



WorkshopPlus – Power Platform - Copilot Studio

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Module 1

Introduction and Overview of Copilot Studio



A Copilot for every experience

Copilot
(Bing Chat)



interaction with
web content

Copilots
for Web

Copilot for M365



Word, Outlook, Excel,
PowerPoint, Teams

Copilot
for Productivity

Copilot in Windows



interaction with OS,
apps, and files

Copilot
for Everyday

Designer



digital creations

Copilot
for Creativity

Azure



Azure platform operations
and optimizations

Copilot
for Cloud

Fabric Copilot



data analytics and
business intelligence

Copilots
for Analytics

Power BI



Unlock your insights

Copilot
for Dashboard

Security
Copilot



threat detection,
identification, and mitigation

Copilot
for Security

Dynamics
Copilot



sales and customer
support

Copilots
for Business

GitHub
Copilot



code development

Copilot
for Development

Power
Platform



creation of apps,
and workflows

Copilot
for Low/No Code
Development

Copilot
Studio



creation of your agents

Extend your
Copilot for M365

Custom
Copilot

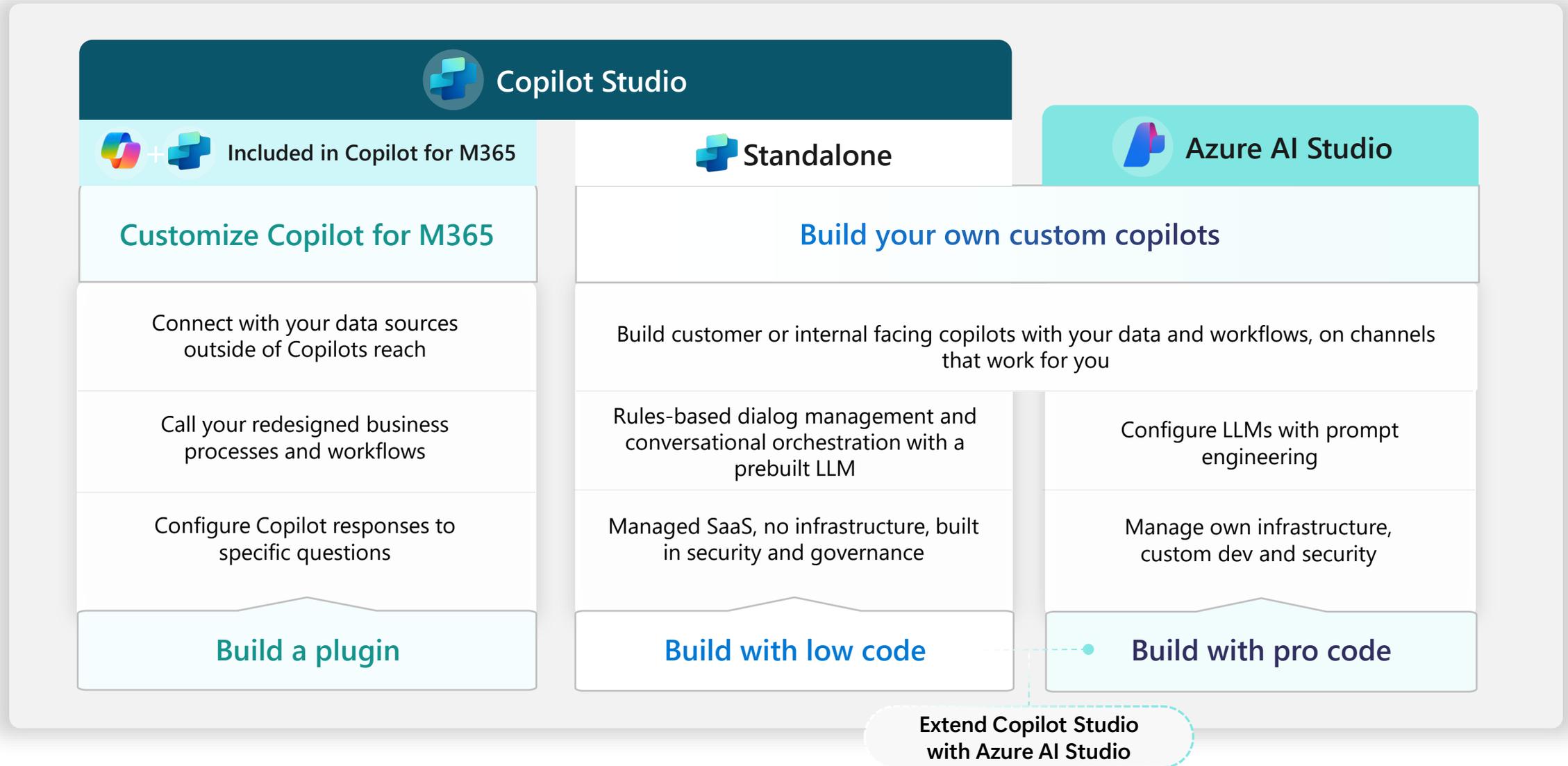


Create your
own copilot

AI Platform

Microsoft Copilot Studio

Different building journeys for different needs





Copilot Studio (Product vs Tool)

The Products



Copilot for Sales



Copilot for Service



Copilot for Microsoft 365



Copilot Studio
(Power Virtual Agents)

The Tool



Copilot Studio

The tool is used to modify/extend Microsoft's 1st party Copilots (e.g. Copilot for Microsoft 365) by creating plugins and to create your own Custom Copilots (formerly PVA chatbots).



What is Copilot?

Copilots are the new chatCopilots and more!

- ✔ Copilot studio reflects the new branding of Power Virtual Agents. We no longer refer to them as just Copilots or chatCopilots.
- ✔ Microsoft Copilot Studio is an end-to-end conversational AI platform that empowers us to create and customize copilots using natural language or a graphical interface. With Copilot Studio, we can easily design, test, and publish copilots that suit our specific needs for internal or external scenarios across industry, department, or role.
- ✔ With more immersive UX and next-generation AI capabilities, copilots are the new chatCopilots.
- ▶ Watch: [Understanding Copilots at Microsoft \(video\)](#)



Copilot Studio



Internal custom copilots



Customer facing copilots



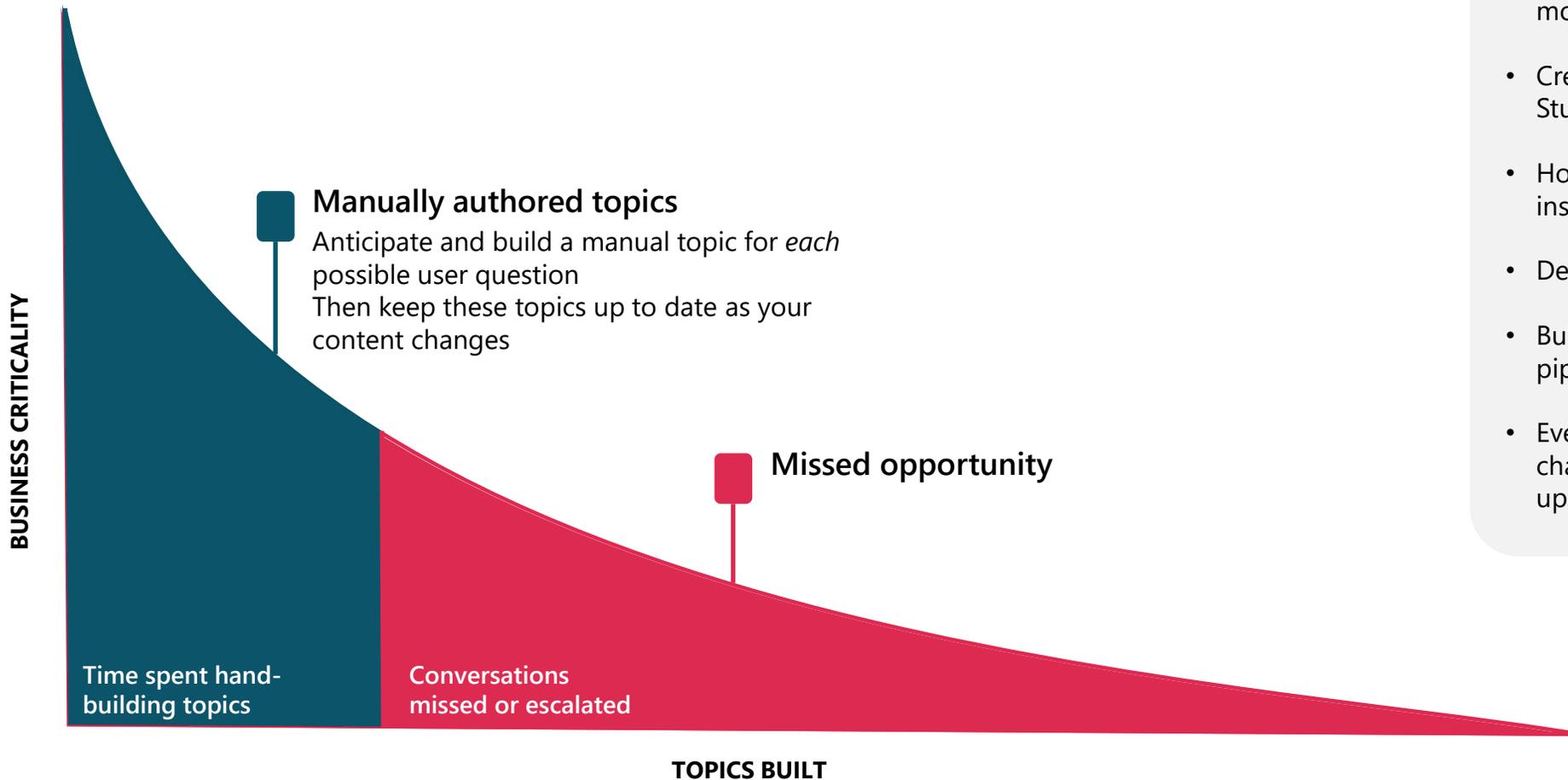
Extend Copilot for Microsoft 365

World Class UX	Declarative	Rich Response	Intuitive	Ease of use	Natural language to build
Logic + Automation	Low code logic	Generative Answers + Actions	Power Automate	Custom Azure Skills	
Next-Gen AI	Prebuilt LLM	Generative AI	Proactive suggestions	Bring your own Model (BYOM)*	
Connected experience	Microsoft Copilot	Power Platform	1000+ Connectors	Azure AI Studio	
Copilot Lifecycle	Test Pane	Collaboration	Solution Management	ALM Automation	
Security + Governance	Trusted identity	Full visibility	Advanced RBAC	Granular DLP control	

Microsoft's end-to-end copilot building platform

Why Generative AI?

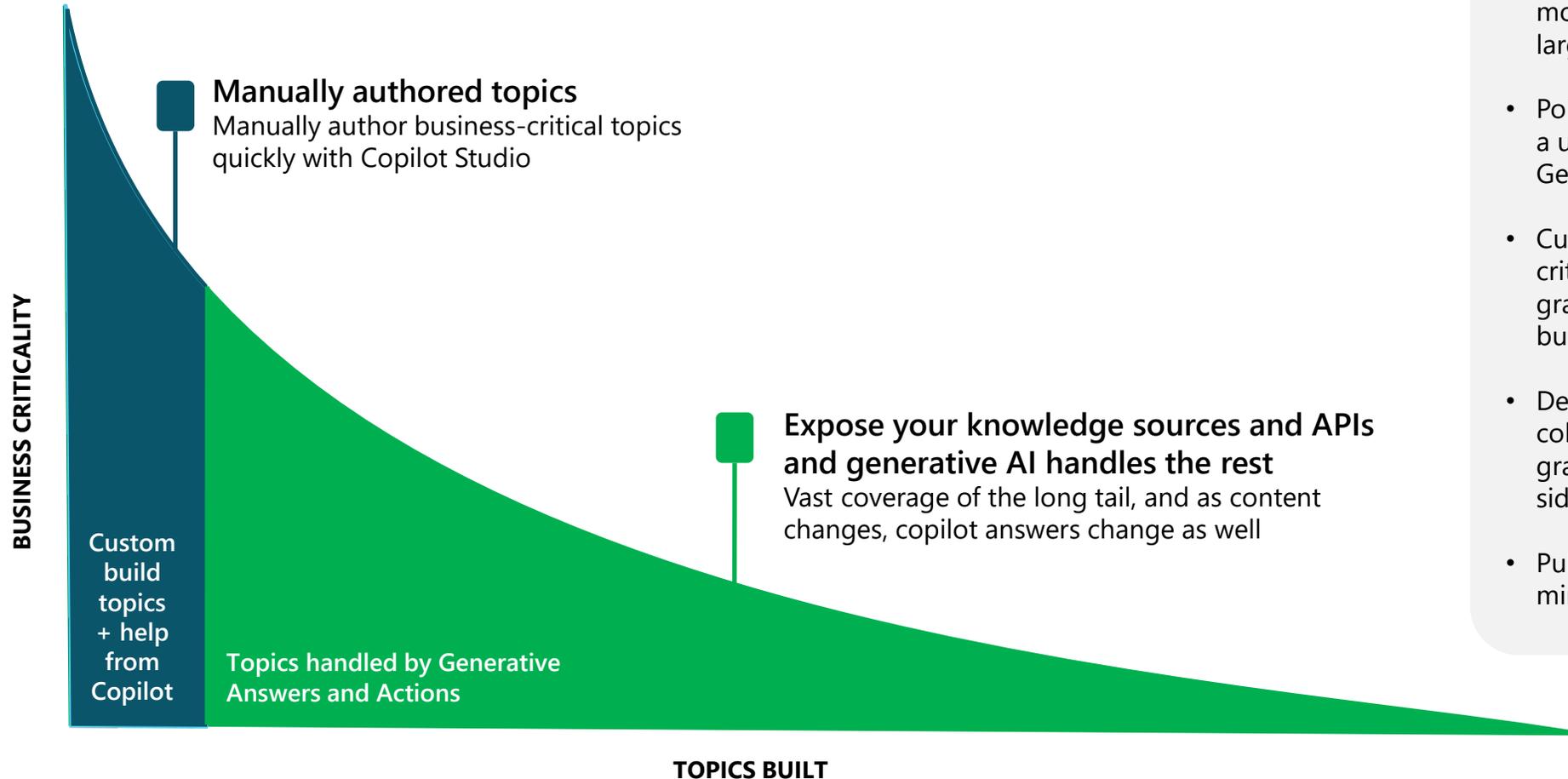
Generative AI is changing building



Traditional (e.g. Azure)

- Create Azure tenant and infra
- Annotate thousands of utterances and conversations to build a custom NL model
- Create topics in code using Visual Studio and BF SDK
- Host Azure Copilot Service and instantiate the appropriate channel
- Deploy your copilot to the service
- Build your own custom analytics pipeline
- Every time your knowledge content changes (e.g. different hours) go and update the copilot in code

Generative AI is changing building



Copilot Studio with Generative AI

- Full E2E SaaS – no infra to host or manage
- No explicit NL training or custom model required, comes with powerful large language model
- Point to a knowledge sources and have a useful Copilot in minutes with Generative AI
- Customize your copilot with business-critical topics using easy to use graphical interface and 1000s of pre-built connectors, or call custom APIs
- Developers, low-code users can collaborate inside the same canvas with graphical multi-authoring and code side-by-side
- Publish to the channel of your choice in minutes with a few clicks

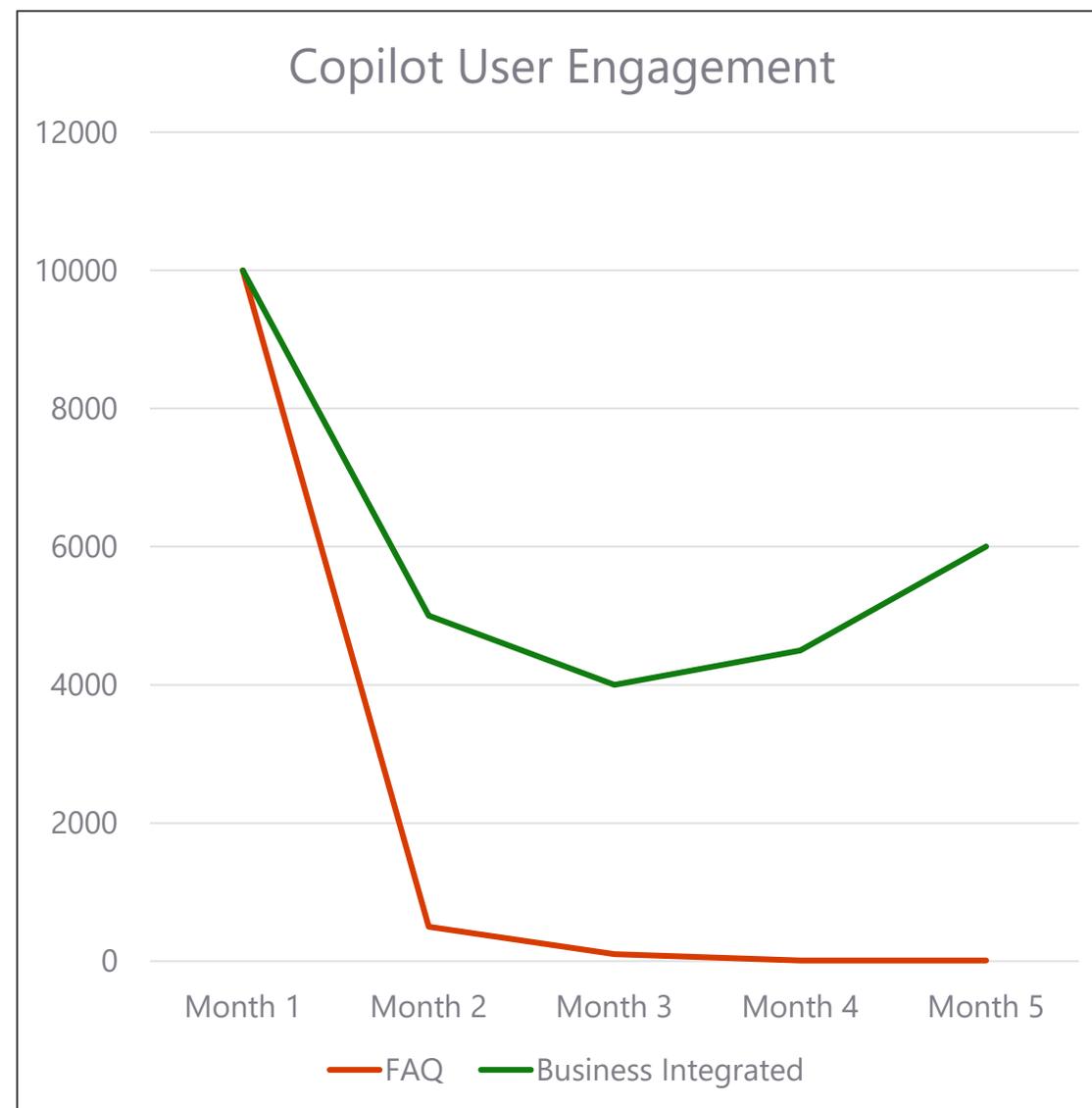


Build Engaging Copilots

FAQ vs Business Integrated

Leverage Power Automate Connectors
Value beyond Form Filling

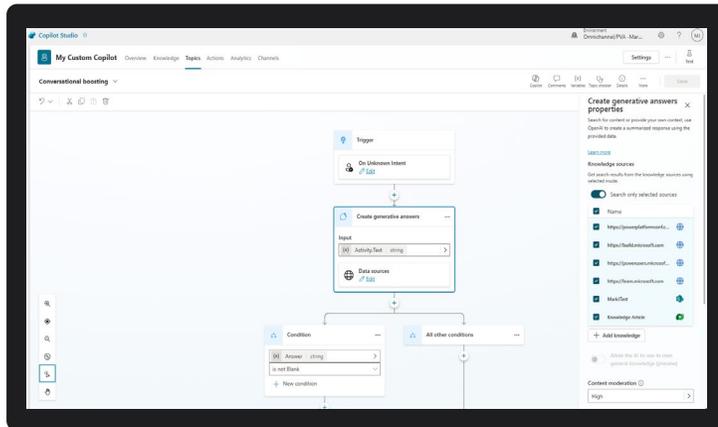
High Deflection Rate



Generative AI in Copilot Studio

Powered by Azure OpenAI Service

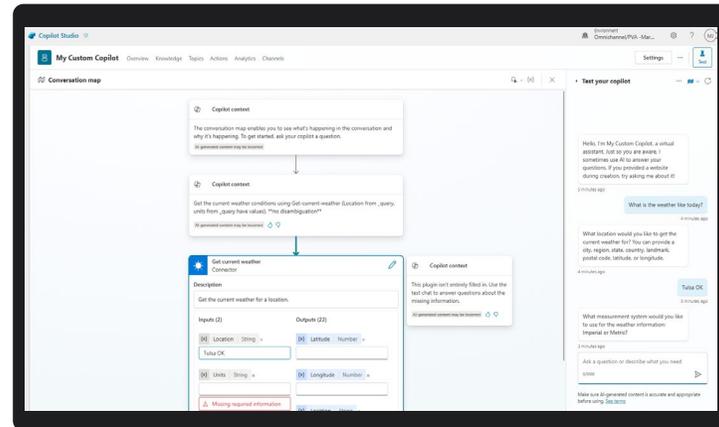
TO ANSWER



Generative Answers
Dynamically generate multi-turn answers based off an organization's content in real-time.

