



**Agent Architecture: MS  
Agent Framework + M365  
Agent SDK**



# Andreas Adner

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Lösningsarkitekt



Mavrix



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<https://www.nullpointer.se>



<https://www.youtube.com/@andreas5710>

# Vem är jag?

- Fick en Commodore 64 1987
- Bakgrund – industrirobotar
- Utvecklade styrenheten till roboten, baserad på Windows CE/.NET CF
- Började som konsult 2007
- Kom in på Dynamics av en slump
- Har jobbat med Dynamics/Power Platform i snart 20 år 🎉

Andreas Adner

📄 Lösningsarkitekt

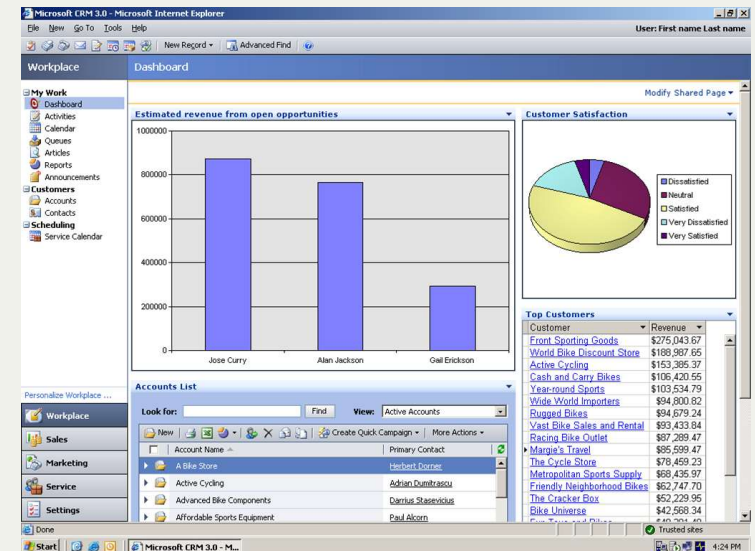
📁 Mavrix

✉ andreas.adner@mavrix.se

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

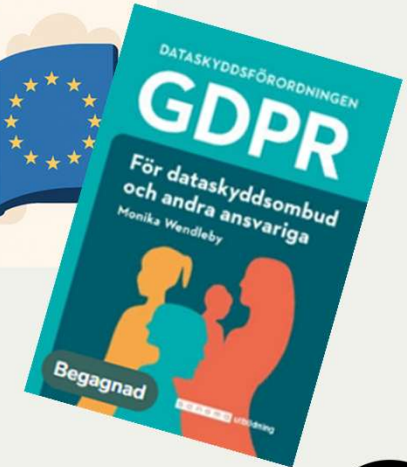
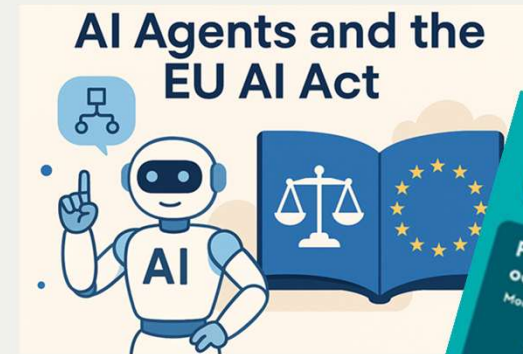
✍ <https://www.nullpointer.se>

▶ <https://www.youtube.com/@andreas5710>




# Vad ska man prata om...

- Mest GDPR sista året...
- Artificiell Intelligens är kul!
- The EU AI Act!
- Model Context Protocol
- AI-arkitektur, MS-ramverk för AI och UI:n för agenter





# Idag tänkte jag prata om...

- Hur jag började min "AI-resa"
- Hur man ger AI:n en verktygslåda med MCP 
- Vilka ramverk och tekniker man kan använda för att skapa verktygslådan
- Hur ser en "AI-arkitektur" och vilka pusselbitar ingår?
- Hur gör man agenten tillgänglig för användaren?
- Användargränssnitt för AI?

