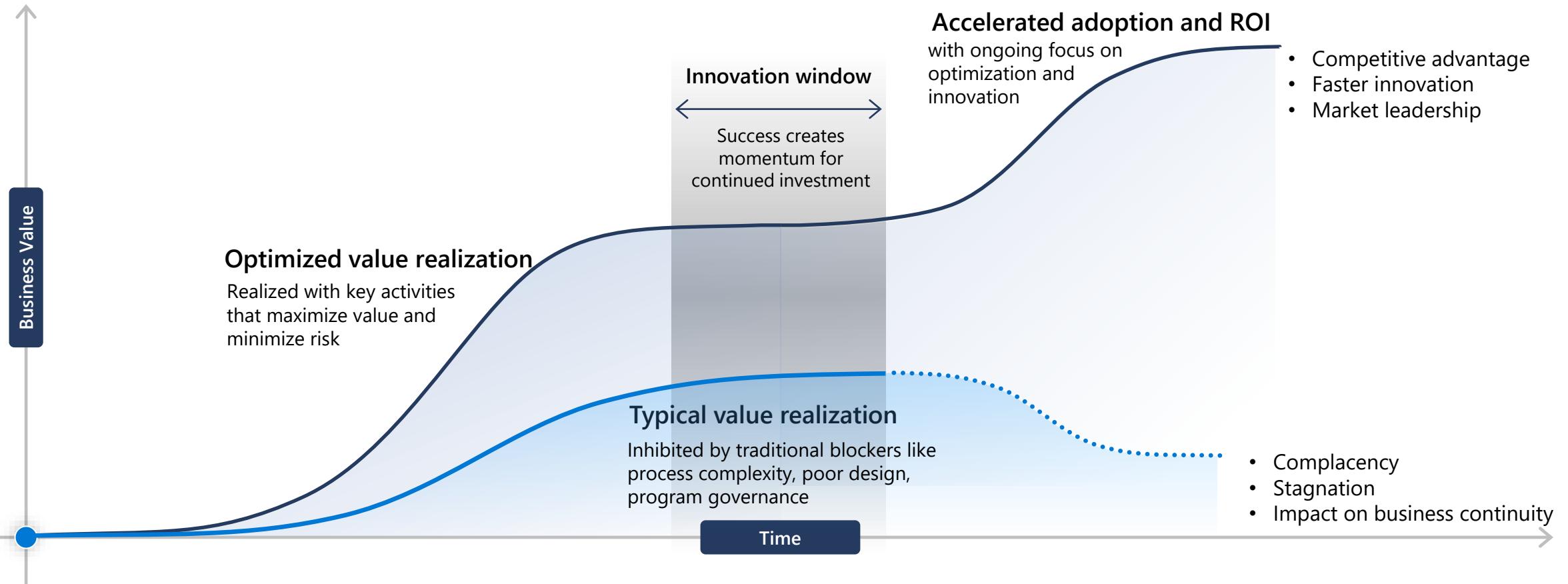
Eventos online

Eventos online promovidos pela Microsoft ou seus parceiros.

<https://microsoft.github.io/powerplatformconnect>

Maximize seus investimentos com o Microsoft Unified

Acelere seu tempo de implantação com serviços liderados por especialistas, desde o planejamento até a implantação e muito mais



Conte com especialistas para construir seus aplicativos

Com acesso direto aos especialistas da Microsoft, você pode criar aplicativos personalizados usando o Power Platform para resolver desafios de negócios e automatizar processos de negócios

O que você quer alcançar...

- Estabeleça um modelo de governança e padrões e prepare-se para a IA
- Implantação bem-sucedida da plataforma de energia em toda a empresa
- Validação de processos de projeto e desenvolvimento de arquitetura de soluções

Como entregamos...

- Assistência na criação de um Centro de Excelência (COE) para governar a criação de aplicativos e acelerar a adoção em toda a organização
- Orientação prescritiva de especialistas para acelerar a implantação com workshops de Maker e Developer para melhorar as habilidades da equipe
- Revisões técnicas e funcionais para validar planos e abordar problemas e riscos

Saiba Mais

Visite aka.ms/Enhanced-Solutions para agendarmos uma sessão com objetivo de determinar como nossas **Soluções Aprimoradas** podem ajudá-lo a alcançar os resultados desejados

Thank you!