Generally Available

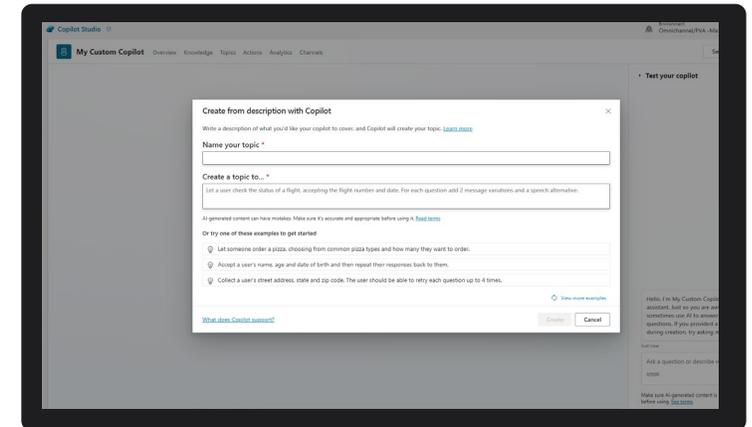
TO ACT



Generative Actions
Generate dialog and take action through dynamically chaining existing building blocks and plugins.

Public Preview

TO BUILD



Generative Building
The Copilot assistant helps build, design and modify copilot topics through natural language.

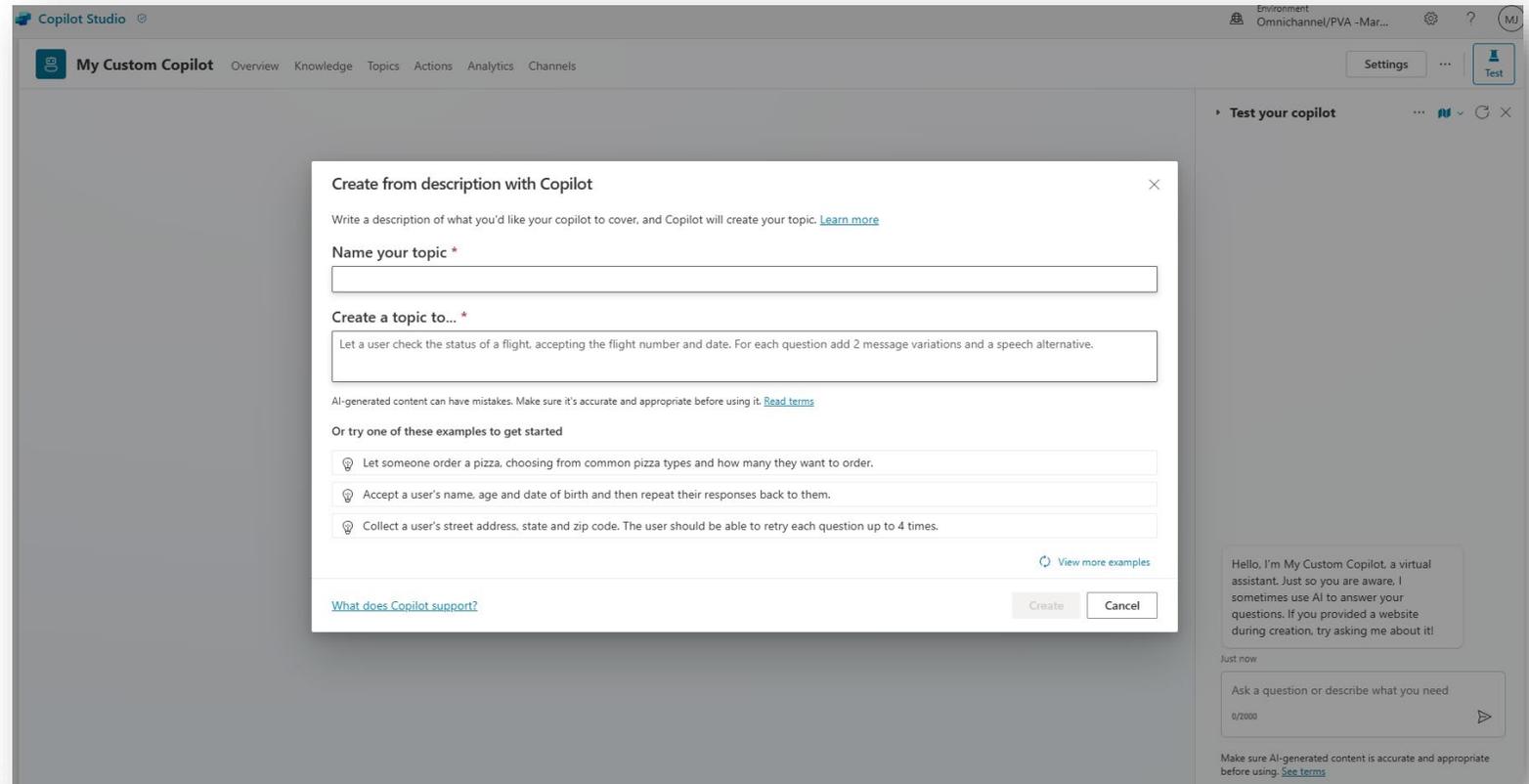
Generally Available

Generative Builder

AI assistance in building topics, designing and modifying a copilot- all through natural language

Assisted authoring for:

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



Generative Answers

Out of the box, your copilot answers questions based on the content your organization has already invested in

Always up to date, your copilot uses your latest published content for each request; no more maintaining info in two places

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

Supports content on the **web**, **SharePoint**, **Azure Open AI** on your data, and **direct file upload** and custom calls to backends

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

The screenshot displays the Copilot Studio interface for 'My Custom Copilot'. The main workspace shows a workflow diagram with three primary steps:

- Trigger:** 'On Unknown Intent'.
- Create generative answers:** This step has an 'Input' field set to '(x) Activity.Text string' and a 'Data sources' section with an 'Edit' link.
- Condition:** A condition is set to '(x) Answer string' with the value 'is not Blank'. Below it is a '+ New condition' button.

Arrows indicate the flow from the Trigger to the 'Create generative answers' step, and then to the Condition. A final step labeled 'All other conditions' is also visible. On the right side, a panel titled 'Create generative answers properties' is open, showing:

- Search for content or provide your own context, use OpenAI to create a summarized response using the provided data.**
- Knowledge sources:** A list of selected sources including 'https://powerplatformconf.c...', 'https://build.microsoft.com', 'https://powerusers.microsoft...', 'https://learn.microsoft.com', 'MarkJTest', and 'Knowledge Article'. There is an 'Add knowledge' button.
- Content moderation:** Set to 'High'.

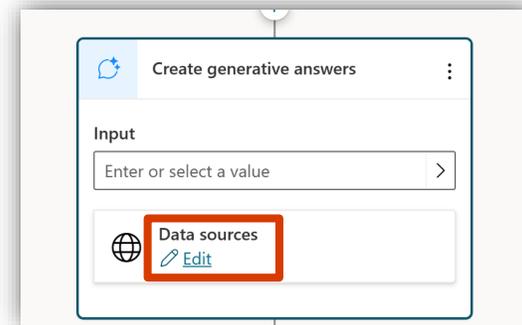
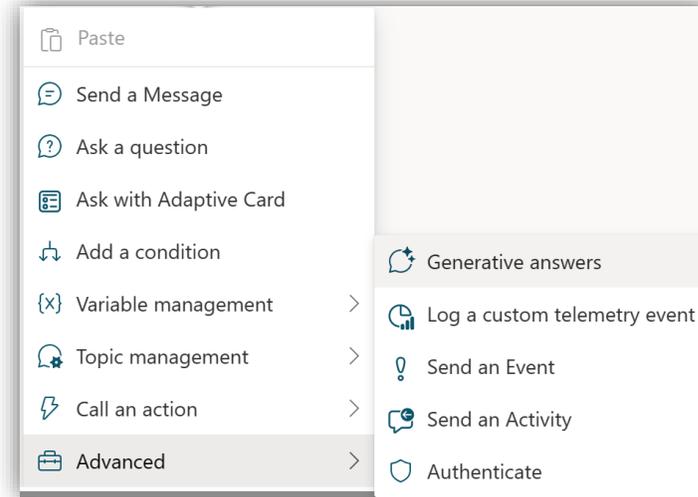
At the bottom right, a chat window titled 'Test your copilot' shows a conversation:

- User: 'Hello, I'm My Custom Copilot, a virtual assistant. Just so you are aware, I sometimes use AI to answer your questions. If you provided a website during creation, try asking me about it!'
- Assistant: '4 minutes ago' (timestamp)
- User: 'If I want to become a Power Platform admin in my company someday, what certifications would you recommend I take? Can you give me 3 suggestions?'
- Assistant: 'Just now' (timestamp)
- Assistant response: 'To become a Power Platform admin, you can consider the following certifications: Microsoft Certified: Power Platform Fundamentals, Microsoft Certified: Power Platform Administrator Associate, and Microsoft Certified: Power Platform App Maker Associate [1].'
- Reference: '1 Microsoft Certified: Power Platfor...'
- Footer: 'Surfaced with Azure OpenAI | 0/2000'

A dark blue banner at the bottom right of the screenshot contains the text: 'Try now at aka.ms/copilotstudio'.

Generative Answers Node

- You can use generative answers within your Copilot's topic.
- Your Copilot can query information sources by introducing generative answers in a node.
- To boost coverage in a Generative answer's node, you can navigate to the Data sources menu for the node and add the data sources you would like the node to use.



Create generative answers properties

Search for content or provide your own context, use OpenAI to create a summarized response using the provided data.

[Learn more](#)

Knowledge sources

Get search results from the knowledge sources using selected mode.

Search only selected sources

<input checked="" type="checkbox"/>	Name	
<input checked="" type="checkbox"/>	https://powerplatformconf.c...	
<input checked="" type="checkbox"/>	https://build.microsoft.com	
<input checked="" type="checkbox"/>	https://powerusers.microsof...	
<input checked="" type="checkbox"/>	https://learn.microsoft.com	
<input checked="" type="checkbox"/>	MarkJTest	
<input checked="" type="checkbox"/>	Knowledge Article	

+ Add knowledge

Allow the AI to use its own general knowledge (preview)

Content moderation ⓘ

High >

Generative Actions

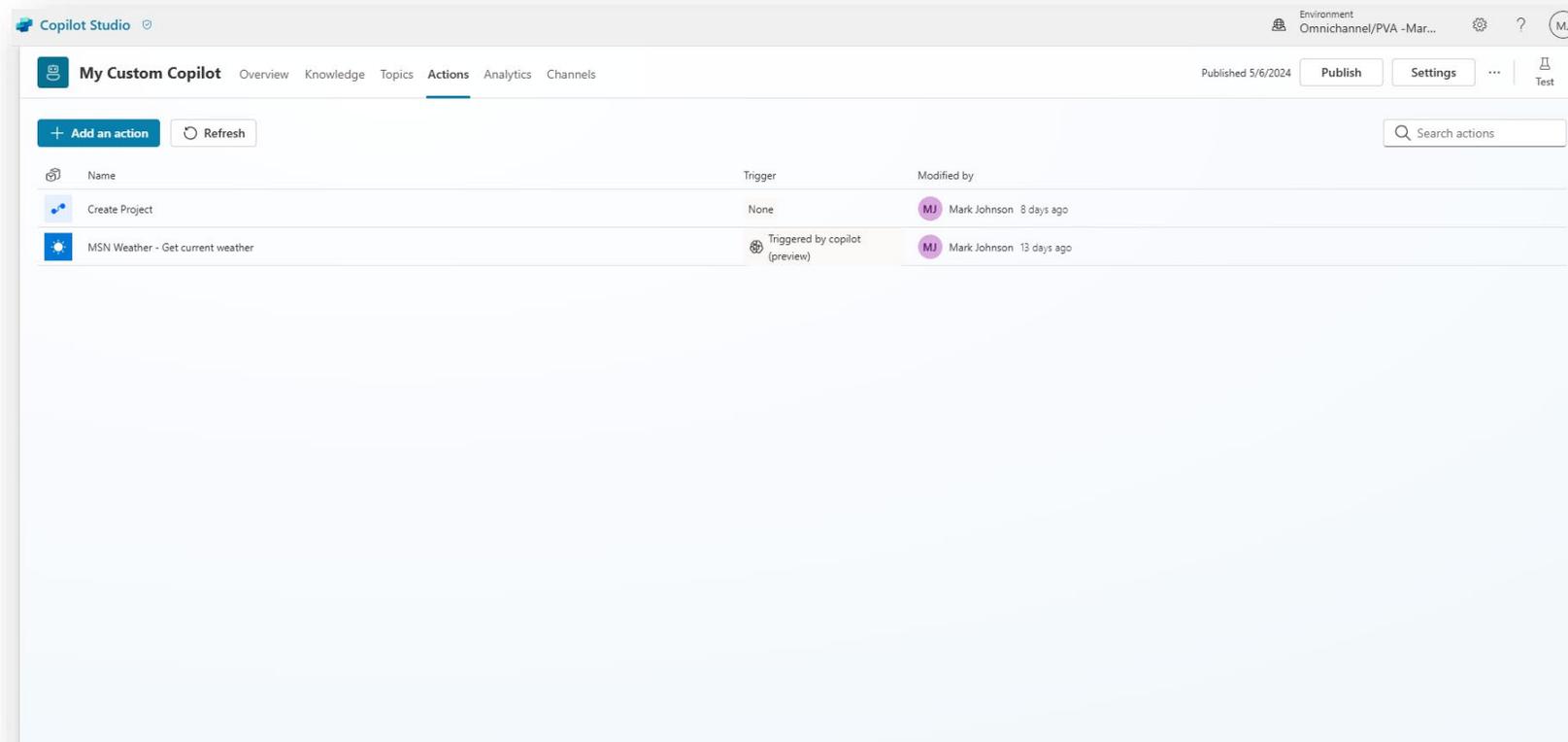
Dynamically chains plugins together to produce actionable customer responses

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

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

Powered by the Azure OpenAI Service with “LangChain” concepts

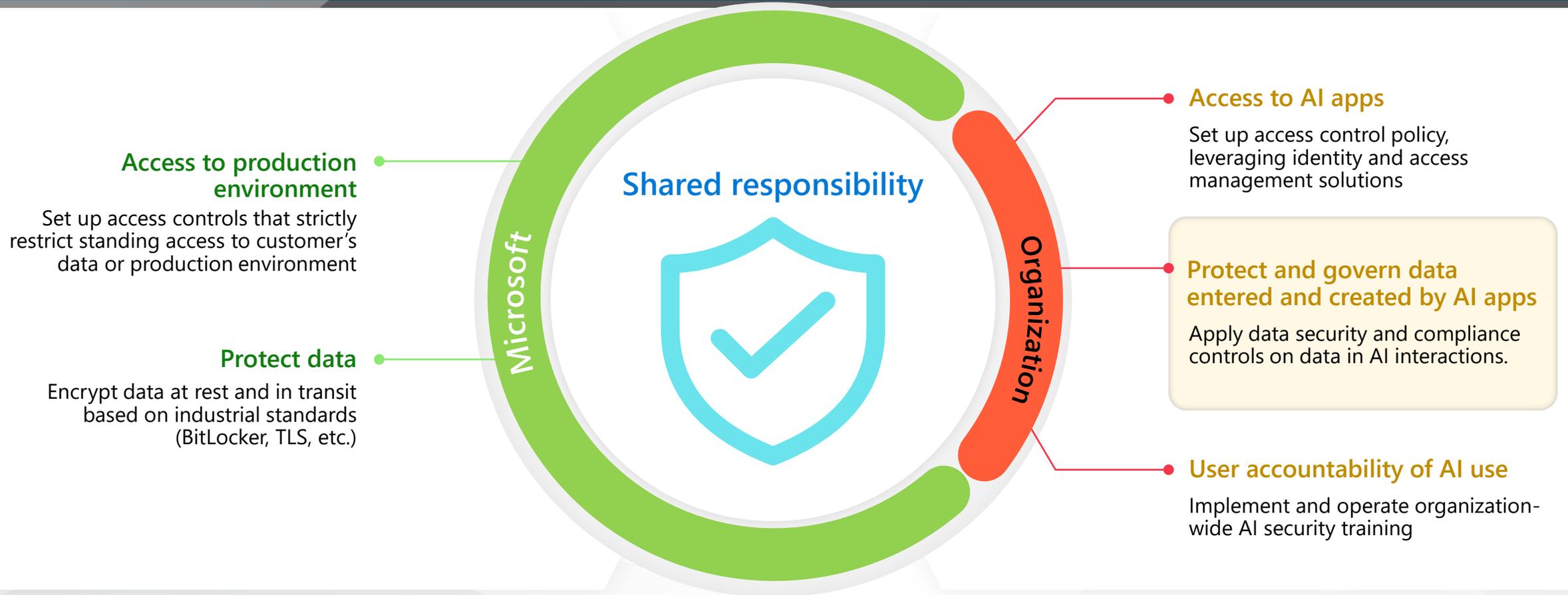
Example shows generative actions calling two APIs (Weather + custom APIs) based on request.