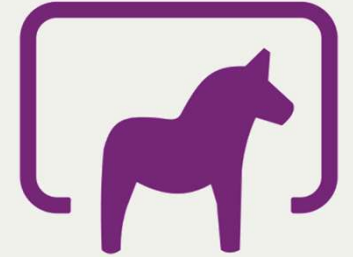
# De första stapplande stegen på AI-resan



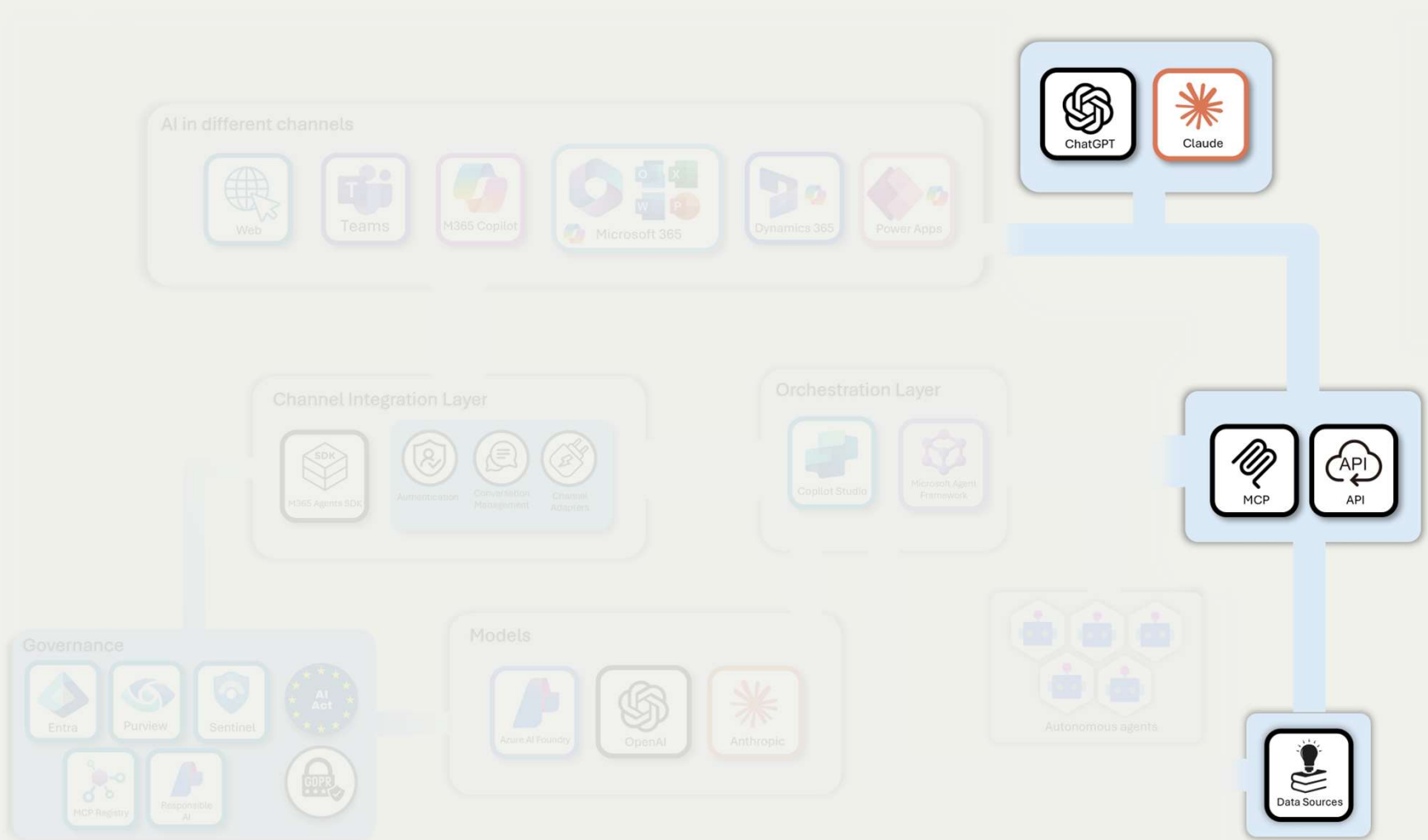
- Model Context Protocol (MCP) var det som fick "poletten att trilla ner".
- En AI-agent blir riktigt användbar först när den får tillgång till en verktygslåda!
- MCP gör det enklare att ge AI:n en verktygslåda.
- AI-modeller har kunnat använda verktyg länge (function calling), men det användes inte mycket.
- Nu finns det MCP:er för allt! Och man kan skapa sin egen om man vill...