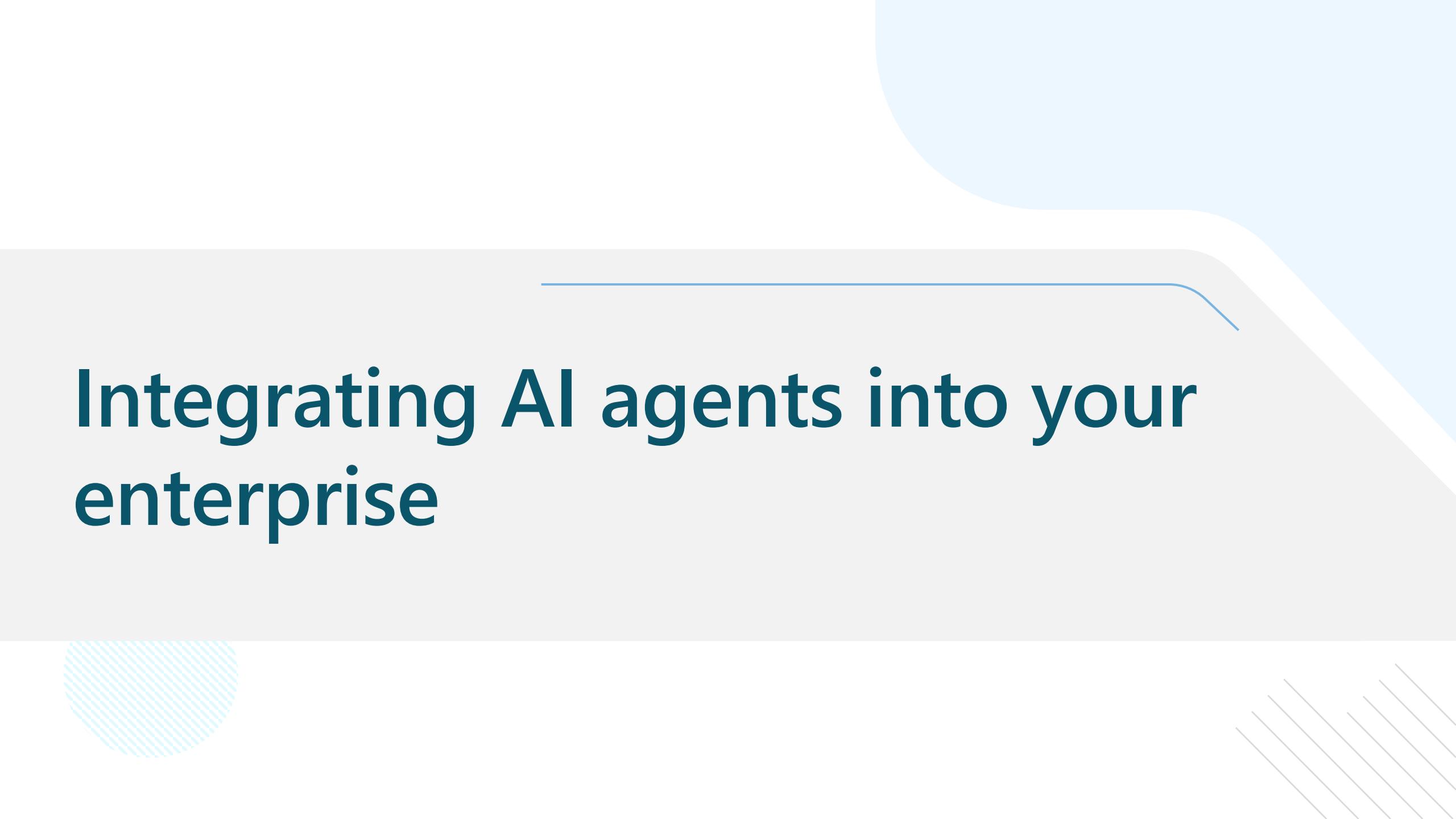
Ricardo de Souza

Technology Specialist - Power Platform

 rdesouza@microsoft.com

 <https://www.linkedin.com/in/ricardodesouza/>

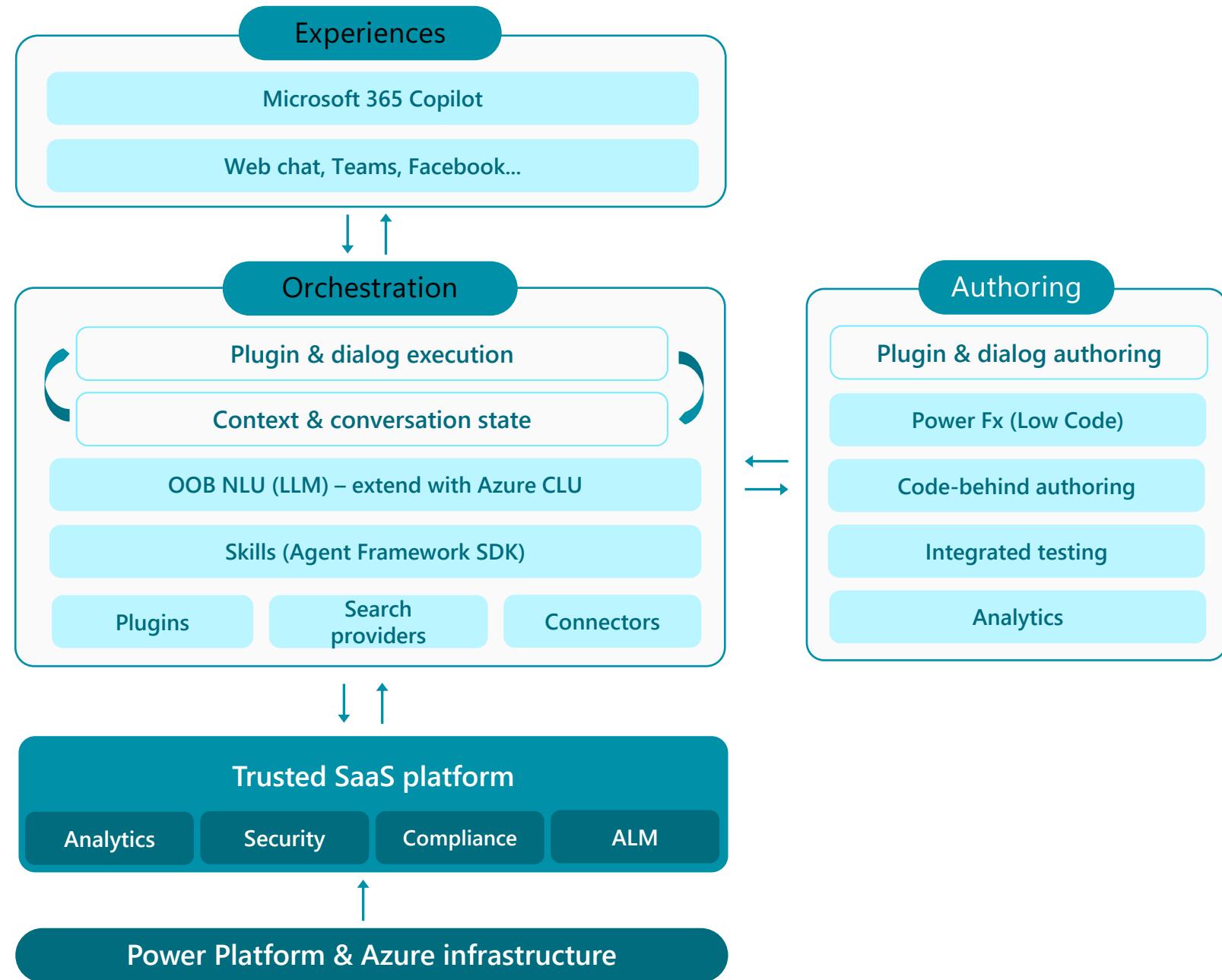
Appendix



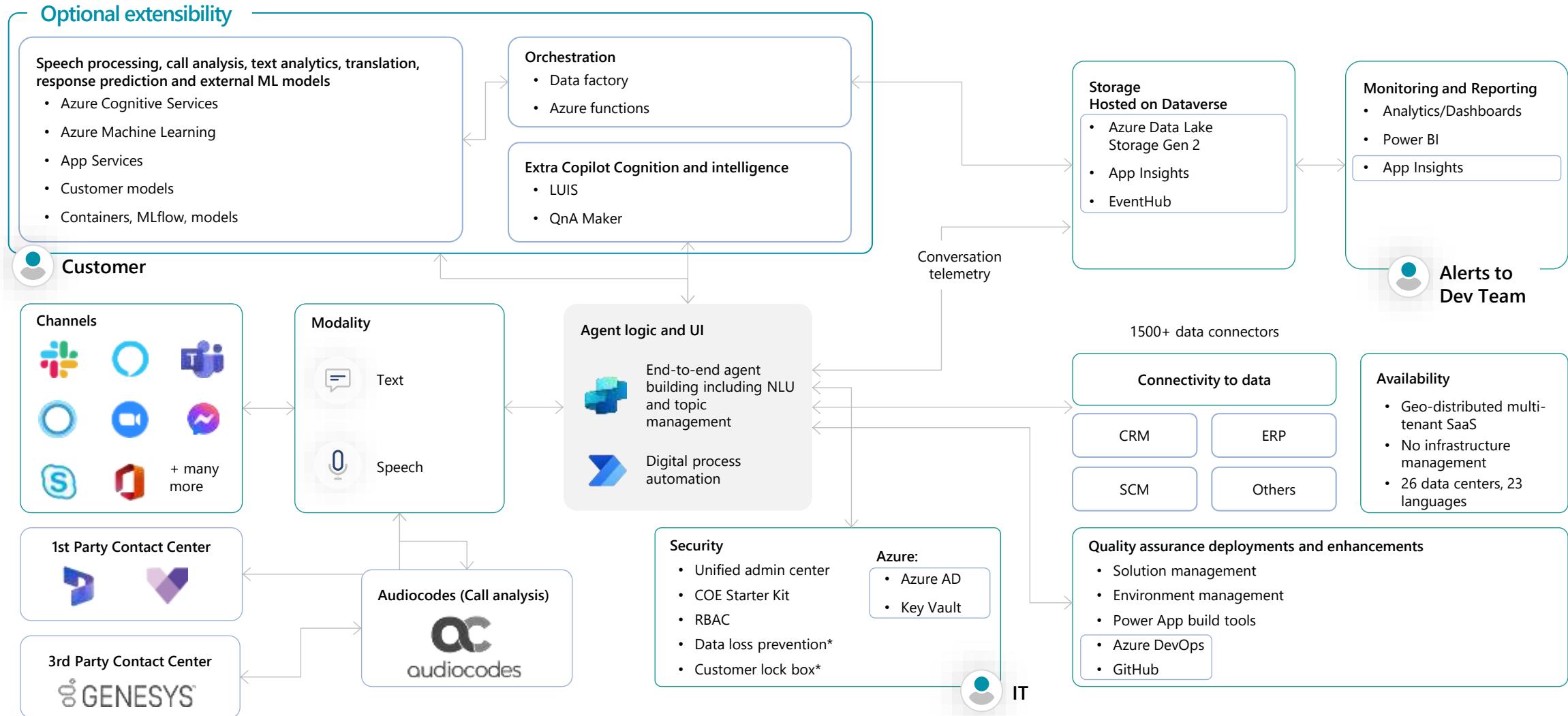
Integrating AI agents into your enterprise

Copilot stack

Applied to Copilot Studio



Integrating into your enterprise



Differences and similarities between Copilots

Comparison of agent types (1 of 2)

	Custom agents	Declarative agents	Embedded agents (Biz Chat)
Availability	Generally available	Generally available on 9/19	Public preview
Supported scenarios	B2C & B2E	B2E	B2E
Orchestrator	MCS standard or generative	Sydney	Sydney
LLM Answers	Yes	Yes	Yes
Custom Instructions	Yes	Yes	Yes
Starter prompts	No – users can use suggested actions to achieve a similar experience	Yes	Yes
Actions	<ul style="list-style-type: none"> • Connectors • Custom Connector • Flow • Skill • Prompt • Rest API (9/26) 	<ul style="list-style-type: none"> • Connectors • Custom Connectors • Flow • Prompt • Rest API (9/26) 	No
Knowledge available	<ul style="list-style-type: none"> • Websites • SharePoint • Files • Dataverse • Graph connectors • Power Platform connectors • AOAI On Your Data 	<ul style="list-style-type: none"> • SharePoint • Graph connectors 	<ul style="list-style-type: none"> • SharePoint • Graph connectors that have been configured by your admin • Full web
Topics	Yes – full advanced authoring canvas	No	No
Code editor	Yes	No	No
Adaptive card support	Yes	No	No
Adaptive card actions	Yes	No	No

Comparison of agent types (2 of 2)