The screenshot shows the Copilot Studio interface for 'My Custom Copilot'. The 'Actions' tab is active, displaying a table of actions. The table has columns for Name, Trigger, and Modified by. Two actions are listed: 'Create Project' and 'MSN Weather - Get current weather'. The 'MSN Weather' action is highlighted in yellow, indicating it is a generative action. The interface includes a search bar for actions, a 'Refresh' button, and a 'Publish' button. The top right corner shows the environment name 'Omnichannel/PVA -Mar...' and the user profile 'MJ'.

Name	Trigger	Modified by
Create Project	None	MJ Mark Johnson 8 days ago
MSN Weather - Get current weather	Triggered by copilot (preview)	MJ Mark Johnson 13 days ago

Shared responsibilities of security for AI usage for Microsoft Copilot





Copilot Studio

Licensing Summary

RECOMMENDED OFFER

Copilot Studio

\$200 per tenant/month

Tenant-wide capacity license sold in capacity packs.

1 capacity pack = 25,000 messages/month

Offer Details

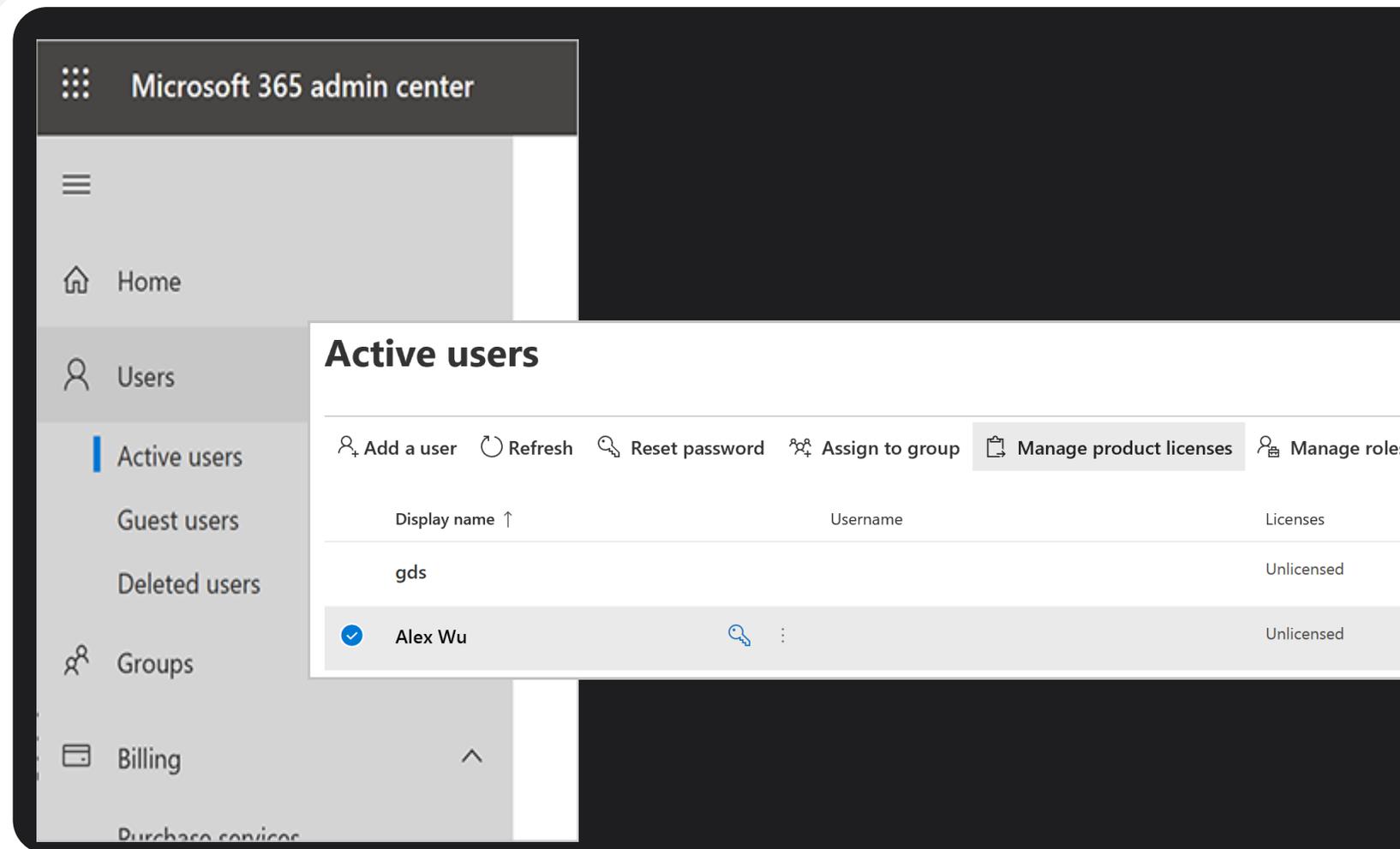
- Gen AI: AI-enabled conversations
- Copilot in Copilot Studio: Create and iterate on chatCopilot topics using expanded natural language capabilities
- Power Automate for Copilot Studio: Cloud flows – Create automated, instant and scheduled flows within context of Copilot Studio Copilots
- Connectors: Standard, Premium and Custom connectors
- Dataverse Default Capacity for Copilot Studio
 - 5 GB Database Capacity
 - 20 GB File Capacity
 - 2 GB Log Capacity

Assigning Licenses

To Start, a "Tenant License" should be purchased by the tenant administrator. This is the **Copilot Studio** license.

Users that plan to create and manage copilots will require a free "per user license". This is the **Copilot Studio User** license

End **users of your copilots do not need a special license** assigned.



Capacity Allocation

What is a message?

A message is defined as any request or message sent to the copilot that triggers an action or a response from the copilot.

To allocate additional capacity: go to the Power Platform Admin Center, select Resources . Capacity, Summary tab, and then select Assign to an Environment.

Power Platform admin center

Capacity

Summary | Dataverse | Microsoft Teams | Add-ons | Trial

See where your org (tenant) is using storage, add-ons, and Microsoft Power Platform requests that could impact your capacity. [Learn more](#)

Storage capacity usage

✔ You have available capacity across all storage types. [Learn more about managing capacity.](#)

Database	0 of 0 MB used	100% available
File	0 of 0 MB used	100% available
Log	0 of 0 MB used	100% available

Storage capacity, by source

Source	Database
Org (tenant) default ⓘ	0 MB
User licenses ⓘ	0 MB
Additional capacity	0 MB
Total	0 MB

Top storage usage, by environment

Billing

New Billing report for the entire tenant!

This is found in the Power Platform Admin Center, under:

Billing > Licenses > Copilot Studio

The screenshot shows the Power Platform Admin Center interface. The left-hand navigation pane includes options like Home, Environments, Billing, Licenses, and Settings. The main content area is titled 'Licenses' and has tabs for Summary, Environments, and Intelligent recommendations. A 'Copilot Studio' section is highlighted, showing a 'Licensing summary' table and two charts: 'Messages capacity assignment (MAU)' and 'Messages capacity consumption (MAU)'. The table shows 25,000 purchased capacity, 0 assigned, and 87 consumed for Messages capacity. The assignment chart shows 25,000 total capacity, with 0 assigned and 25,000 unassigned. The consumption chart shows 87/25,000 units consumed.

License type	Category	Purchased	Assigned	Consumed
Capacity Manage capacity	Messages capacity	25,000	0	87
Capacity (Legacy) Manage capacity	Sessions capacity	0	0	0

Messages capacity assignment (MAU)
Displaying data as of 08/16/2024 7:00:00 PM

25,000	0	25,000
Total	Assigned	Unassigned

Messages capacity consumption (MAU)
Month to date: 87/25,000 units consumed

Module 2

Creating Copilots, AI, and Topics

Building blocks of a Copilot

Microsoft Dataverse Environment

Copilot (0, 1 or more copilots in an environment)

User Topics (1 or more in a copilot)

Conversation Tree (1 per topic)

Trigger Phrases

Prebuilt Entities

Custom Entities

Power Automate Flows

AI components

System Topics (9 pre-defined in a copilot)

Conversation tree

Trigger Phrases

Prebuilt Entities

Custom Entities

Power Automate Flows

AI Components

Topics – Different Types

My Custom Copilot Overview Knowledge **Topics** Actions Analytics Channels

Published 7/31/2024 Publish Settings ... Test

+ Add a topic

Search custom topics

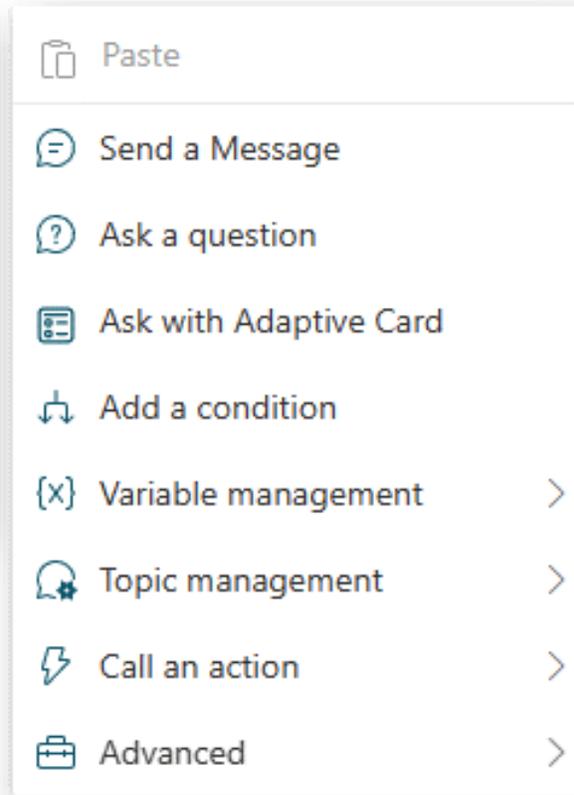
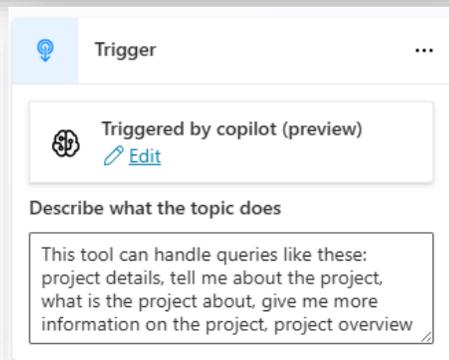
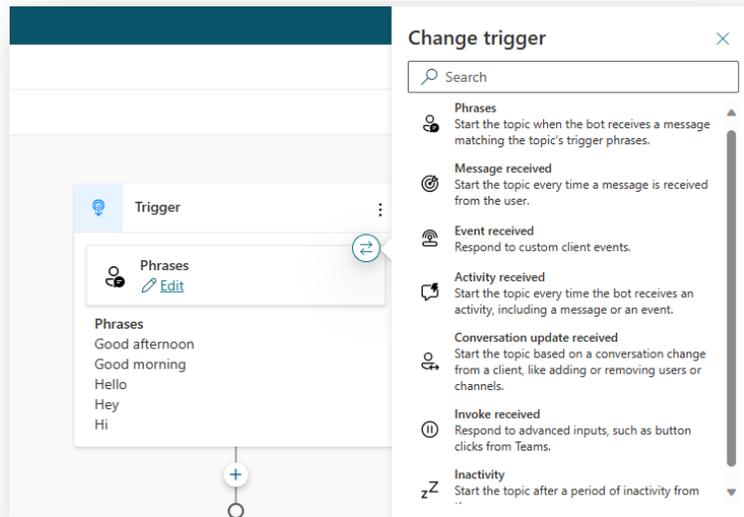
All Custom (13) System (9) Last refreshed 5 minutes ago

Name	Trigger	Description	Editing	Last modified	Errors	Enabled
Get Project Details: Lab 3- Snapshot E...	Phrases			Mark Johnson 4 mon...		Off
Get Project Details: Lab 3- Snapshot E...	Phrases			Mark Johnson 4 mon...		Off
Get Project Details: Lab 3- Snapshot E...	Phrases			Mark Johnson 3 mon...		On
Goodbye	Phrases	This topic triggers when the user says good...		Mark Johnson 4 mon...		On
Greeting	Phrases	This topic is triggered when the user greets ...		Mark Johnson 4 mon...		On
How to prepare for an Interview	Phrases			Mark Johnson 1 mon...		On
Inactivity	Inactivity			Mark Johnson 1 mon...		On
Lunch Order	Phrases			Mark Johnson 1 mon...		On
Name	Phrases			Mark Johnson 3 mon...		On
New User Request Form	Phrases			Mark Johnson 3 mon...		On
Start Over	Phrases			Mark Johnson 4 mon...		On
Thank you	Phrases	This topic triggers when the user says thank ...		Mark Johnson 4 mon...		On
Updating a row in dataverse	Phrases			Mark Johnson 2 mon...		On

There are three types of topics:

- **System topics**
- **Custom topics**

Topics – Different Components



Each topic has a *trigger* and *conversational nodes*

- **Triggers** can take the form of phrases or questions the user may ask, specific conversation events, or *Trigger by Copilot (Preview)* which will rely on more NLU and not on trigger phrases.
- **Conversation nodes** define how a Copilot should respond to a trigger phrase and what it should do.

Module 3

Building Topics (Nodes, Flows, and More)

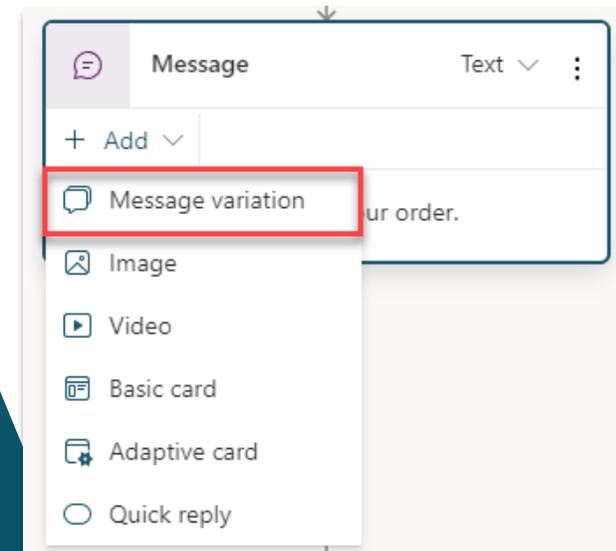
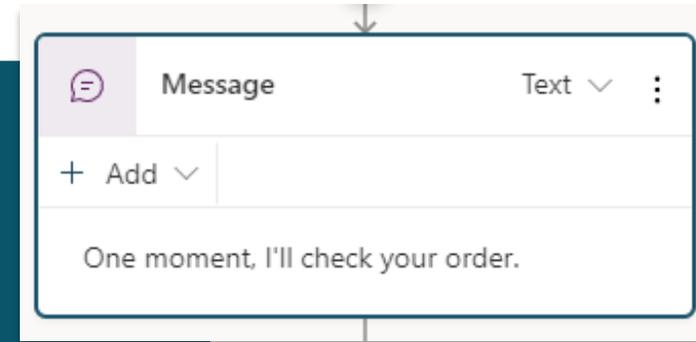
The Message Node



The Message Node is one of the most common nodes used when authoring copilots



It allows you to display standard text, formatted text and dynamic data in the conversation



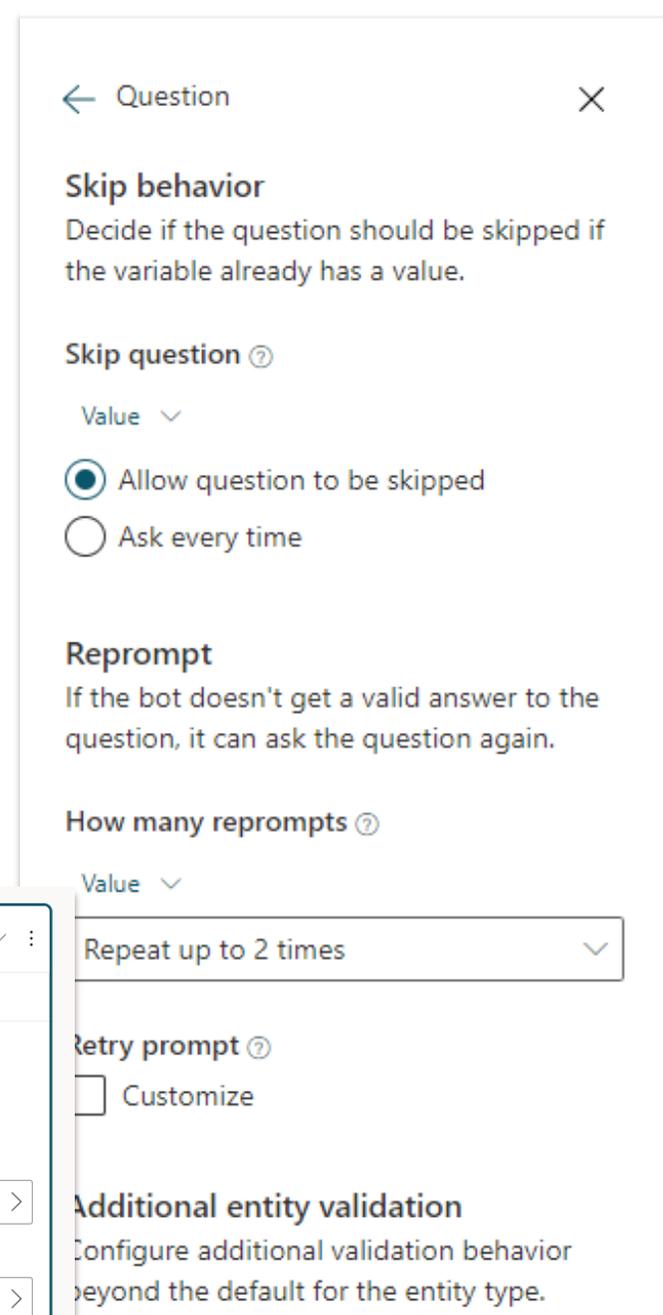
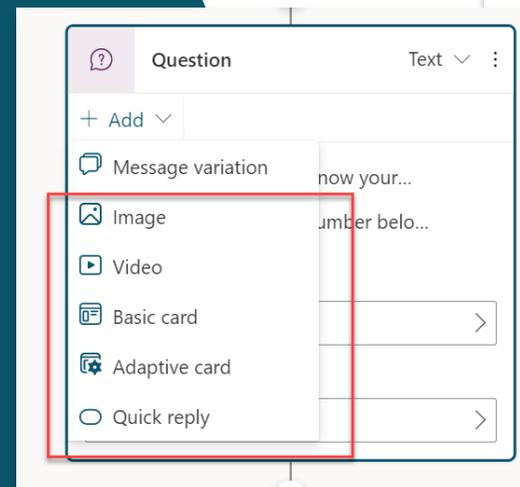
The Question Node