# En agent för PPCS!



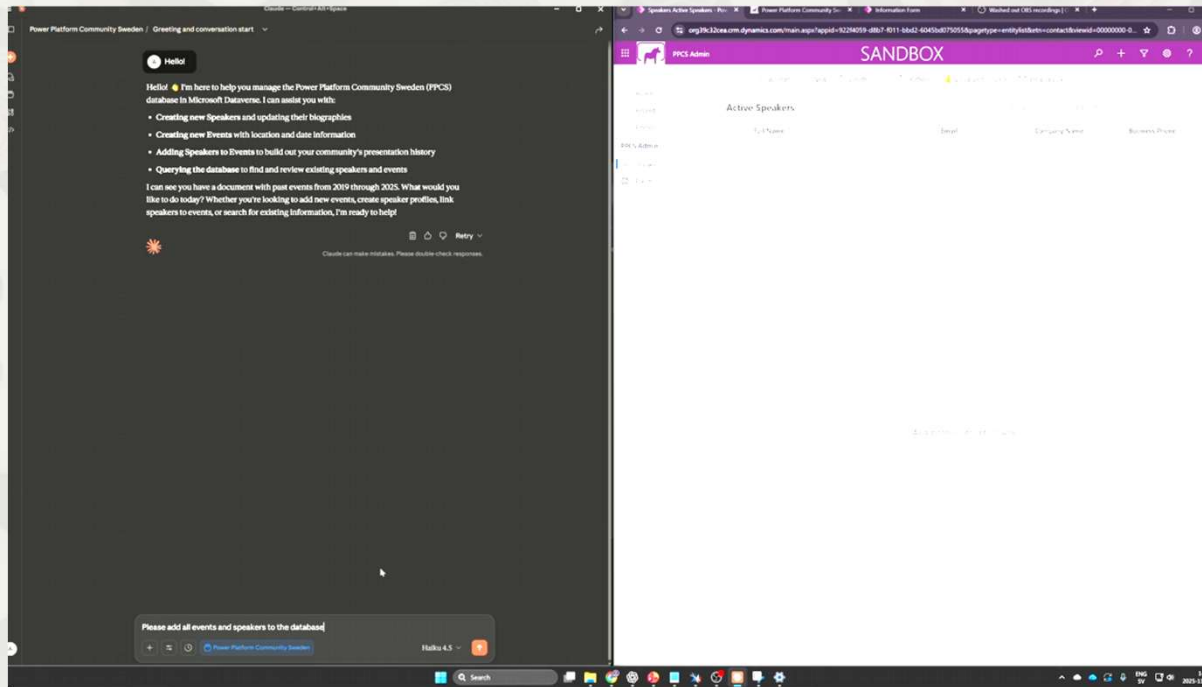
- Om vi har en PPCS databas med alla events och talare...
  - ...vilka verktyg behöver AI:n för att jobba med databasen?
- 
- Söka i databasen
  - Lägga till events och talare
  - Uppdatera talar-biografier





# PPCS-agent med en MCP Server

- En [model-driven app](#) med en enkel datamodell
- MCP Server med ett antal verktyg:
  - ExecuteFetch
  - CreateSpeaker
  - CreateEvent
  - AddSpeakerToEvent
- Använder oss av [C# SDK för MCP](#)
- <https://powerplatformsweden.se/> som datakälla (copy/paste)
- GitHub: [PPCS MCP](#)



<https://www.youtube.com/watch?v=aRRVufV1UMw>

# En agent behöver tydliga instruktioner!

You are an agent that helps out with the management of the Power Platform Community Sweden (PPCS) database, which is hosted in Microsoft Dataverse. It contains Speakers (contact) and Events (new\_event). These are related to each other through a many-to-many relationship. The schema name of the intersection table is cr5ec\_new\_event\_speaker.