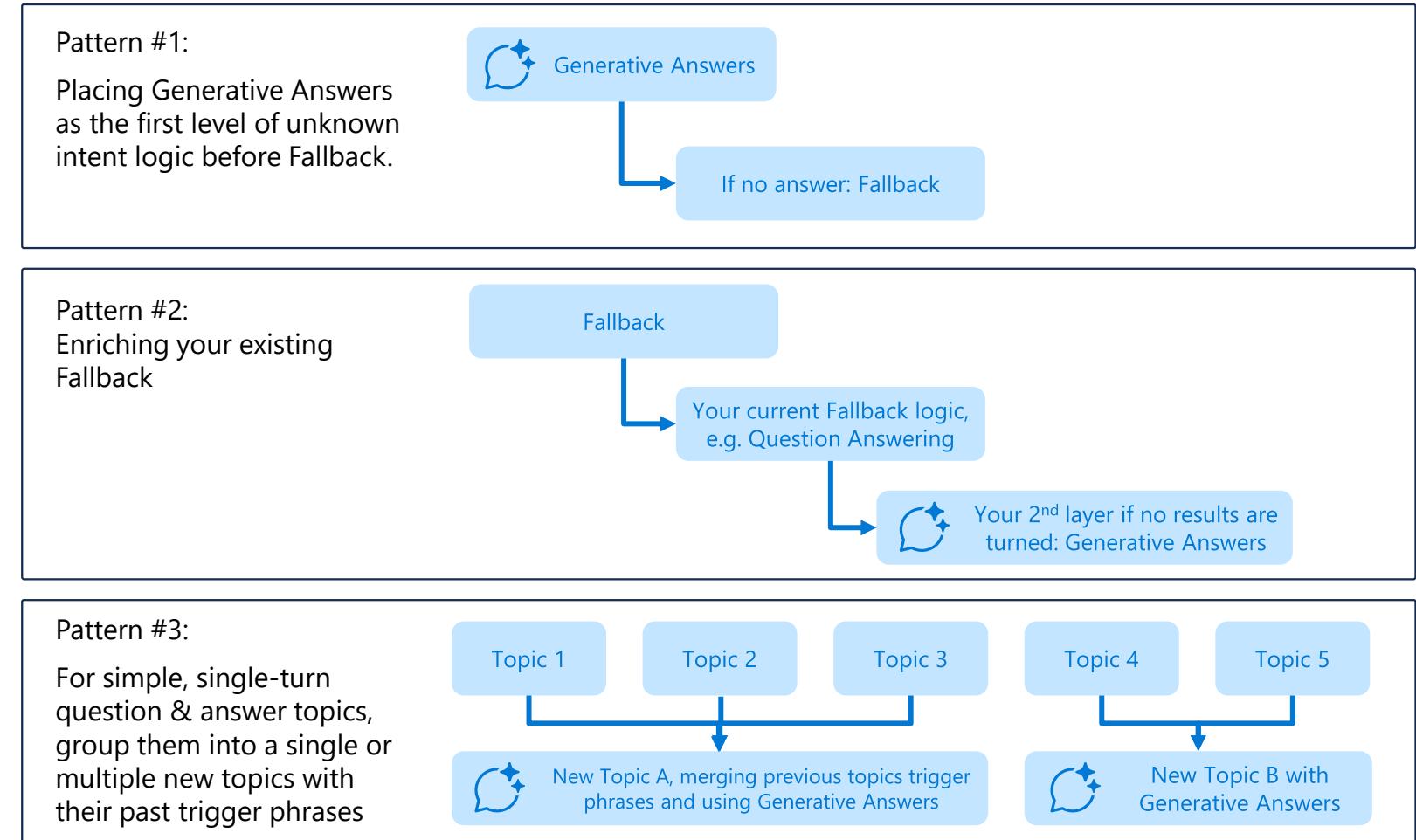
	Custom agents	Declarative agents	Embedded agents (Biz Chat)
Authentication	Yes, for agent and actions	Yes, for actions	No
Channels	<ul style="list-style-type: none"> • Website • Teams • Facebook • Slack • Mobile App • SMS - Twilio • Telephony • Telegram • Line • Email <p>With Dynamics Customer Service:</p> <ul style="list-style-type: none"> • Apple Business Chat • WhatsApp • Google Business Messaging 	<ul style="list-style-type: none"> • M365 Copilot • Teams 	<ul style="list-style-type: none"> • M365 Copilot • Teams
Handoff	Yes	No	No
Analytics	Yes	No	No
Azure AI integration	Yes	No	No
Custom prompts through AI Builder	Yes	Yes	No
Collaboration	Commenting and sharing	Everyone in environment can collaborate. No commenting.	No
Environment and solution aware	Yes	Yes	Environment agnostic
Agentic / autonomous capabilities	Coming at Ignite	No	No
Licensing	Copilot Studio PP License	M365 Copilot license (does not hit message meter)	M365 Copilot license (does not hit message meter)
Admin controls	Yes	Yes	No

Generative AI usage patterns

Infusing generative AI into topics example

Finding the right place for generative AI in your new or existing copilots

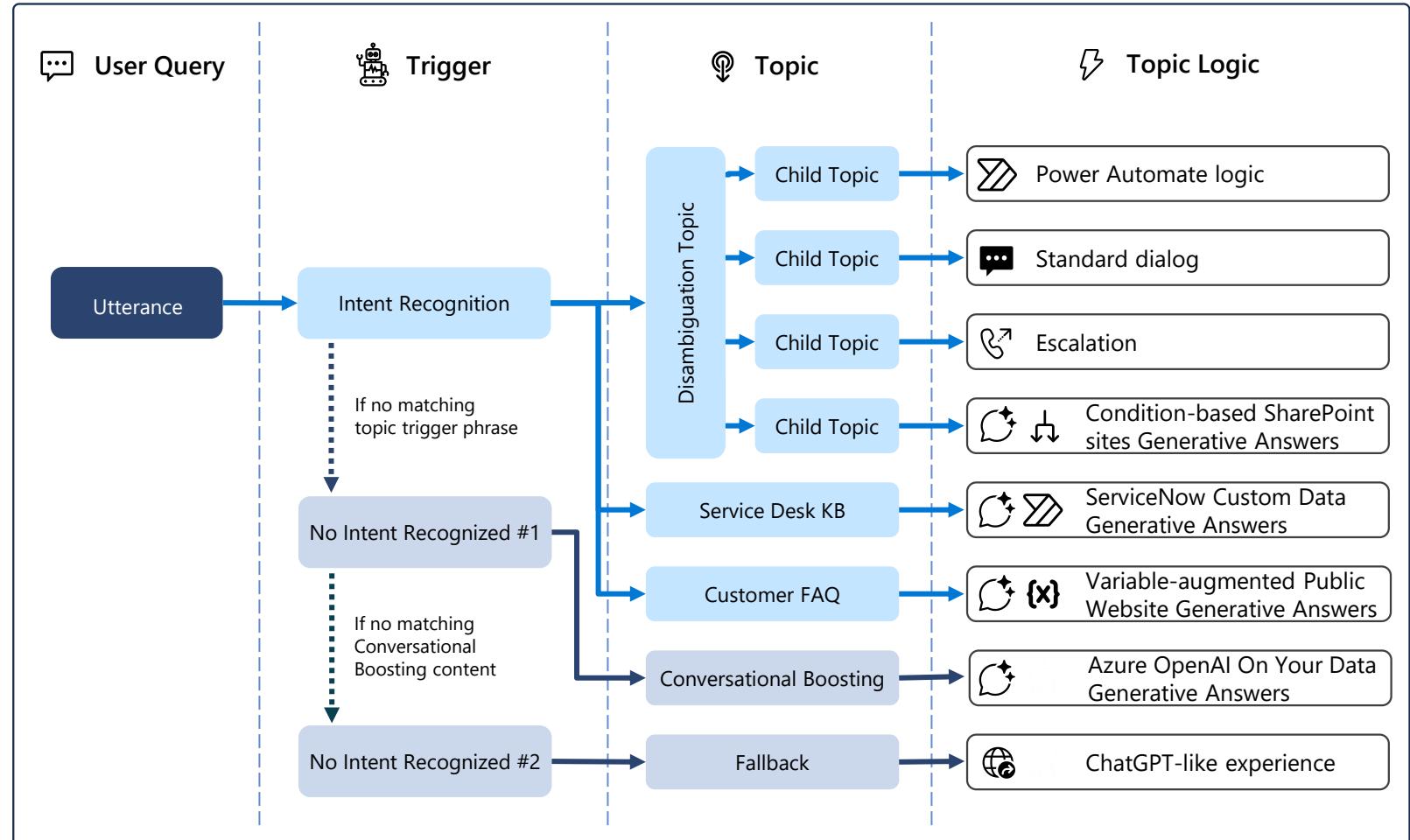
- Generative answers unlock new use cases for copilots where dialog paths no longer need to be fully anticipated.
- By plugging generative answers into your internal and external data sources, the copilot can search and summarize answers for user queries.
- It's not an 'either' choice: you can configure generative answers wherever you choose in your topics, and the data sources can both be dynamic, hard coded, or enriched with context variables.
- It's still a good idea to have generative answers also configured in the Conversational boosting topic that triggers before Fallback, to try to catch and answer user queries with broader data sources before they get to Fallback.
- While planning for generative answers, it's important to plan for follow-up questions (should they remain in context of the previous answer or trigger a new topic?) and how you will measure, track, and validate that the generated answers are accurate and answer the user questions.