The Question Node is another of the most common nodes used when authoring copilots



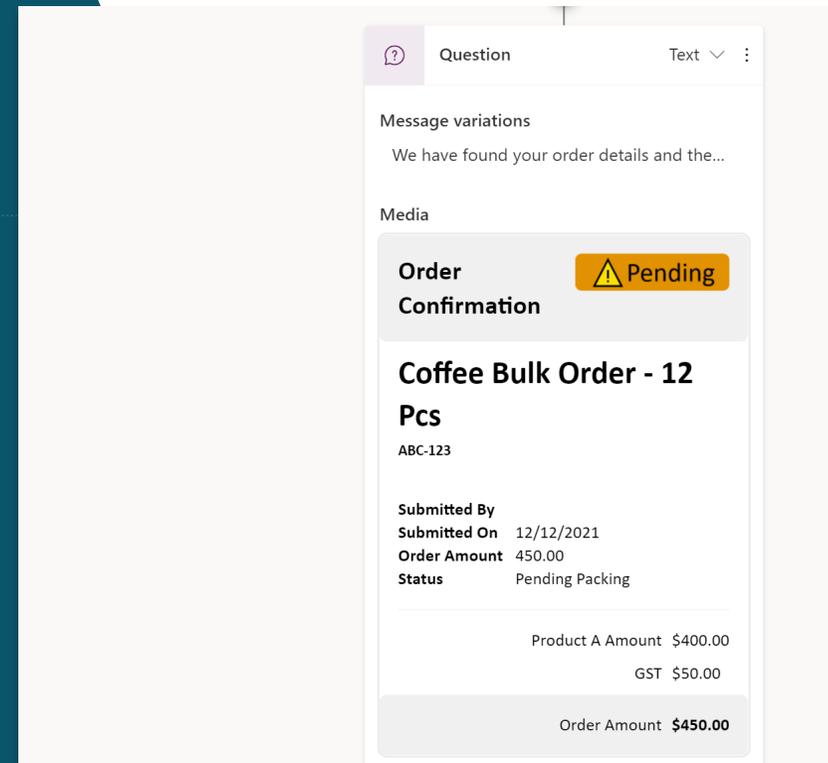
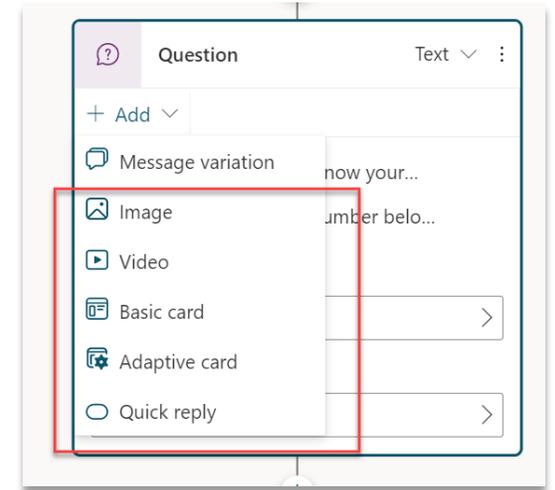
It provides capability to ask the user a question and store the data to be used and operated upon



Rich Text Responses

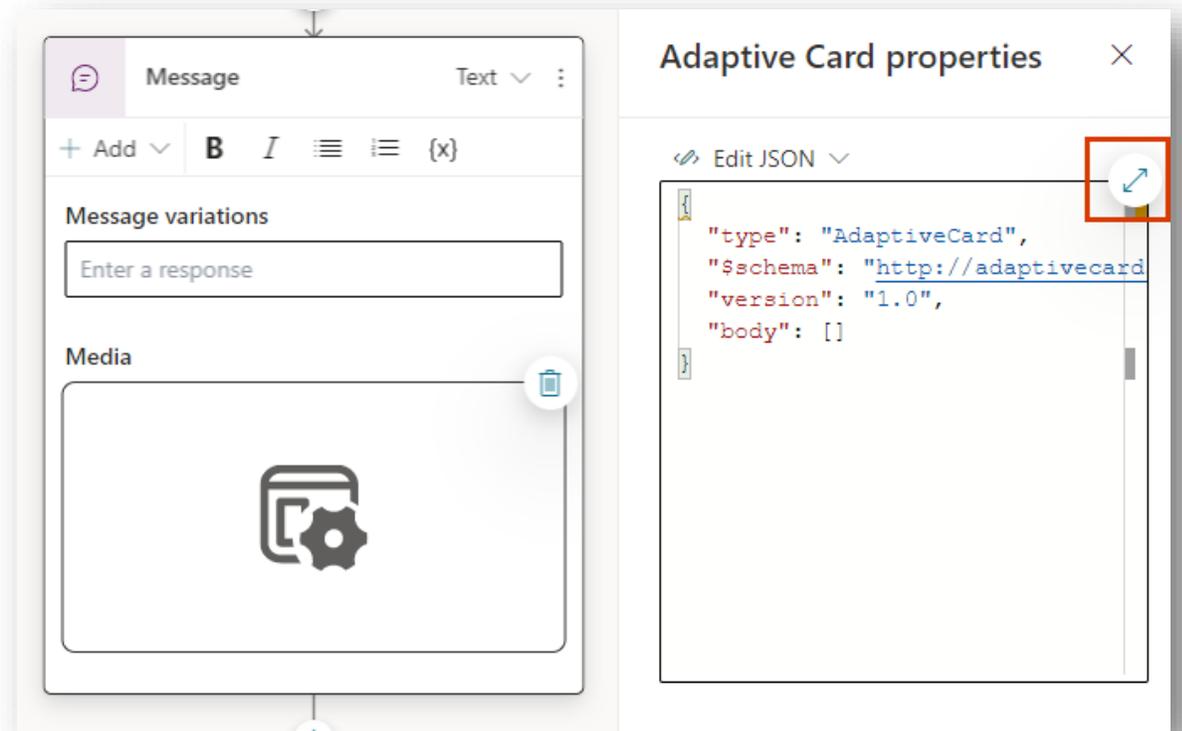
Brand new rich text response options including image and adaptive card

Deliver enhanced experiences to customers and users which are more engaging and display data in more dynamic ways



Adaptive Cards

- [Adaptive Cards](#) are platform-agnostic cards that you can tailor to your needs. You can design Adaptive Cards using the [Adaptive Cards Designer](#) or author the JSON directly.
- Copilot Studio supports AdaptiveCard schema version 1.3 or lower.



Topic Management



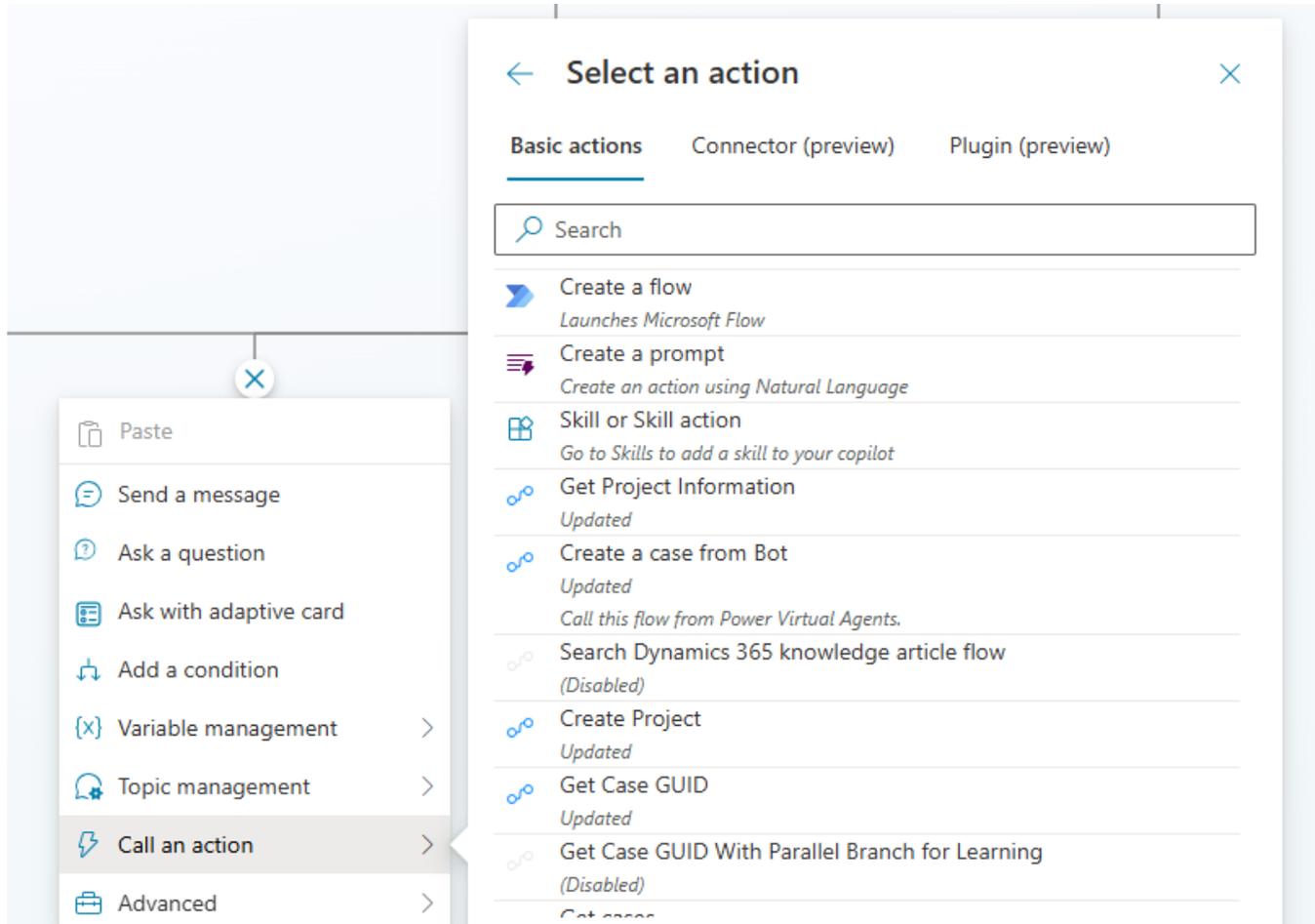
Re-direct and connect customers to related topics

Use it when:

A conversation requires more than one topic, such as when you need to ask a clarifying question to determine which topic the user needs

The screenshot displays a chatbot interface with a 'Message' box containing the text 'One moment, I'll check your order.' Below the message is a '+ Add' button. A 'Select a topic' dialog box is open, featuring a search bar and a list of topics. The 'Order Cancellation' topic is highlighted with a red box. To the right of the dialog, a secondary menu is visible, with the 'Go to another topic >' option highlighted by a red box. Other options in this menu include 'End current topic', 'End all topics', 'Transfer conversation', 'Go to step', and 'End conversation'. The background shows a flowchart with nodes and arrows, indicating the conversation's path.

Call an Action

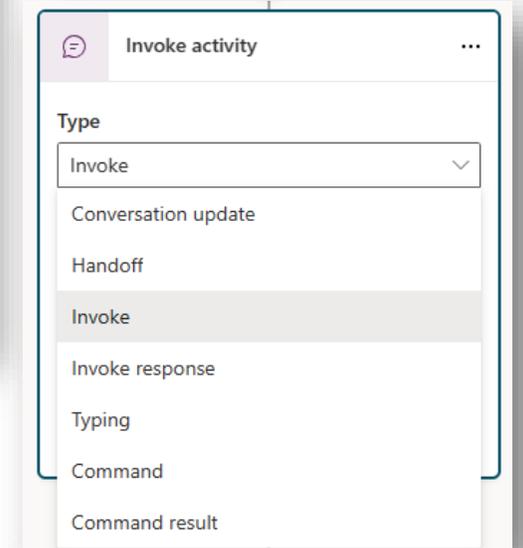
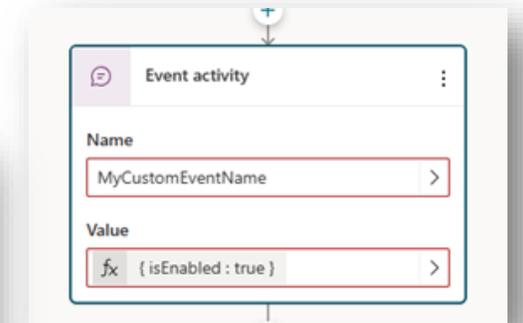
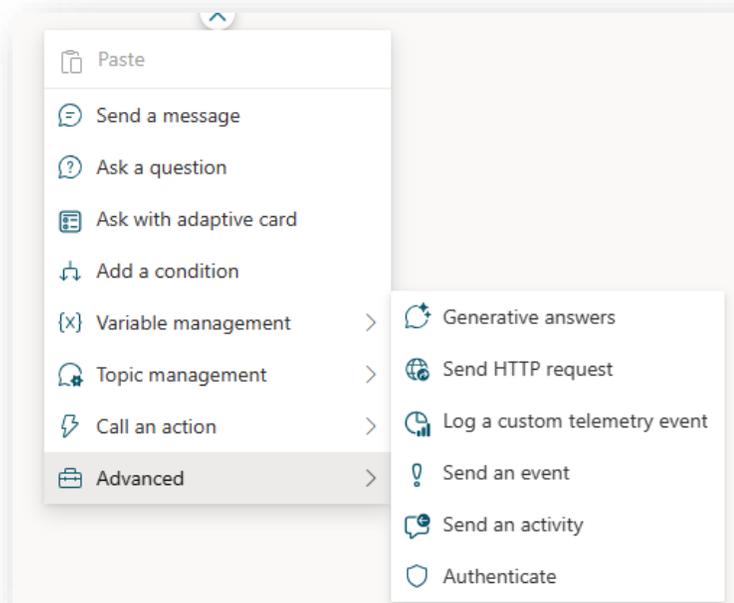


Call an action to create or call:

- 1. Power Automate Flows**
- 2. Connectors (Preview)**
- 3. Plugin Actions**

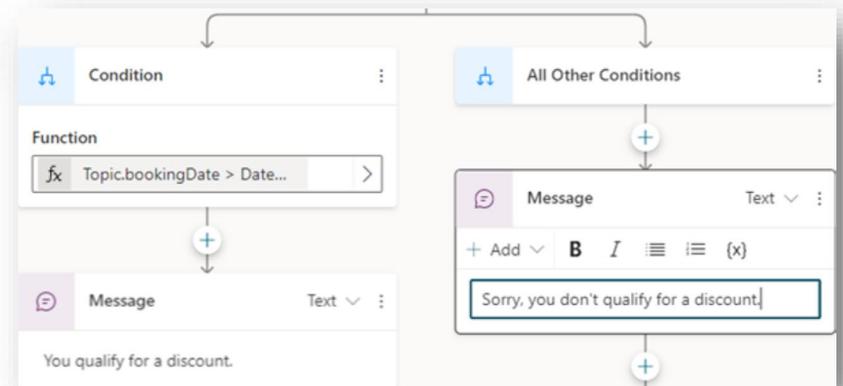
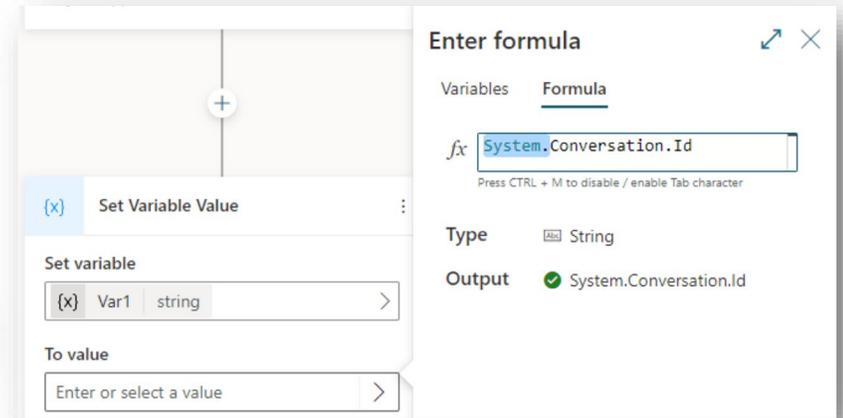
Send Events and Activities

- Copilot Studio provides two nodes that allow you to send non-message activities: Send an Event and Send an Activity.
- Event activities are sent from the Copilot and can be intercepted and used by the channel, which decides if and how to use the activities.
- Additionally, there are other activities you can send that are subset of the ones offered in the [Copilot Framework Schema - ActivityTypes Class](#), such as **Typing** and **Invoke Response**.



Use Expressions with Power FX

- Power Fx is a low-code language that uses Excel-like formulas, that you can use to create complex logic that allows your Copilots to manipulate data
- For instance, a Power Fx formula can set the value of a variable, parse a string, or use an expression in a condition.