Example of how to use link-entity in fetchxml to get speakers for an event:

```
<link-entity name="cr5ec_new_event_speaker" from="new_eventid" to="new_eventid" intersect="true"><link-entity name="contact" from="contactid" to="contactid" intersect="true">
```

The Speaker table is just the contact table, with only one custom field:

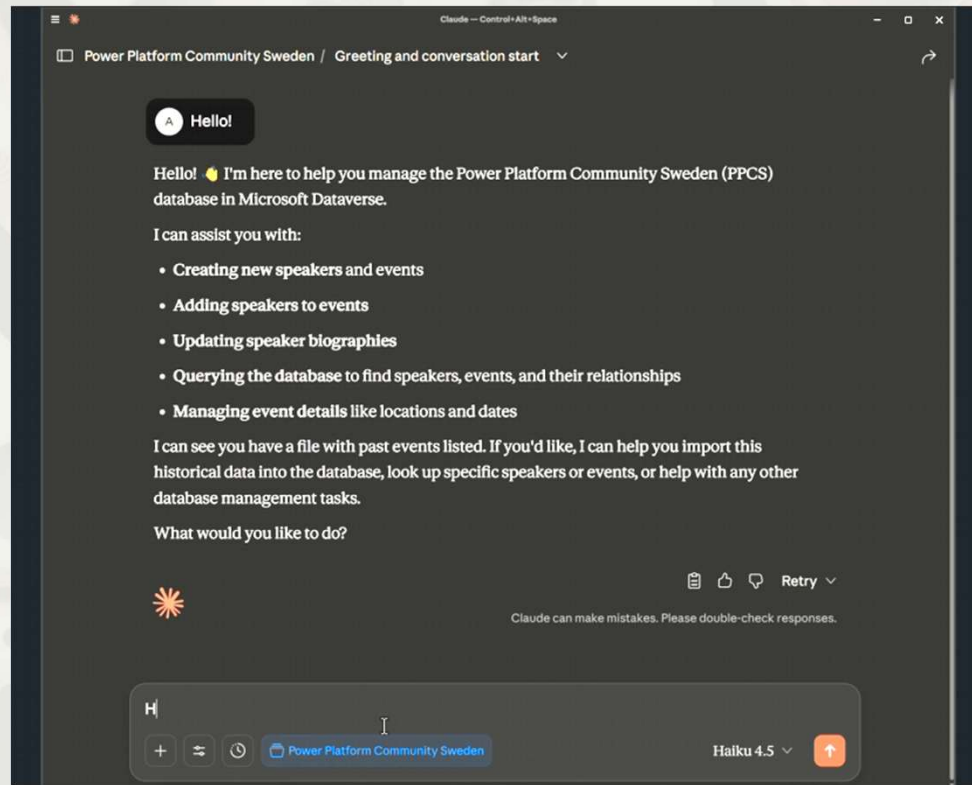
- cr5ec\_biography - The speaker biography.

The Event table is a custom table with the logical name new\_event, and the following custom fields:

- new\_location - the name of the location where the Event is held.
- cr5ec\_eventname - A descriptive name of the Event.
- cr5ec\_eventdate - The date and time of the Event

You have access to an MCP Server that allows you to:

- query the database using the ExecuteFetch tool
- create new Speakers using the CreateSpeaker tool
- create new Events using the CreateEvent tool
- add a Speaker to an Event using the AddSpeakerToEvent tool
- update the speaker biography using the UpdateSpeakerBiography tool



<https://www.youtube.com/watch?v=khlClqU-tc4>

The image shows two overlapping windows. The left window is a chat interface with a dark background. It contains a greeting from a bot named 'Hello!' and a list of tasks it can perform: querying speakers, creating and linking events, and updating speaker biographies. It also offers to help with historical events. At the bottom, there is a text input field with the text 'Please add a new event at Softronic, Stoc' and a 'Send' button. The right window is a web browser showing the 'PPCS Admin' console. The page title is 'SANDBOX'. It features a navigation menu on the left and a table titled 'My Active Events' on the right. The table has columns for 'Event name', 'Location', and 'Event date'. The table lists several events with their respective dates and locations.