Infusing generative AI into topics example 2

Mixing scripted dialog paths and generative answers from different data sources

- Generative answers unlock new use cases for copilots where dialog paths no longer need to be fully anticipated.
- By plugging generative answers into your internal and external data sources, the copilot can search and summarize answers for user queries.
- It's not an 'either' choice:** you can configure generative answers wherever you choose in your topics, and the data sources can both be dynamic, hard coded, or enriched with context variables.
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- While planning for generative answers, it's important to plan for follow-up questions (should they remain in context of the previous answer or trigger a new topic?) and how you will measure, track, and validate that the generated answers are accurate and answer the user questions.



Copilot studio popular authoring features

Popular authoring features



Rich responses



Adaptive Cards



Images



Videos



Quick Replies



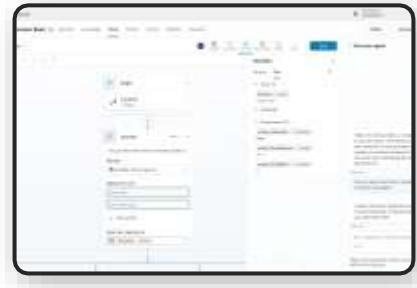
Power Fx-based variables system

- Power Fx integrated formula editor for variable management
- List/record type support
- Condition nodes with Power Fx formula support
- Iterate over a list with new Loop nodes



Code side-by-side

- Move between a visual editor and code
- Share and re-use topic logic between developers and agents



Event-driven & contextual triggering

- Trigger an event if it detects a certain value has been received
- Add more nuanced responses to a message when the agent runs into an issue
- Agents can stay within context when a user asks for help or more details



Productivity

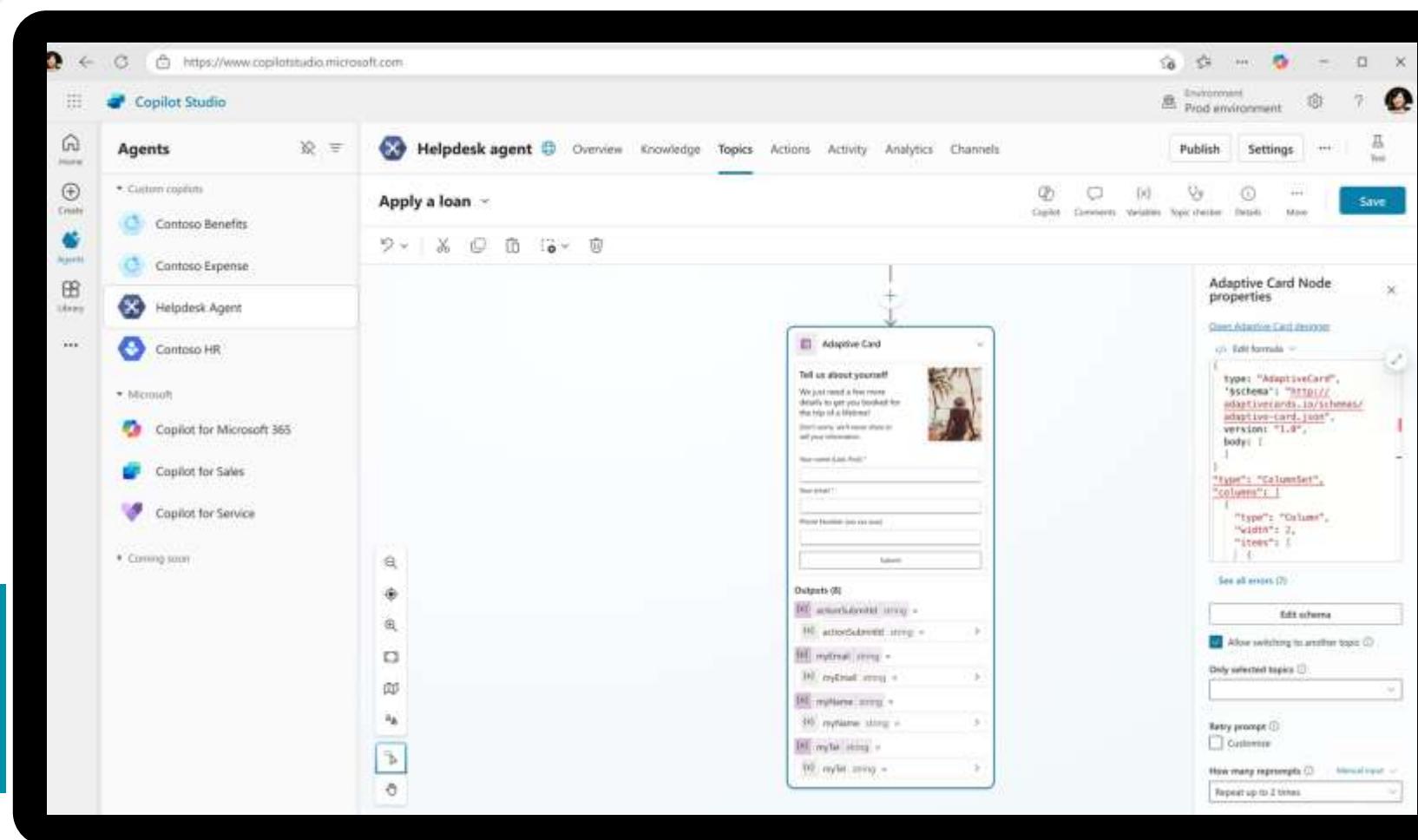
- Cut, Copy, Paste
- Multi-node selection
- Enhanced topic navigation