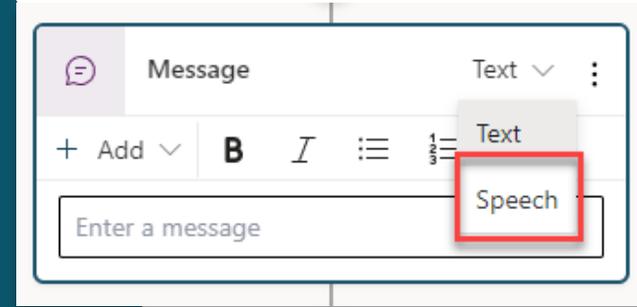




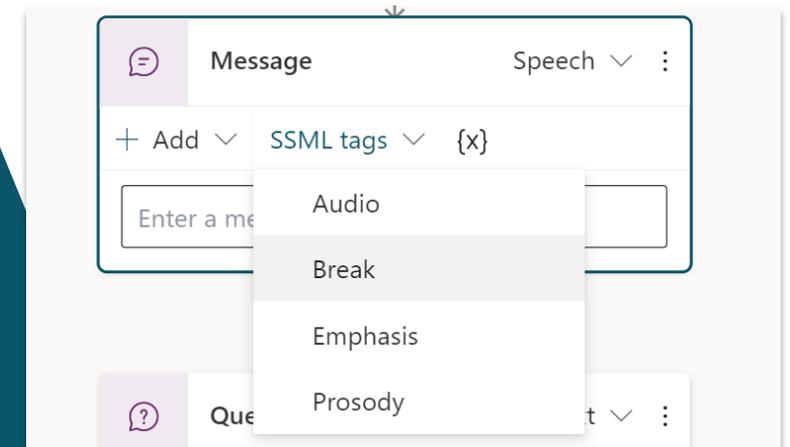
Use Enhanced Speech Authoring Capabilities



Directly add SSML overrides



Enhances speech enabled text copilots



Tailor the best experience for your customers



Productivity and Pro Code Options



Author copilots faster with productivity options including copy and paste



Use the code view to quickly code message content



Modify anywhere dialog flow without disruption

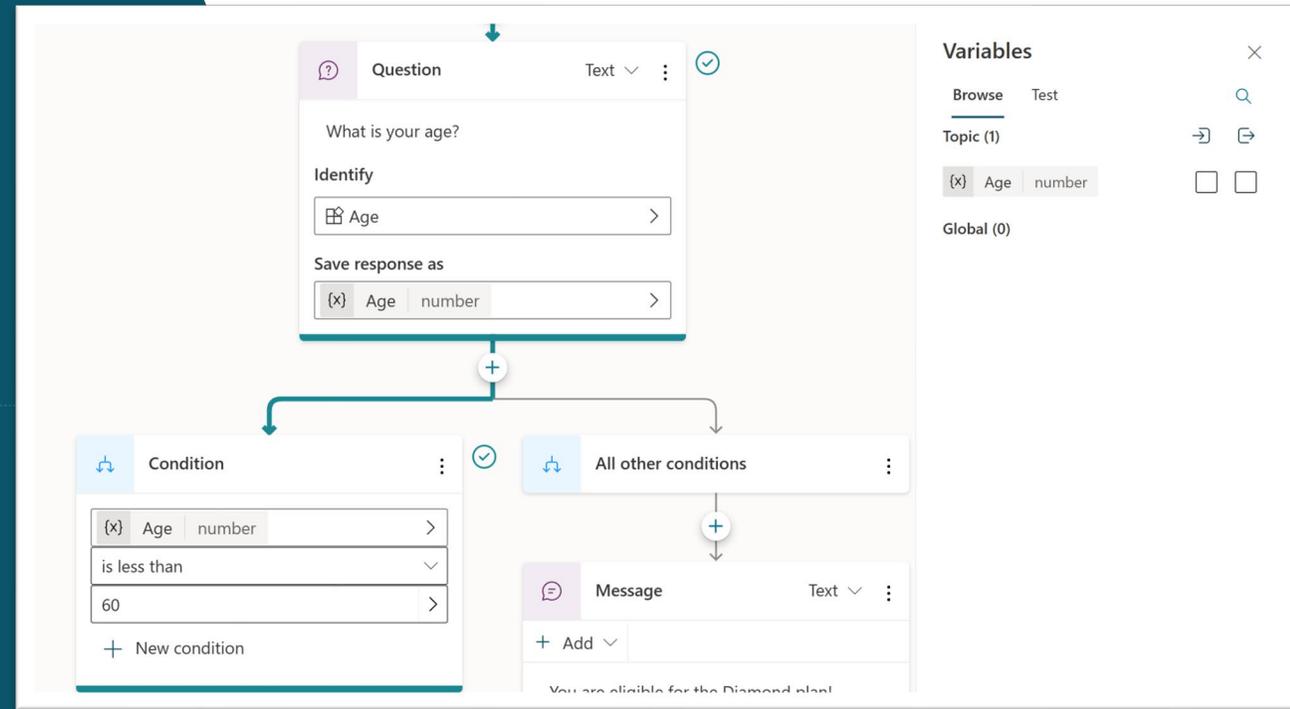
```
Topics > Check Order - Contoso Coffee ▾  
1 kind: AdaptiveDialog  
2 beginDialog:  
3   kind: OnRecognizedIntent  
4   id: main  
5   intent:  
6     displayName: Check Order - Contoso Coffee  
7     triggerQueries:  
8       - order delivery  
9       - I have a question when my order will be delivered  
10      - I have a question on the time for my order  
11      - I have a question about my order  
12      - question about my order status  
13      - question about my order  
14      - confirm my order  
15      - order confirmation  
16      - order check  
17      - check my order  
18      - Check order status  
19  
20 actions:  
21   - kind: SendMessage  
22     id: sendMessage_4KMeq4  
23     message:  
24       text:  
25         - Thank you for your message! I can certainly check the order for you.  
26         - Thank you very much for your message. I can absolutely help with your request!
```

Variables

Use Variables to Navigate Customers to Tailored Content

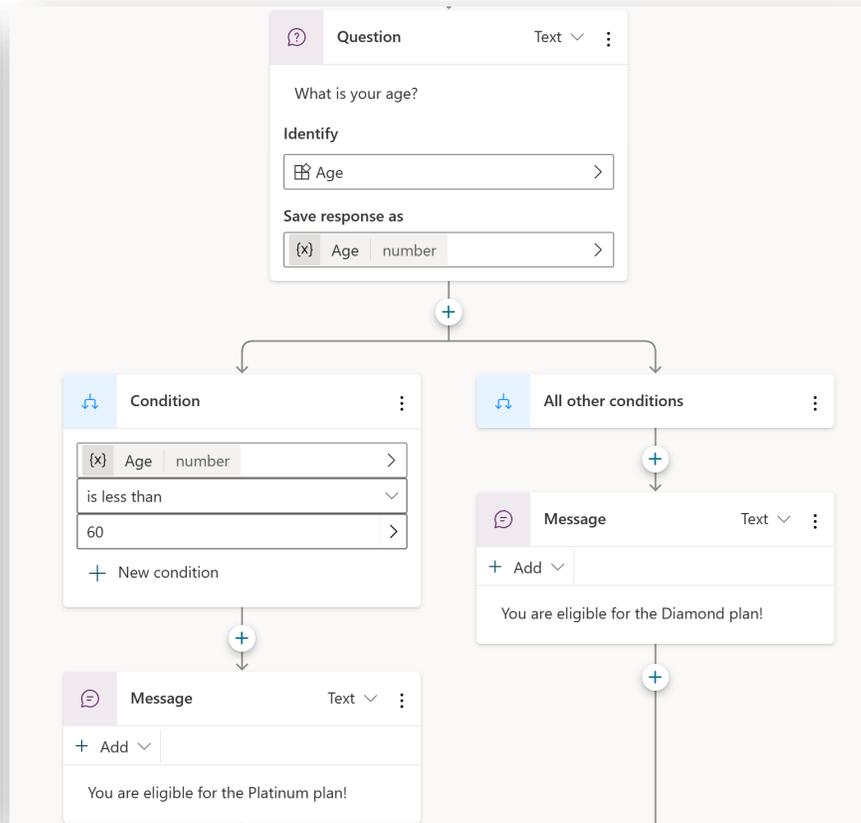
Direct your customers to content you want them to see

Add variables to keep customer information for later in the conversation



Conditions

- Paste
- Send a Message
- Ask a question
- Ask with Adaptive Card
- Add a condition
- Variable management >
- Topic management >
- Call an action >
- Advanced >



Conditions utilize branch logic to force the conversation path to branch based on specific criteria.

Example: Health insurance Copilot asks the user about their age and suggests policies based on age above or below 60 years.

Variable Scope

Variable properties ×

Variable name
Age

Type
number

Reference
Question
What is your age?
Type (number) derived from here
[View all references](#)

Usage
 Topic (limited scope)
 Receive values from other topics
 Return values to original topics
 Global (any topic can access)

Variable properties ×

Variable name
Global.Plan

Type
string

Reference
Set variable value
(x) Global.Plan set to fx ""
Type (string) derived from here
[View all references](#)

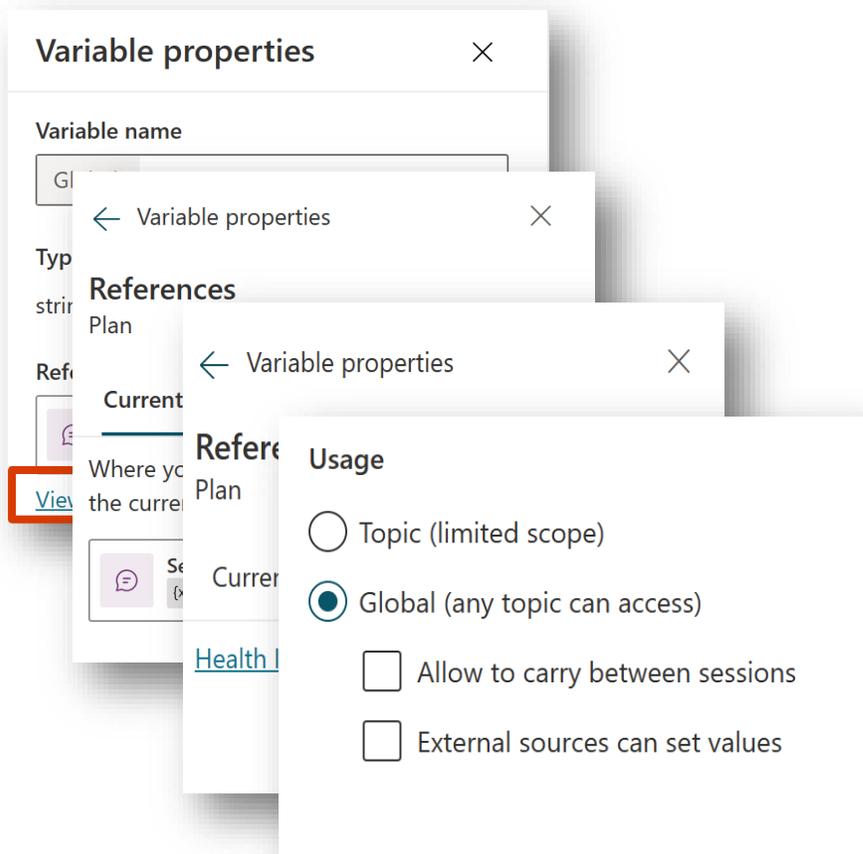
Usage
 Topic (limited scope)
 Global (any topic can access)
 Allow to carry between sessions
 External sources can set values

Save user's responses in a Copilot conversation to variables and reuse them later in the conversation.

Scope of a variable:

- By default, a variable is limited to the **Topic (limited scope)** where it's created.
- You can also create a **Copilot variable**, which applies across the entire Copilot.

Variables – Manage Copilot variables



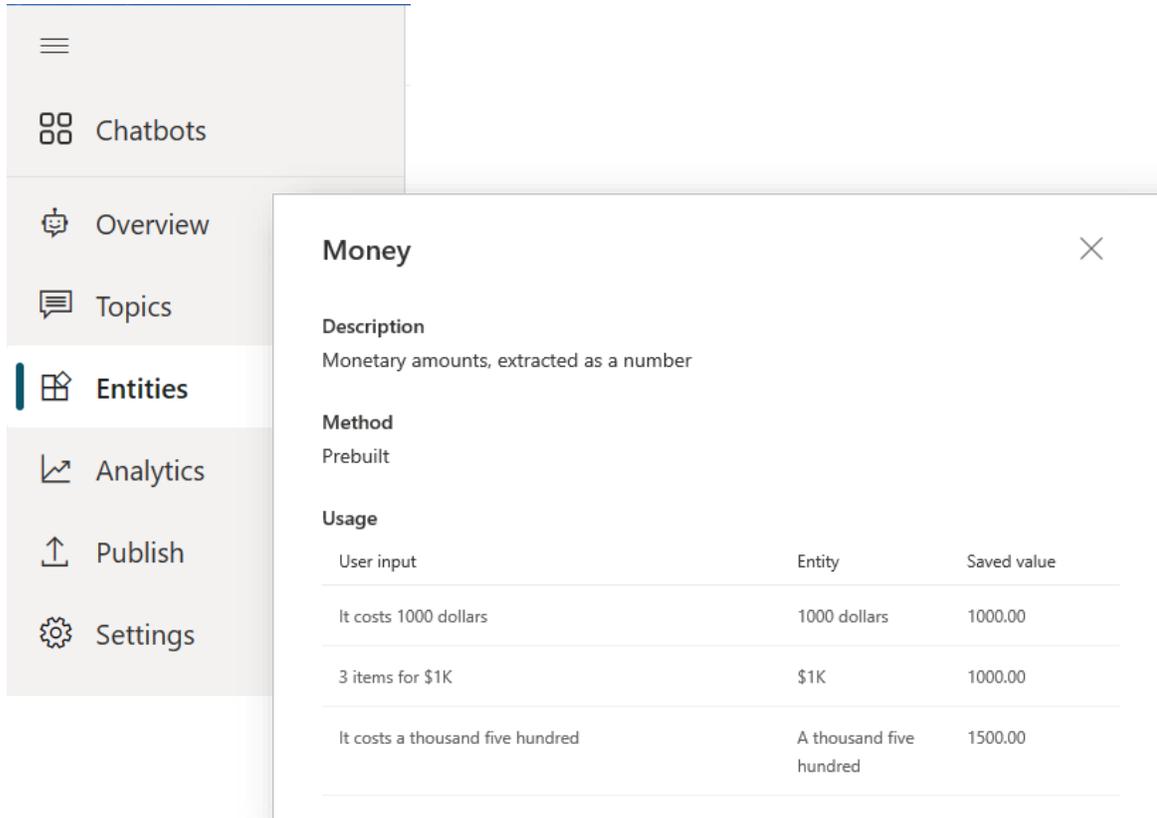
You can manage the Global variables with options such as:

- Understanding its references
- Seeing which other topics use the variable
- Allowing the variable to be set from external source
- Enable values to be carried over between sessions

For example, if you have a username from a sign-in script or if you want to pass variables through query parameters to an embedded Copilot.

Entities

Entities



Money ×

Description
Monetary amounts, extracted as a number

Method
Prebuilt

Usage

User input	Entity	Saved value
It costs 1000 dollars	1000 dollars	1000.00
3 items for \$1K	\$1K	1000.00
It costs a thousand five hundred	A thousand five hundred	1500.00

Power Virtual Agent Copilots are capable of natural language understanding. An important aspect is to identify **entities** from user dialogue.

Entity types:

- **Prebuilt**, such as age, colors, numbers, and names.
- Users can also create their own **custom** entity.

An entity can be viewed as an information unit that represents a certain type of a real-world subject, like a phone number, zip code, city, or even a person's name. Users can also create their own custom entity.

Custom Entities

+

New entity

Entities ⓘ

Create an entity

Choose a method

Closed list

Define a list. Use when you have an exact list of items that is a manageable size (small to medium).

Example: List of sizes

- Extra small
- Small
- Medium
- Large

Regular expression (Regex)

Define a specific logical pattern, such as an ID number, credit card number, IP address, and more.

Example: Article ID pattern that starts with "kb" and ends with 6 digits, such as 'kb123456'.

`kb[0-9]{6}`

Make your bot smarter with entities.

An entity is a piece of information (person, place, thing, or concept) that the bot might want to pick out from what your customer says.

[Learn how to use entities](#)

There are two types of custom entities.

1. **Closed list entity** let you define a list of items. This is best used for small lists that are easy to manage and that have simple item labels.
2. **Regular expression (regex) entity** let you define logical patterns that you can use to match and extract information from an input.

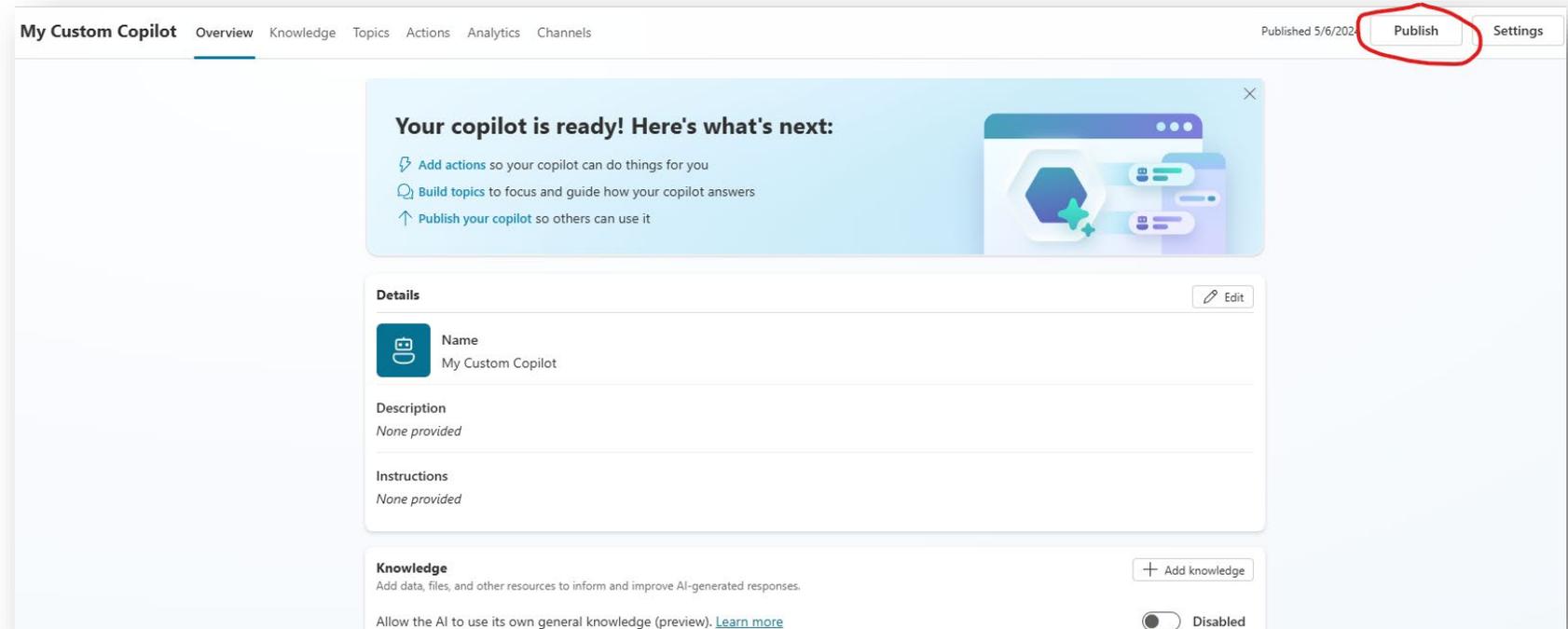
Module 4

Surfacing the Copilot

**Publish your first
Copilot**

Publish the Copilot

- You need to publish the Copilot at least once before your customers can interact with it or before you can share it with your teammates.
- Any time you publish the Copilot will be shown to your end users as it was at the time of the publish.



The screenshot shows the configuration page for a custom Copilot named "My Custom Copilot". The page has a navigation bar with tabs for Overview, Knowledge, Topics, Actions, Analytics, and Channels. In the top right corner, it shows "Published 5/6/2024" and a "Publish" button, which is circled in red. Below the navigation bar is a light blue banner with the text "Your copilot is ready! Here's what's next:" and three links: "Add actions", "Build topics", and "Publish your copilot". The main content area is divided into sections: "Details" (with an "Edit" button), "Name" (My Custom Copilot), "Description" (None provided), "Instructions" (None provided), "Knowledge" (with an "Add knowledge" button), and a toggle for "Allow the AI to use its own general knowledge (preview)" which is currently "Disabled".

Configure Channels

Available Channels

- Expand your agent's reach.
- Deploy your virtual agent on widely used services.
- These include live websites, mobile apps, and messaging platforms like Microsoft Teams and Facebook.

The screenshot shows the 'Channels' configuration page for 'My Custom Copilot'. The page is titled 'My Custom Copilot' and includes navigation tabs for Overview, Knowledge, Topics, Actions, Analytics, and Channels. The current page is 'Channels', which is highlighted. In the top right corner, there is a 'Published 5/6/2024' status, a 'Publish' button, a 'Settings' button, and a 'Test' button. Below the navigation, there is a 'Publish status' section with a 'Publish' button and a 'Demo website' link. The main content area is titled 'Channels' and contains a grid of channel options. The channels are: Microsoft Teams, Demo website, Custom website, Mobile app, Facebook, Skype, Slack, Telegram, Twilio, Line, GroupMe, Direct Line Speech, and Email. Below the channels, there is a 'Customer engagement hub' section with a 'Connect to a customer engagement app to enable your copilot to hand off a chat session to a live agent or other copilot.' This section includes options for Dynamics 365 Customer Service, Genesys, LivePerson, Salesforce, ServiceNow, ZenDesk, and Custom engagement hub.



Configure Other Channels

1

[Configure a chatCopilot for a live or demo website \(contains video\)](#)

2

[Add a chatCopilot to a Power Page in Power Apps](#)

3

[Add a chatCopilot to Microsoft Teams](#)

4

[Add a chatCopilot to mobile and web apps](#)

5

[Add a chatCopilot to Facebook](#)

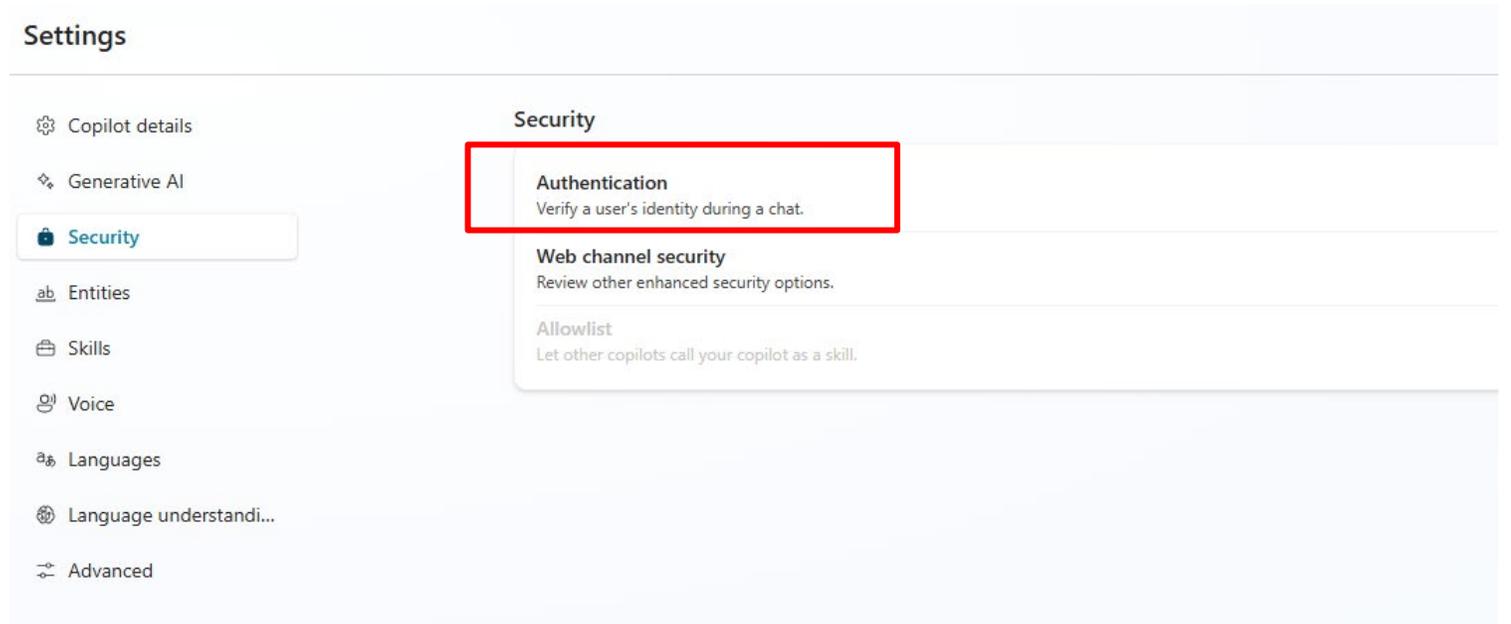
6

[Add a chatCopilot to Azure Copilot Service channels](#)

Authentication

User Authentication

- Sign in directly from within your Copilot.
- Authentication providers:
 - Azure Active Directory v1
 - Azure Active Directory v2
 - Azure Active Directory v2 with Certificates
 - Any identity provider that complies with the [OAuth2 standard](#)



The screenshot shows the 'Settings' page for Copilot. On the left, a sidebar lists various settings categories: Copilot details, Generative AI, Security (highlighted with a red box), Entities, Skills, Voice, Languages, Language understandi..., and Advanced. The main content area is titled 'Security' and contains three sub-sections: 'Authentication' (Verify a user's identity during a chat.), 'Web channel security' (Review other enhanced security options.), and 'Allowlist' (Let other copilots call your copilot as a skill.).

Authentication Types

Three options to configure Authentication in PVA:

1. No authentication
2. Only for Teams
3. Manual (for any channel including Teams)

< Authentication

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](#)

Choose an option

No authentication
Publicly available in any channel

Microsoft Entra ID authentication in Teams and Power Apps
When selecting this option, all other channels will be disabled.

Authenticate manually
Set up authentication for any channel

Save

No Authentication

- Any user who has a link to the Copilot can chat with it.
- Can't control user level access.

< **Authentication**

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](#)

Choose an option

No authentication
Publicly available in any channel

Microsoft Entra ID authentication in Teams and Power Apps
When selecting this option, all other channels will be disabled.

Authenticate manually
Set up authentication for any channel

Save

Only for Teams and Power Apps

- Only work on the Teams channel. All other channels are disabled.
- User will always be signed in. 'Require users to sign in' setting is turned on and can't be turned off.
- Control user access with **Copilot sharing**.

< Authentication

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](#)

Choose an option

No authentication
Publicly available in any channel

Microsoft Entra ID authentication in Teams and Power Apps
When selecting this option, all other channels will be disabled.

Require users to sign in

Authenticate manually
Set up authentication for any channel

Save

Manual Authentication

- Work for any Channel including Teams.
- If the service provider is either **Azure Active Directory** or **Azure Active Directory V2**, you can turn on 'Require users to sign in' to control who in your organization can chat with the Copilot using Copilot sharing.
- For **Generic OAuth2**, you can turn 'Require users to sign in' on or off. When it's turned on, a user who signs in can chat with the Copilot. You can't control which specific users in your organization may chat with the Copilot using **Copilot sharing**.

< Authentication

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](#)

Choose an option

No authentication
Publicly available in any channel

Microsoft Entra ID authentication in Teams and Power Apps
When selecting this option, all other channels will be disabled.

Authenticate manually
Set up authentication for any channel

Require users to sign in

Redirect URL

[Copy](#)

Service provider *

Client ID *

Client secret *

Token exchange URL (required for SSO) [Learn more about SSO](#)

Tenant ID

Scopes ⓘ

Save

Require Users to Sign-in

- Combining the Copilot's **authentication option** and **Require user to sign in** allows you to control who in the organization can chat with the Copilot. This control will be done using the [share the Copilot](#) configuration.

< Authentication

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](#)

Choose an option

No authentication
Publicly available in any channel

Microsoft Entra ID authentication in Teams and Power Apps
When selecting this option, all other channels will be disabled.

Authenticate manually
Set up authentication for any channel

Require users to sign in

Redirect URL

[Copy](#)

Service provider *

Client ID *

Client secret *

Token exchange URL (required for SSO) [Learn more about SSO](#)

Tenant ID

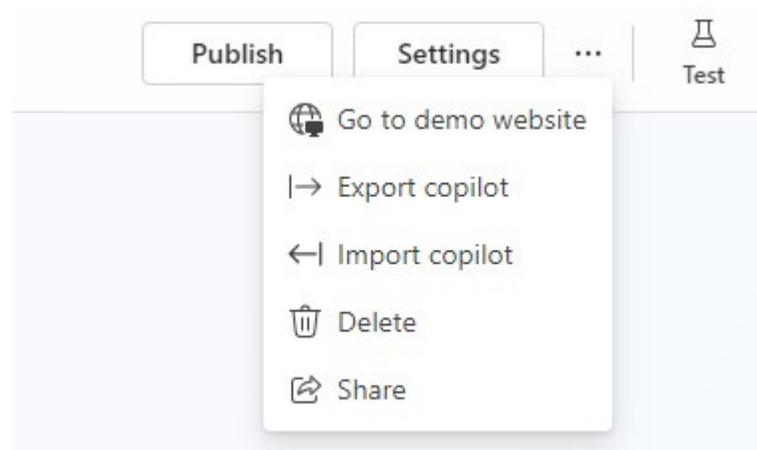
Scopes ⓘ

Save

Share Copilot with Other Users

Copilot Sharing

- Copilot can be shared with other users to chat with it.
- Prerequisite:
 - The Copilot's [end user authentication setting](#) must be configured to **Only for Teams** or **Manual**, with **Azure Active Directory** or **Azure Active Directory V2** as the provider.
 - Required user sign-in must be enabled to manage who can chat with the Copilot in your organization



Share copilot

Share with users to collaborate or with security groups to use your copilot. [Learn more](#)

Sort by Name ▾

 Mark Johnson
Owner, Manager, Power Automate user, Transc...

My organization

 Everyone in ChicagoEDUEvent
None

Select or add a user to set their permissions

Share Copilots with Security Groups

- Copilot can be shared with **Users** and **Security groups** so their members can chat with the Copilot.
- Select the **Send an email invitation** to new users check box to let user(s) know about the sharing.

Share copilot

Share with users to collaborate or with security groups to use your copilot. [Learn more](#)

Enter a name, security group, or email address

New users

User1A
Manager, Power Automate user

Sort by Name

Mark Johnson
Owner, Manager, Power Automate user, Transc...

My organization

Everyone in ChicagoEDUEvent
None

Send an email invitation to new users

User1A

Copilot permissions

The user's permissions for this copilot.

- Manager
Can view, edit, configure, share, publish copilot but not delete it.
 - Power Automate user
Can create and add flows to the copilot. [Learn about sharing flows](#)
 - Transcript viewer
Can't view transcripts of chat sessions with end users.
- All flows added to your copilot, current and future, will be shared with this user.

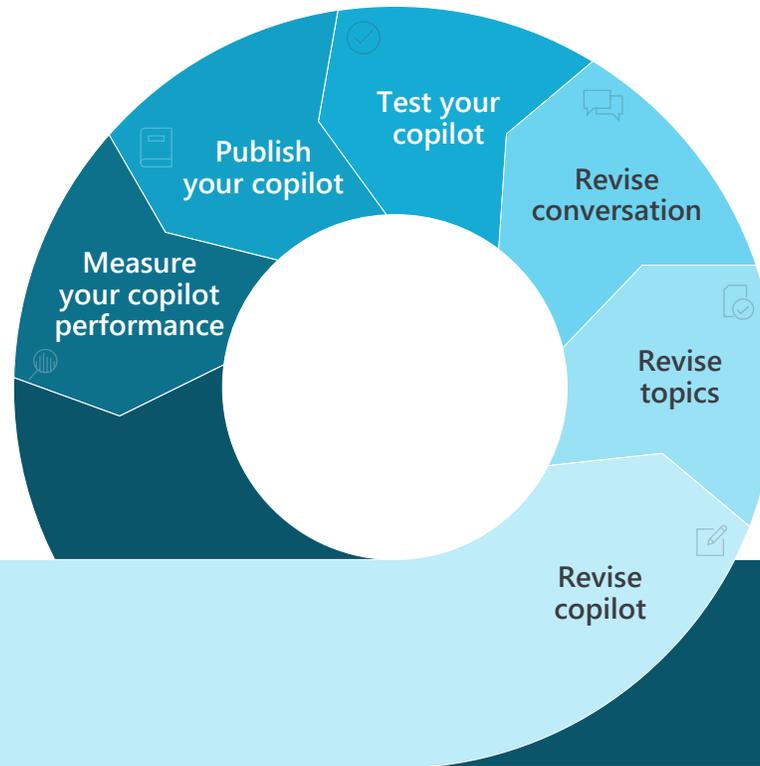
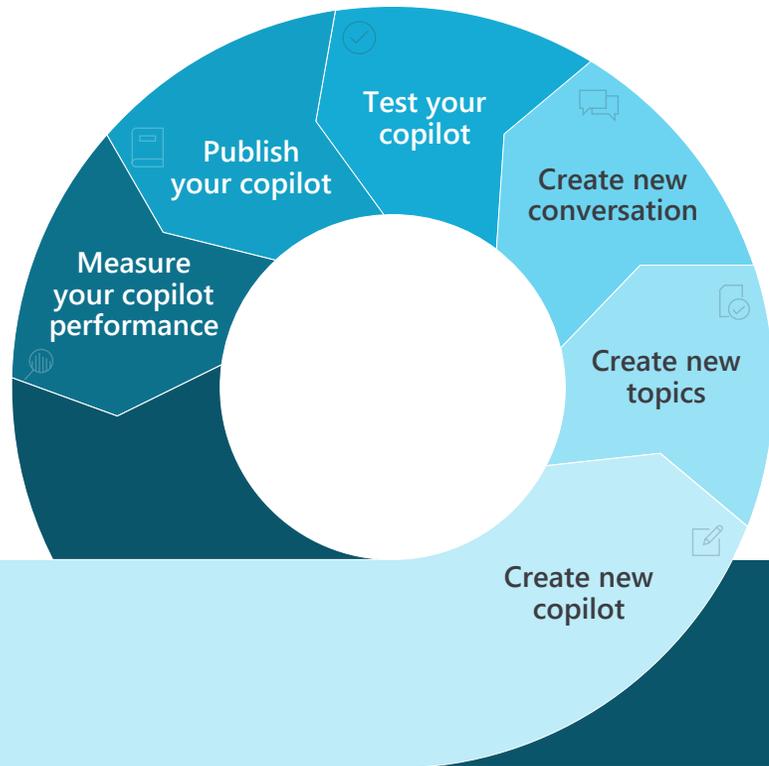
Share

Cancel

Module 5

Evaluating the Copilot and Solutions

Copilot Creation Lifecycle

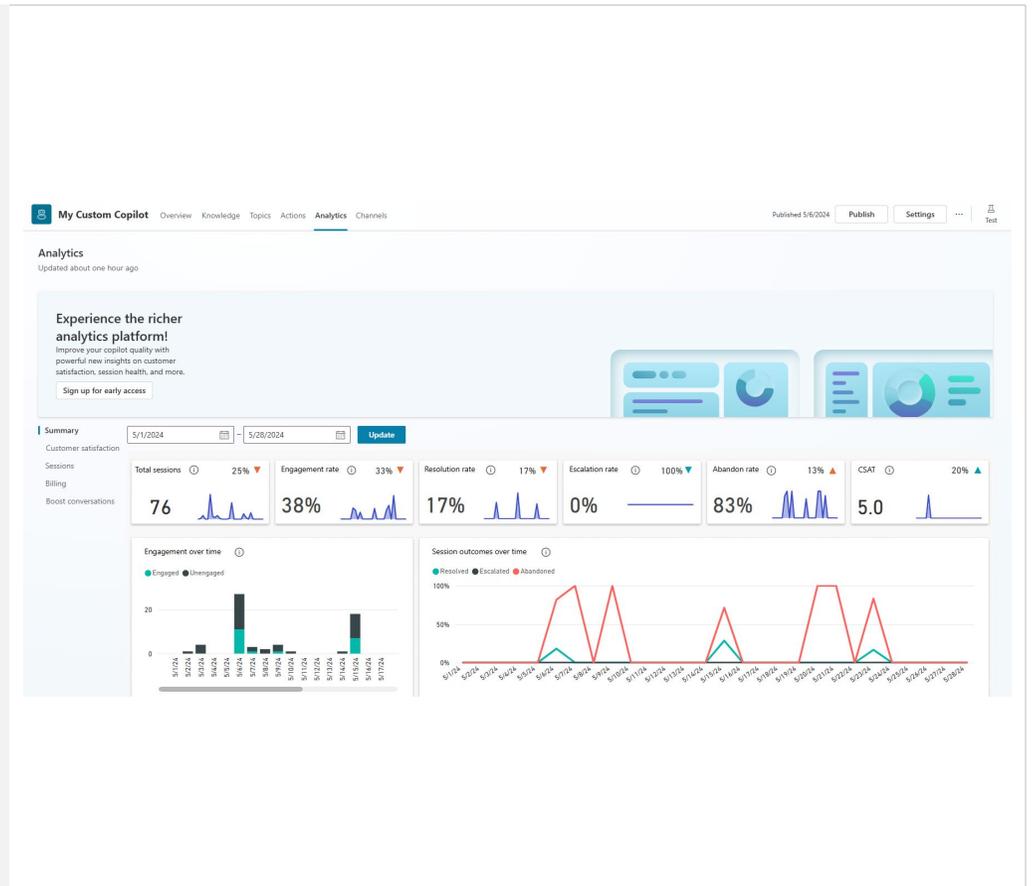


Monitoring Copilot Performance with Analytics

View Analytics

Copilot Studio provides a comprehensive set of analytics that show you the key performance indicators for your bot.

The Analytics page is where you can view metrics to monitor how well your bot is serving your customers and find ways improve it.