Design engaging responses

Type the response you would like to provide to the user

- Add images and videos using URLs
- Create Basic and Adaptive Cards using JSON and Power Fx
- Use Quick Replies to provide suggestions
- Mix up the way the agent says the response with language generation

An adaptive card is an open card exchange format enabling developers to exchange UI content in a common and consistent way.



Ask with an Adaptive Card

Collect information from users with an interactive Adaptive Card

Add a node that allows you to prompt a user with an Adaptive Card and wait for a response

Output variables are automatically generated, based on the JSON for the card

Same flexibility and configurable options for retry and interruption as the Question Node

The screenshot shows the 'Adaptive Card Node properties' panel from a workflow editor. At the top, there's a preview window showing an adaptive card with fields for name, email, and phone number, along with a submit button and a tropical photo. Below the preview, the JSON configuration for the adaptive card is displayed:

```
type: "AdaptiveCard",
'$schema': "http://adaptivecards.io/schemas/adaptive-card.json",
version: "1.0",
body: [
]
}

"type": "ColumnSet",
"columns": [
{
  "type": "Column",
  "width": 2,
  "items": [
    {
      "type": "Text"
    }
  ]
}
]

See all errors (7)
```

On the right side of the panel, there are several configuration options:

- Edit schema** button
- Allow switching to another topic** checkbox (checked)
- Only selected topics** checkbox

Design with code side-by-side

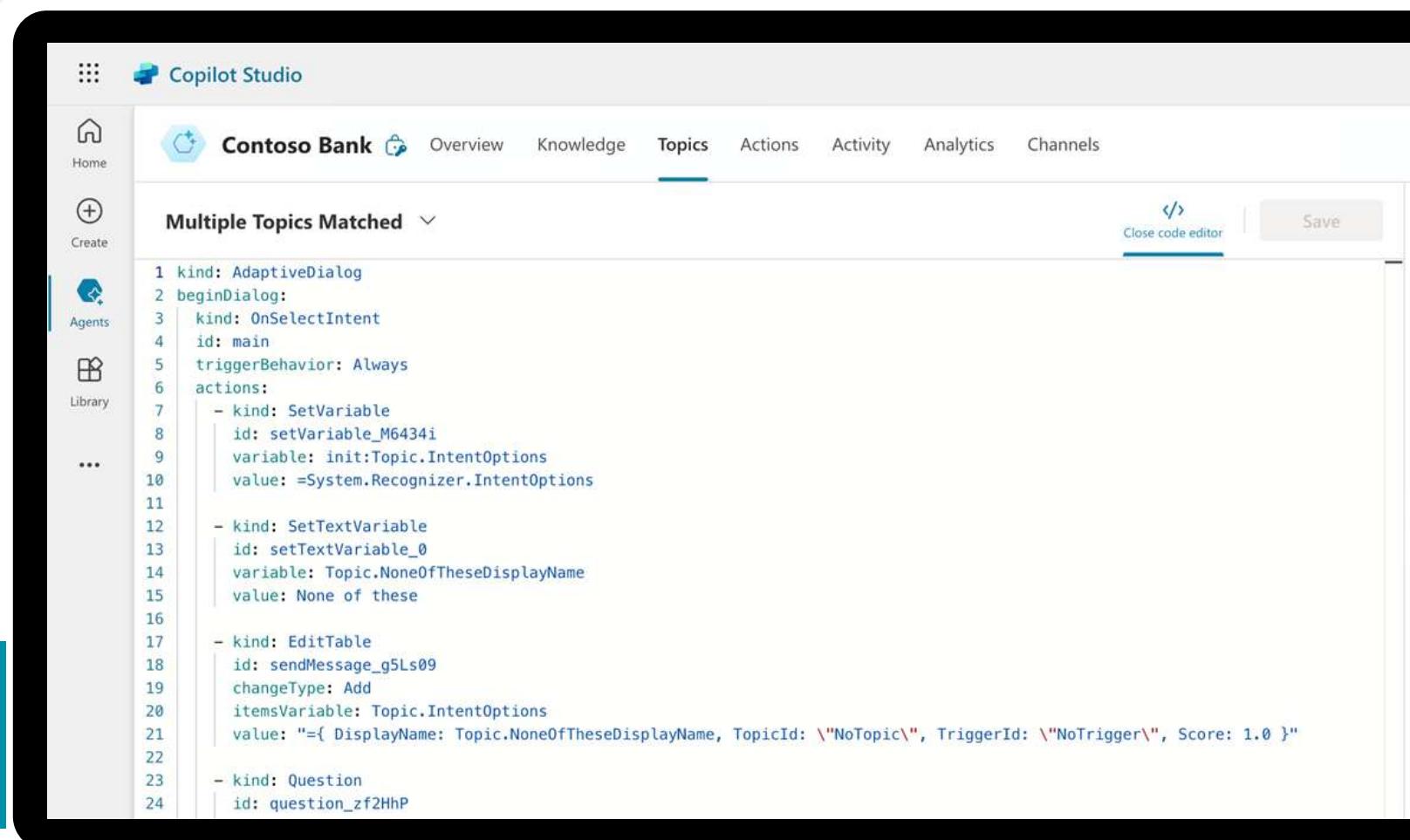
Switch in between the graphical user interface and the code editor

The code editor provides a YAML-like experience to make inline edits to the agent

Pick the view that makes your agent building the most efficient

Developers can share and re-use topic logic between developers and agents

YAML is a human-readable data-serialization language. It is commonly used for configuration in applications where data is being stored or transmitted.



The screenshot shows the Copilot Studio interface for the Contoso Bank agent. The top navigation bar includes Home, Create, Agents, Library, and a three-dot menu. The main header shows 'Contoso Bank' and the 'Topics' tab is selected. Below the header, a title 'Multiple Topics Matched' is displayed. The central area contains a YAML code editor with the following content:

```
1 kind: AdaptiveDialog
2 beginDialog:
3   kind: OnSelectIntent
4   id: main
5   triggerBehavior: Always
6   actions:
7     - kind: SetVariable
8       id: setVariable_M6434i
9       variable: init:Topic.IntentOptions
10      value: =System.Recognizer.IntentOptions
11
12     - kind: SetTextVariable
13       id: setTextVariable_0
14       variable: Topic.NoneOfTheseDisplayName
15       value: None of these
16
17     - kind: EditTable
18       id: sendMessage_g5Ls09
19       changeType: Add
20       itemsVariable: Topic.IntentOptions
21       value: "{ DisplayName: Topic.NoneOfTheseDisplayName, TopicId: \"NoTopic\", TriggerId: \"NoTrigger\", Score: 1.0 }"
22
23     - kind: Question
24       id: question_zf2HhP
```

On the right side of the code editor, there are buttons for 'Close code editor' and 'Save'.

Establish variables for data manipulation

A variable type is associated with the entity and identified information when it's saved

Set variables before the question or save from responses

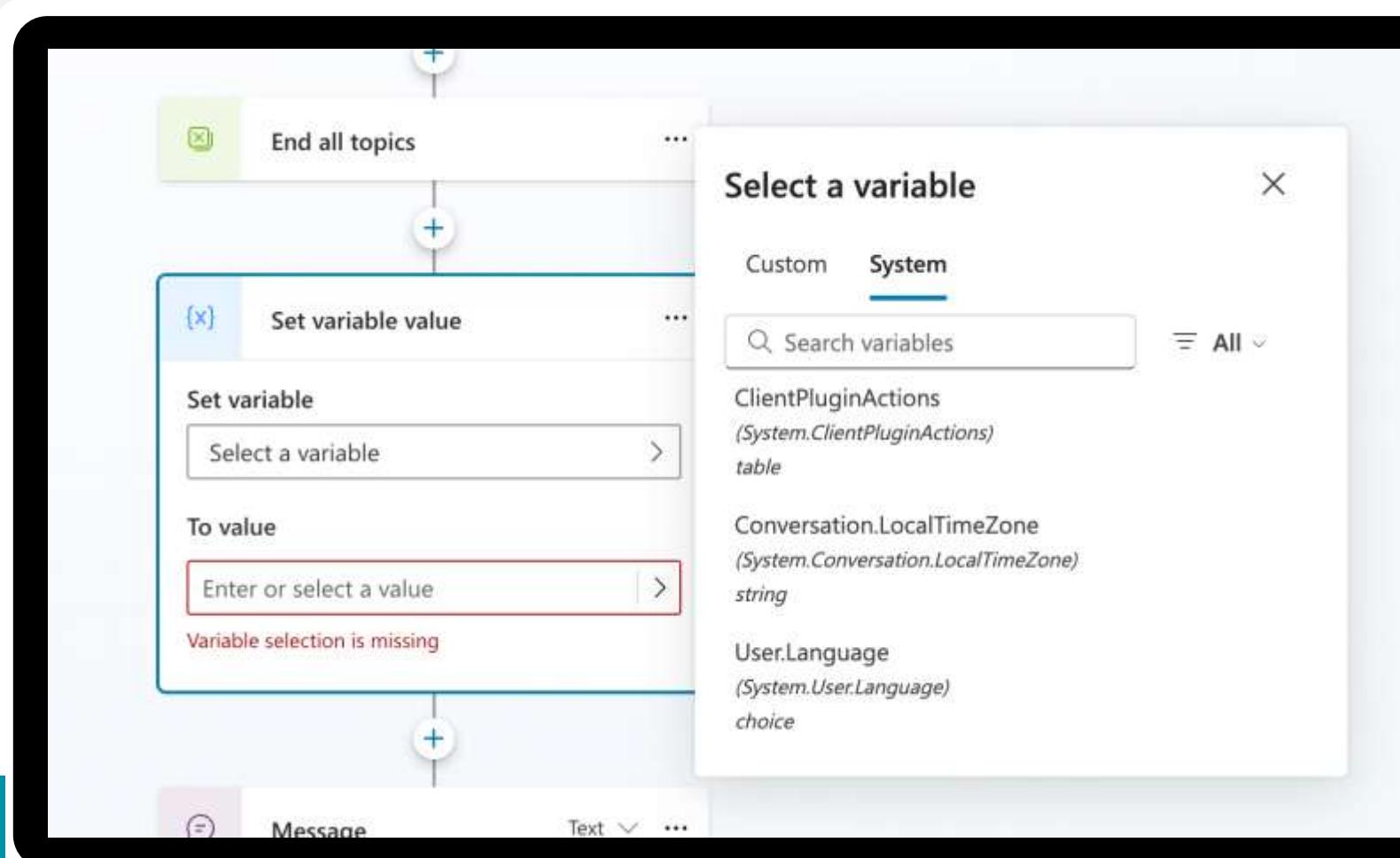
Examples:

- The country and region entity would store a variable as a "String"
- The money entity stores the variable as a "Number"

Variable types

String	List
Number	Record
Boolean	Table
DateTime	Choice

A variable is used to store, transform and use data.
Variables can be used to dynamically route the user through a conversation.