Enhance your Copilot from Analytics

GAIN VISIBILITY OF MANY PARAMETERS



Summary charts



Engagement over time chart



Session outcomes over time chart



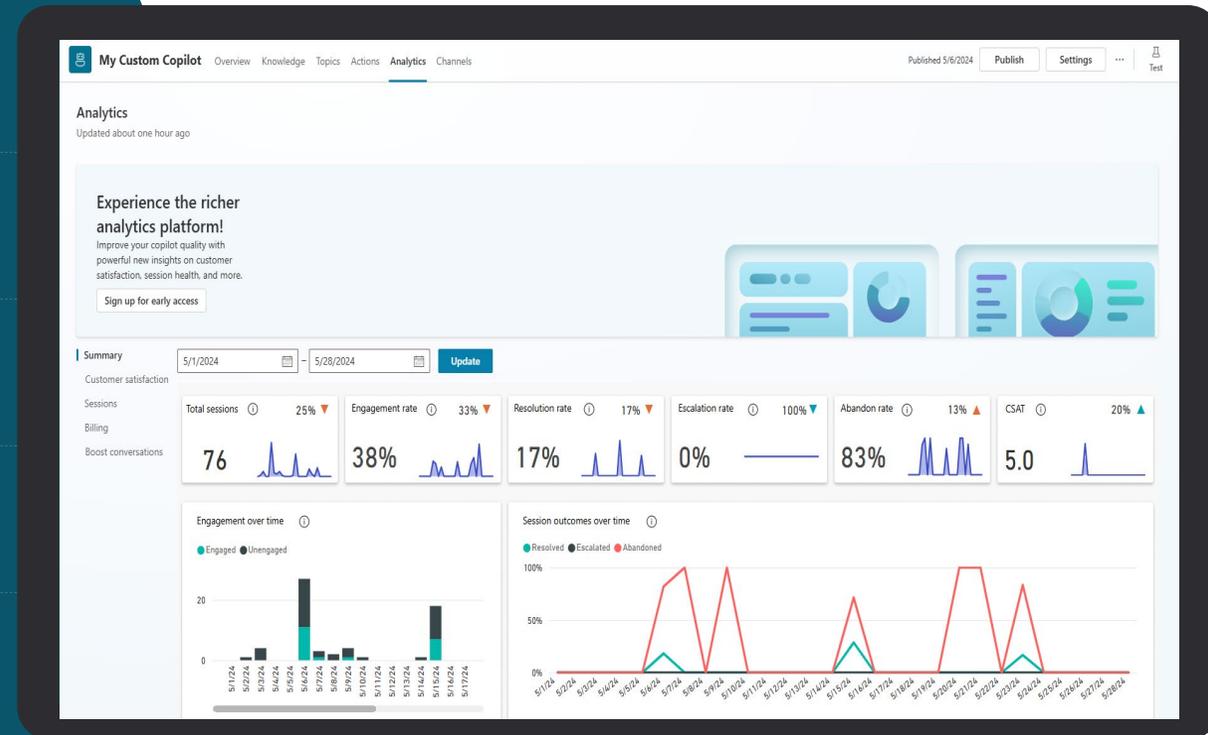
Resolution rate drivers chart



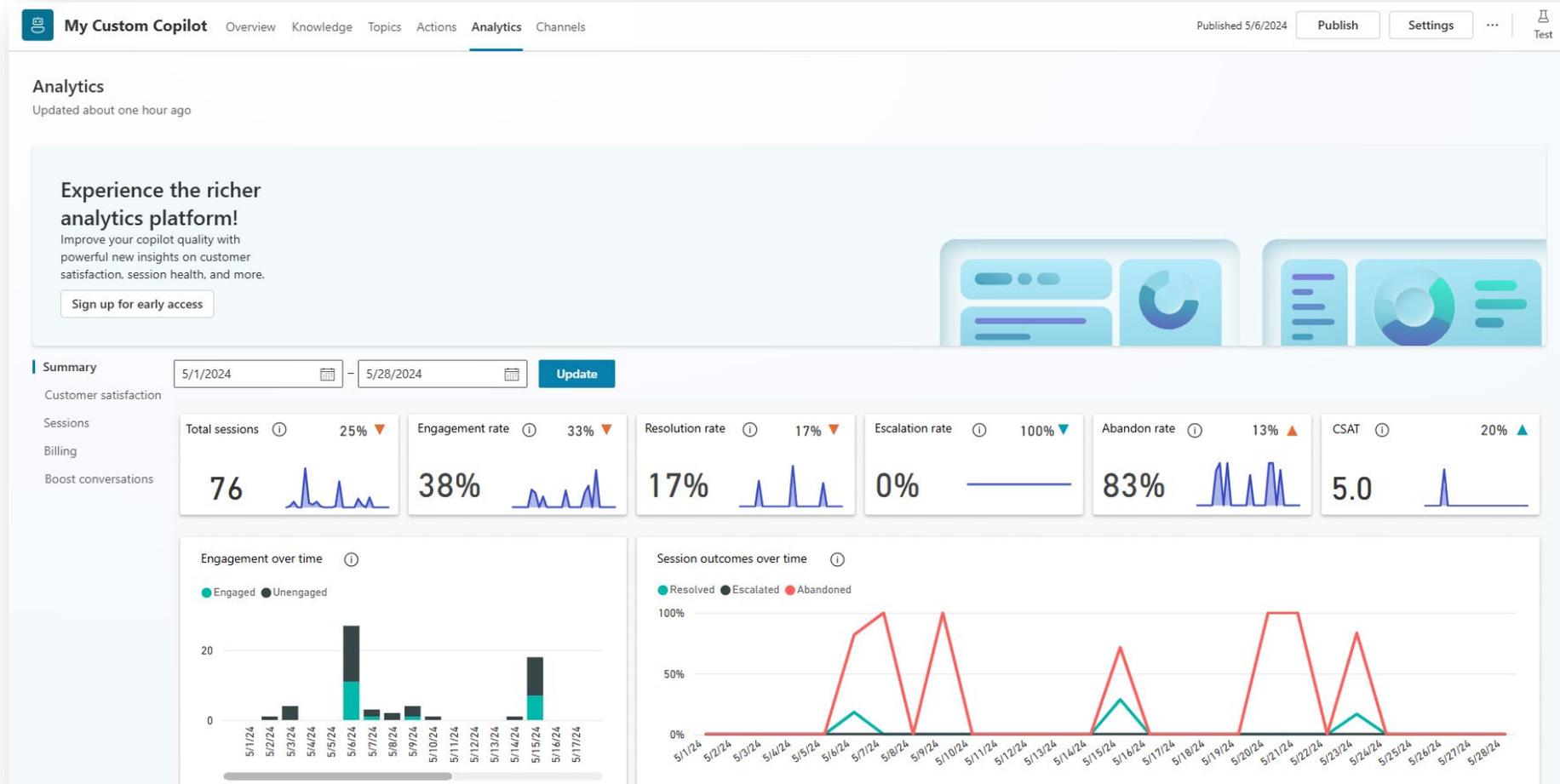
Escalation rate drivers chart



Abandon rate drivers chart

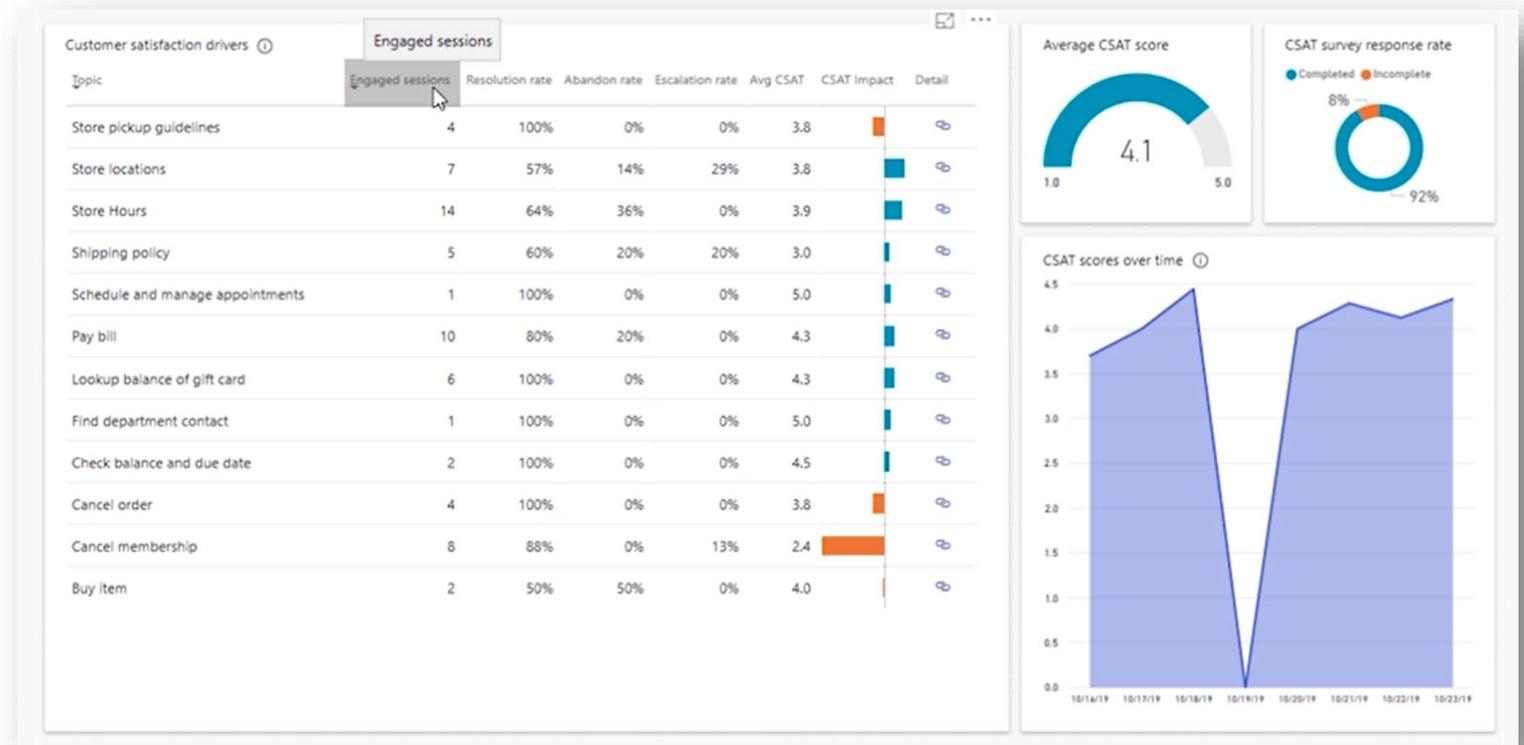


Summary



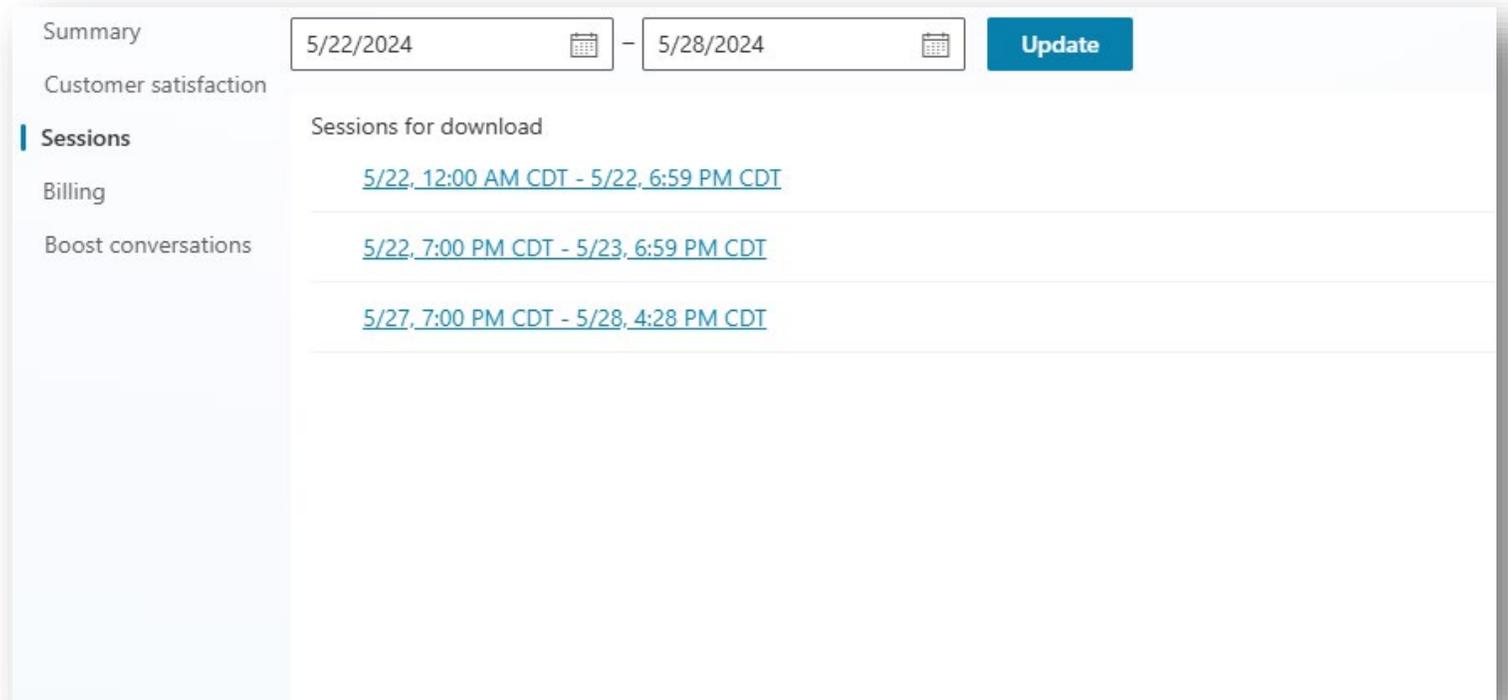
Customer Satisfaction

- CSAT report shows
 - Detailed view of CSAT survey data
 - Average CSAT score over time
 - Topics that are having the most impact on the CSAT score



Sessions

- Session's transcript can be downloaded and imported into Excel for further analyses.

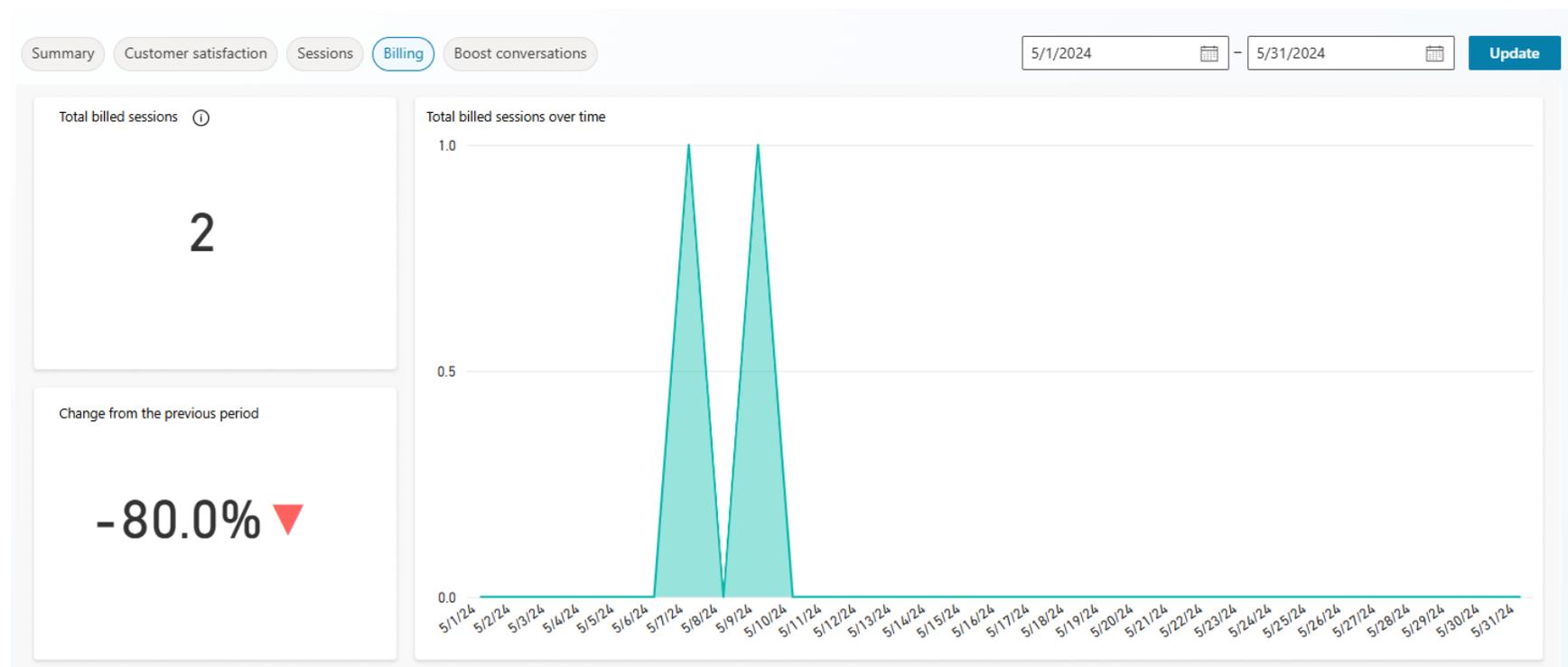


The screenshot displays a web interface for managing sessions. On the left is a navigation menu with the following items: Summary, Customer satisfaction, Sessions (highlighted with a blue bar), Billing, and Boost conversations. The main content area features a date range filter set to 5/22/2024 to 5/28/2024, with an 'Update' button to the right. Below the filter, the text 'Sessions for download' is followed by a list of three session periods, each with a blue underlined link:

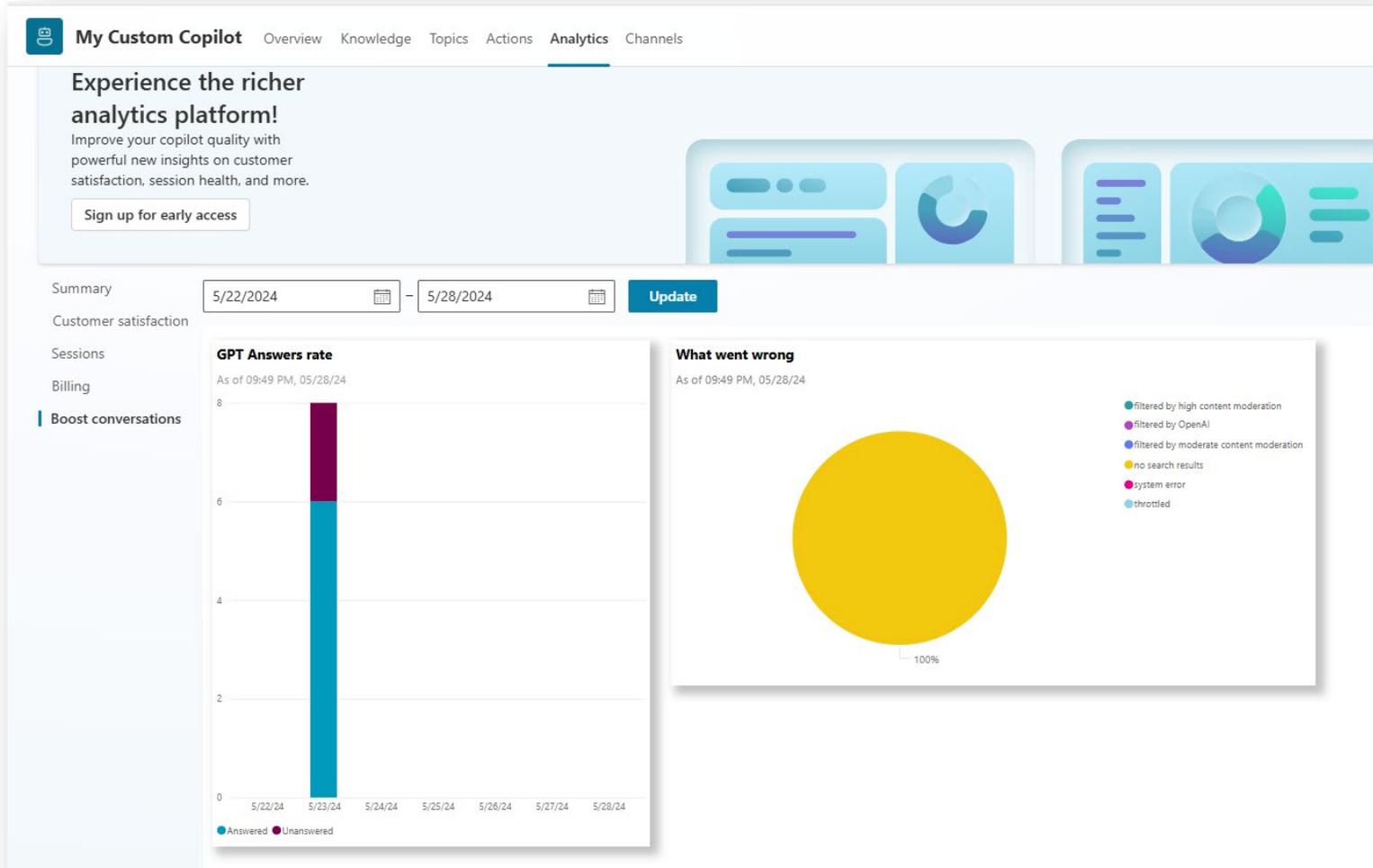
- [5/22, 12:00 AM CDT - 5/22, 6:59 PM CDT](#)
- [5/22, 7:00 PM CDT - 5/23, 6:59 PM CDT](#)
- [5/27, 7:00 PM CDT - 5/28, 4:28 PM CDT](#)

Billing

- This tab will show the copilot's billing and usage.