Design for complex logic using Power Fx

Use the integrated Power Fx formula editor for simple but powerful variable manipulation across multiple nodes

These formulas can be used to work with variables and conditions

Popular Power Fx uses

- Date manipulation (date dif, date add, date format)
- Math calculations (sum, average, etc.)
- Text formatting (concat, numeric, etc.)

Power Fx uses Excel-like formulas to create complex logic for data and advanced variable manipulation

The screenshot shows the Power Automate interface. On the left, a message card displays the text "Got it. I'll process your return now." Below it is a "Message" action with a "Text" input field containing the same text. Above the message card, a "To value" step shows the formula `fx returnItem`, which is highlighted and has a red error message: "Identifier not recognized in expression". To the right, a separate "Enter formula" dialog is open, showing an empty input field and some usage instructions.

To value

fx returnItem

Identifier not recognized in expression "

+

Message

Text

Add **B** I \equiv {x} fx

Got it. I'll process your return now.

+

Enter formula

fx

Press CTRL + SHIFT + M to disable / enable Tab character

Examples

Conditions

- If(Topic.isVIP, "Hello VIP", "Hello")
Runs the formula and returns 'Hello VIP'
- If(Topic.age > 18, "Enter")
Runs the formula and returns 'Enter'

Date & Time

Establish event-driven and contextual triggering

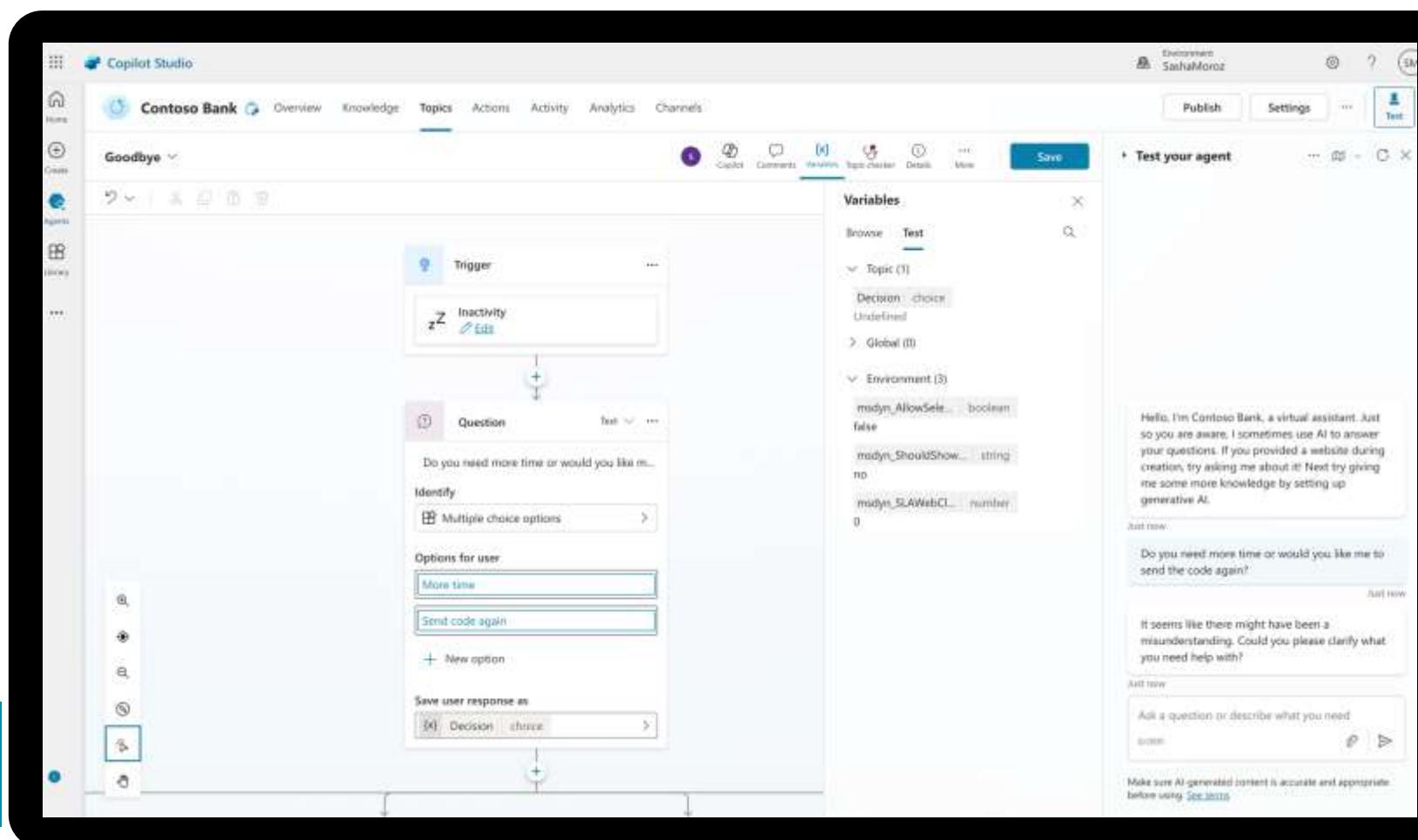
Topics can 'react' if the agent detects a certain value has been passed over or it wants to add more personality to a message when the agent runs into an issue

Contextual triggering enables smarter agents that can stay within context when asking for help or more details on a certain topic

Examples of events:

- Sending a message when a package arrives
- Task completion
- Slot openings

An event is an action or occurrence recognized by software.



Parse data and values

Easily parse JSON or other values into variables

Parse a JSON value or untyped value into a strongly-typed Copilot Studio variable, including support for complex Record types

Automatically generates the schema for the output variable from a JSON example

Use Power Automate to call an API and return the result to Copilot Studio and easily turn it into a usable variable, with full intellisense support in Power Fx