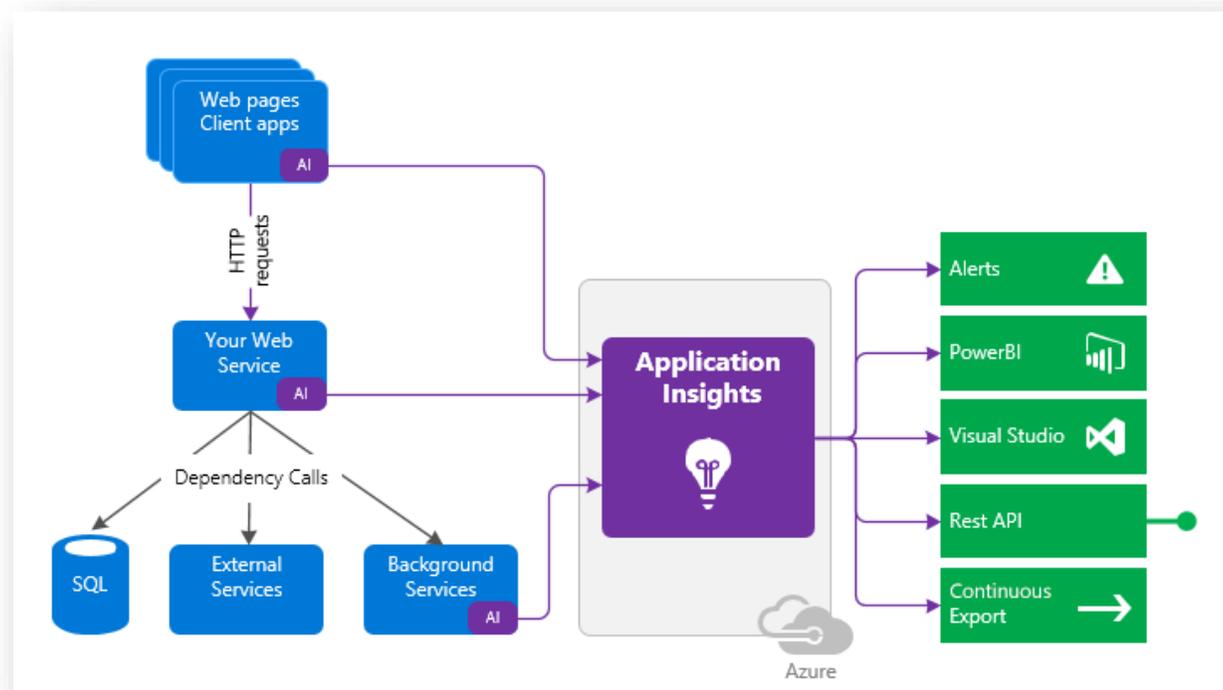
Boost Conversation



- Boost Conversation report shows
 - Breakdown of answered and unanswered Generative Answer opportunities.
 - Pie Chart of What happened when an answer failed to be given.

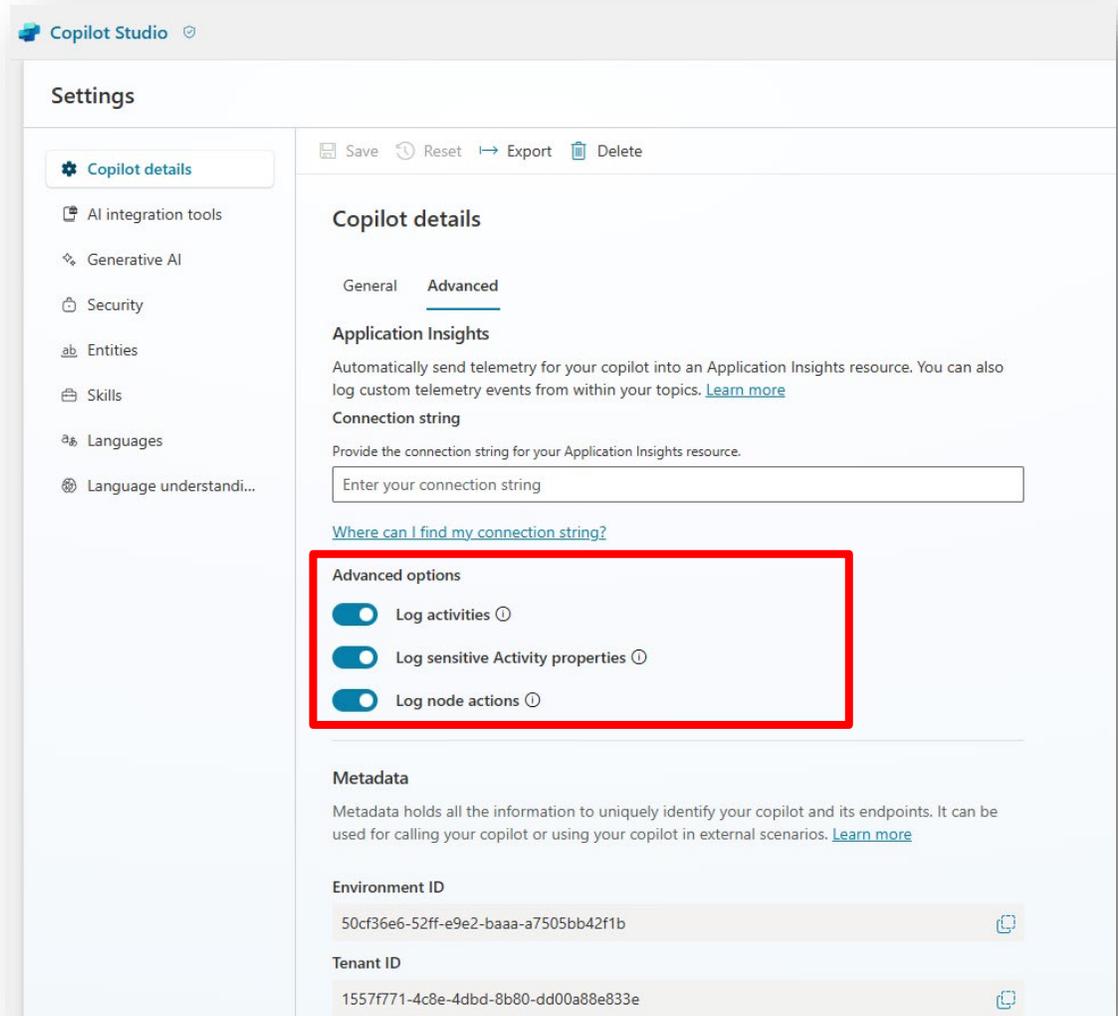
Telemetry with Application Insights

- Gain deeper insights with advanced **telemetry from Application Insights** using Bot Framework Composer with Copilot Studio.
- See which features are most used, detect unwanted behavior, availability issues, performance and more.
- **An Azure Subscription is required.**



Telemetry with Application Insights

- Gain deeper insights with advanced **telemetry from Application Insights** using Bot Framework Composer with Copilot Studio.
- See which features are most used, detect unwanted behavior, availability issues, performance and more.
- **An Azure Subscription is required.**



The screenshot displays the Copilot Studio Settings interface. The left sidebar contains a navigation menu with the following items: Copilot details (selected), AI integration tools, Generative AI, Security, Entities, Skills, Languages, and Language understandi... The main content area is titled 'Settings' and includes a top bar with 'Save', 'Reset', 'Export', and 'Delete' buttons. Below this, the 'Copilot details' section is active, with 'Advanced' selected under the 'General' and 'Advanced' tabs. The 'Application Insights' section is expanded, showing a description: 'Automatically send telemetry for your copilot into an Application Insights resource. You can also log custom telemetry events from within your topics. [Learn more](#)'. Below this is the 'Connection string' section, which includes a text input field labeled 'Enter your connection string' and a link: '[Where can I find my connection string?](#)'. A red rectangular box highlights the 'Advanced options' section, which contains three toggle switches, all of which are turned on: 'Log activities', 'Log sensitive Activity properties', and 'Log node actions'. The 'Metadata' section is also visible, with a description: 'Metadata holds all the information to uniquely identify your copilot and its endpoints. It can be used for calling your copilot or using your copilot in external scenarios. [Learn more](#)'. Below this, the 'Environment ID' and 'Tenant ID' are displayed with their respective values and copy icons.

Copilot Studio

Settings

Save Reset Export Delete

Copilot details

General **Advanced**

Application Insights

Automatically send telemetry for your copilot into an Application Insights resource. You can also log custom telemetry events from within your topics. [Learn more](#)

Connection string

Provide the connection string for your Application Insights resource.

[Where can I find my connection string?](#)

Advanced options

- Log activities ⓘ
- Log sensitive Activity properties ⓘ
- Log node actions ⓘ

Metadata

Metadata holds all the information to uniquely identify your copilot and its endpoints. It can be used for calling your copilot or using your copilot in external scenarios. [Learn more](#)

Environment ID

50cf36e6-52ff-e9e2-baaa-a7505bb42f1b [Copy](#)

Tenant ID

1557f771-4c8e-4dbd-8b80-dd00a88e833e [Copy](#)

Deploy Copilot Using Solutions

Solutions



Used to transport apps and components from one environment to another.



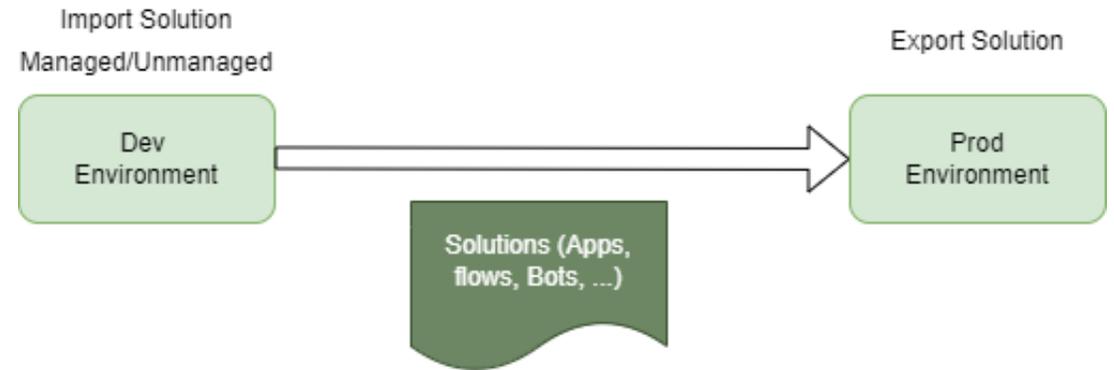
Unmanaged solution

- Recommended only during development
- No restrictions on what can be added or removed
- Useful when moving solution to another dev environment where makers can modify the solution.



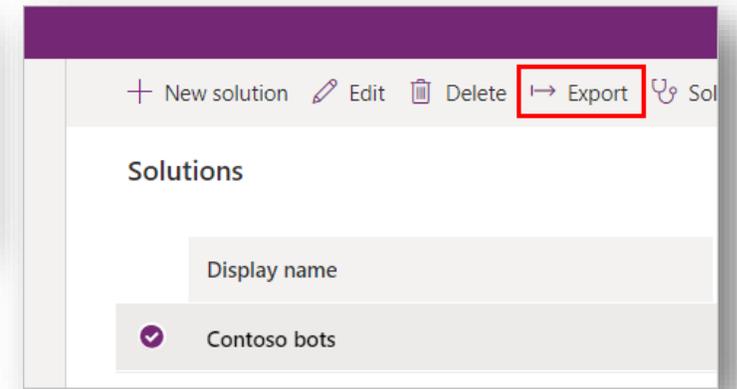
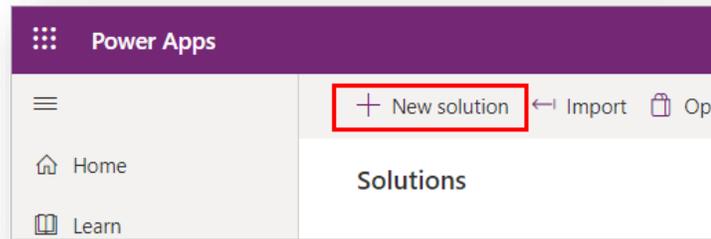
Managed solution

- Recommended when there's no active customizations planned
- Components can't be added or removed
- Useful to locking down the component states so they can't be edited.



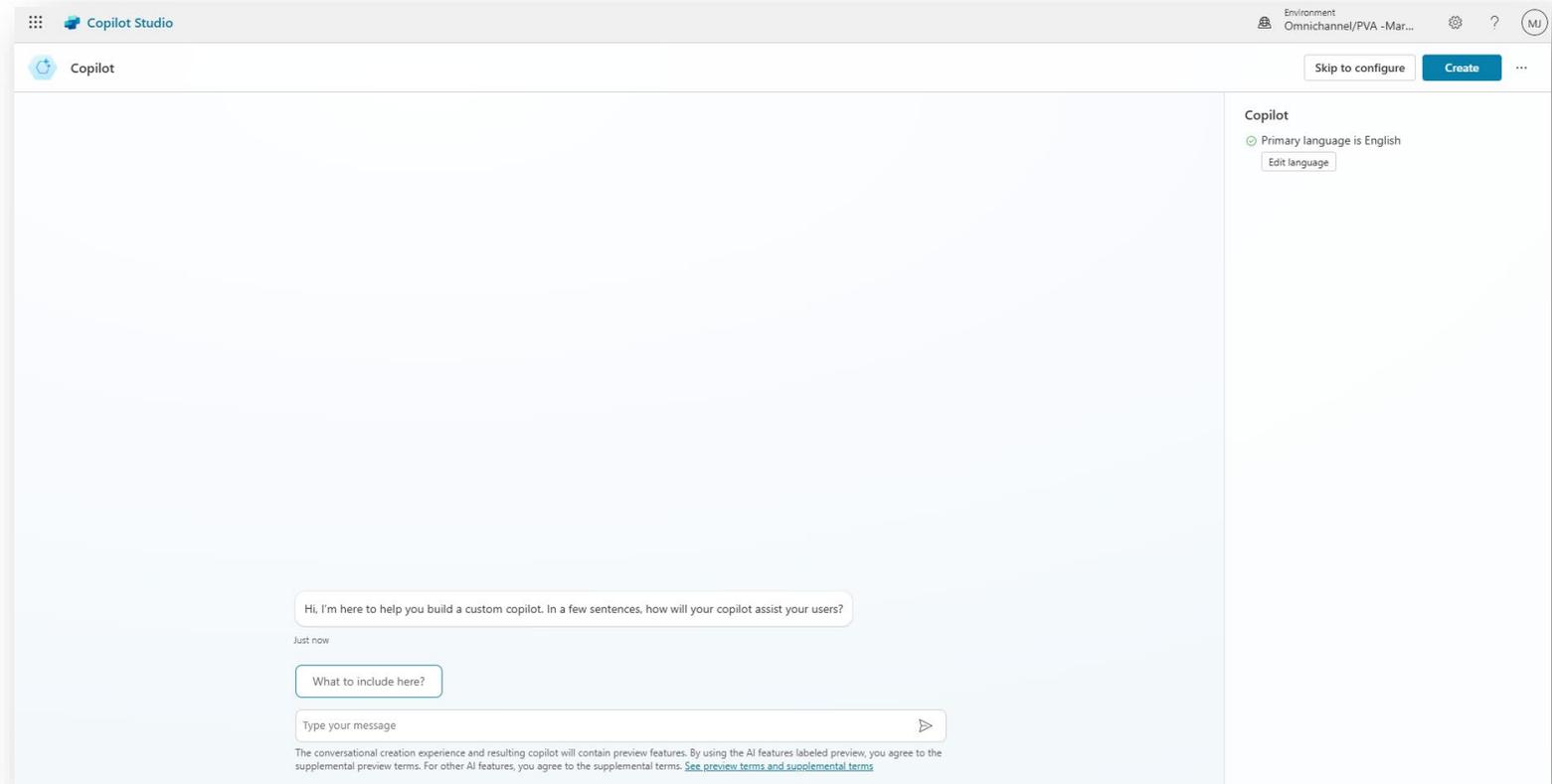
Deploying your Copilot

- You use **solutions** to **export** bots from one environment and **import** them into another.
- The solution acts as a "carrier" for the bots, and you can import multiple bots in one solution.
- By default, when you create a Bot, it is added to the Environment's Default Solution, which can't be exported.
- You need create a new **solution**, and add your bot to it, in order to **export** your bot.



New Copilots and Solutions

- The new process is to use AI to help you build your custom copilot.
- Tell the tool what you want from your copilot and it will build out a copilot to continue to iterate on.
- Tell it what you want from data sources, to goals, and to tone.
- Once you answered all you want and it looks good in the left hand navigation, click "Create."



New Copilots and Solutions

- If you have previously created a solution, you can click the three dots to the right of “Create” and select the **Edit advanced settings** before creating your copilot.
- This way you can select what solution your copilot is automatically added to once it’s created, if not it will be in the Common Data Services Default Solution.