Power Platform Community Sweden / Greeting and conversation start

Hello!

Hello! I'm here to help you manage the Power Platform Community Sweden (PPCS) database. I can assist you with:

- Querying speakers, events, and their relationships
- Creating new speakers or events
- Linking speakers to events
- Updating speaker biographies

I can see you have a document with past events from the community. Would you like me to help you with something specific, such as:

- Adding any of these historical events to the database?
- Looking up information about existing speakers or events?
- Creating new events or speakers?
- Analyzing the data you have?

Just let me know what you'd like to work on!

Please add a new event at Softronic, Stoc

Power Platform Community Sweden

Sonnet 4.5

PPCS Admin

SANDBOX

My Active Events

Event name	Location	Event date
Wellness - Health	Stockholm	24/02/2024 10:45
Wellness - Health	Stockholm	17/04/2024 10:45 AM
Market - Influencer	Stockholm	06/03/2024 10:45
Market - Influencer	Stockholm	4/03/2024 10:45
Market - Influencer	Stockholm	19/02/2024 10:45
Market - Influencer	Stockholm	4/02/2024 10:45
Market - Influencer	Stockholm	12/02/2024 10:45
Market - Influencer	Stockholm	2/02/2024 10:45
Market - Influencer	Stockholm	15/01/2024 10:45
Market - Influencer	Stockholm	10/01/2024 10:45
Market - Influencer	Stockholm	5/01/2024 10:45
Market - Influencer	Stockholm	1/01/2024 10:45
Market - Influencer	Stockholm	11/12/2023 10:45
Market - Influencer	Stockholm	11/12/2023 10:45
Market - Influencer	Stockholm	8/12/2023 10:45
Market - Influencer	Stockholm	2/12/2023 10:45
Market - Influencer	Stockholm	15/11/2023 10:45
Market - Influencer	Stockholm	11/11/2023 10:45
Market - Influencer	Stockholm	11/11/2023 10:45

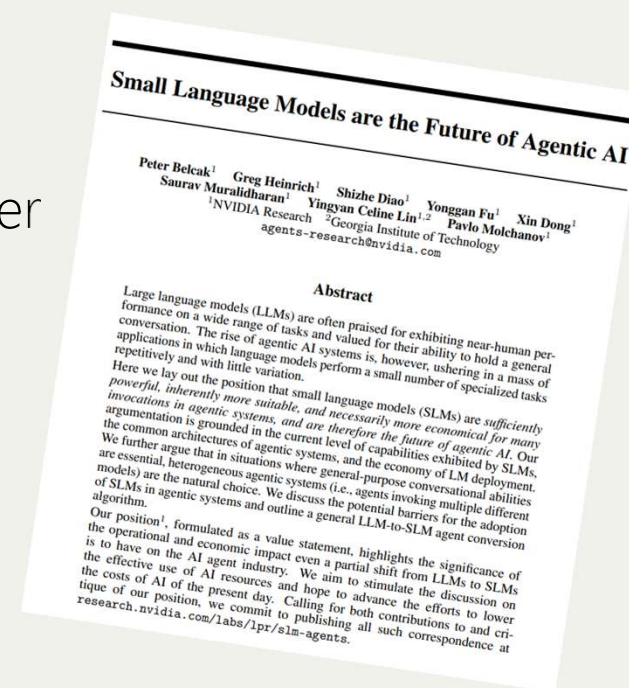
<https://www.youtube.com/watch?v=C3ZDQR4VC9M>

***AI-spaning #1***  
***"Behöver min AI-modell  
verkligen kunna alla  
Shakespears verk  
utantill?"***



# Är framtiden “small language models”?

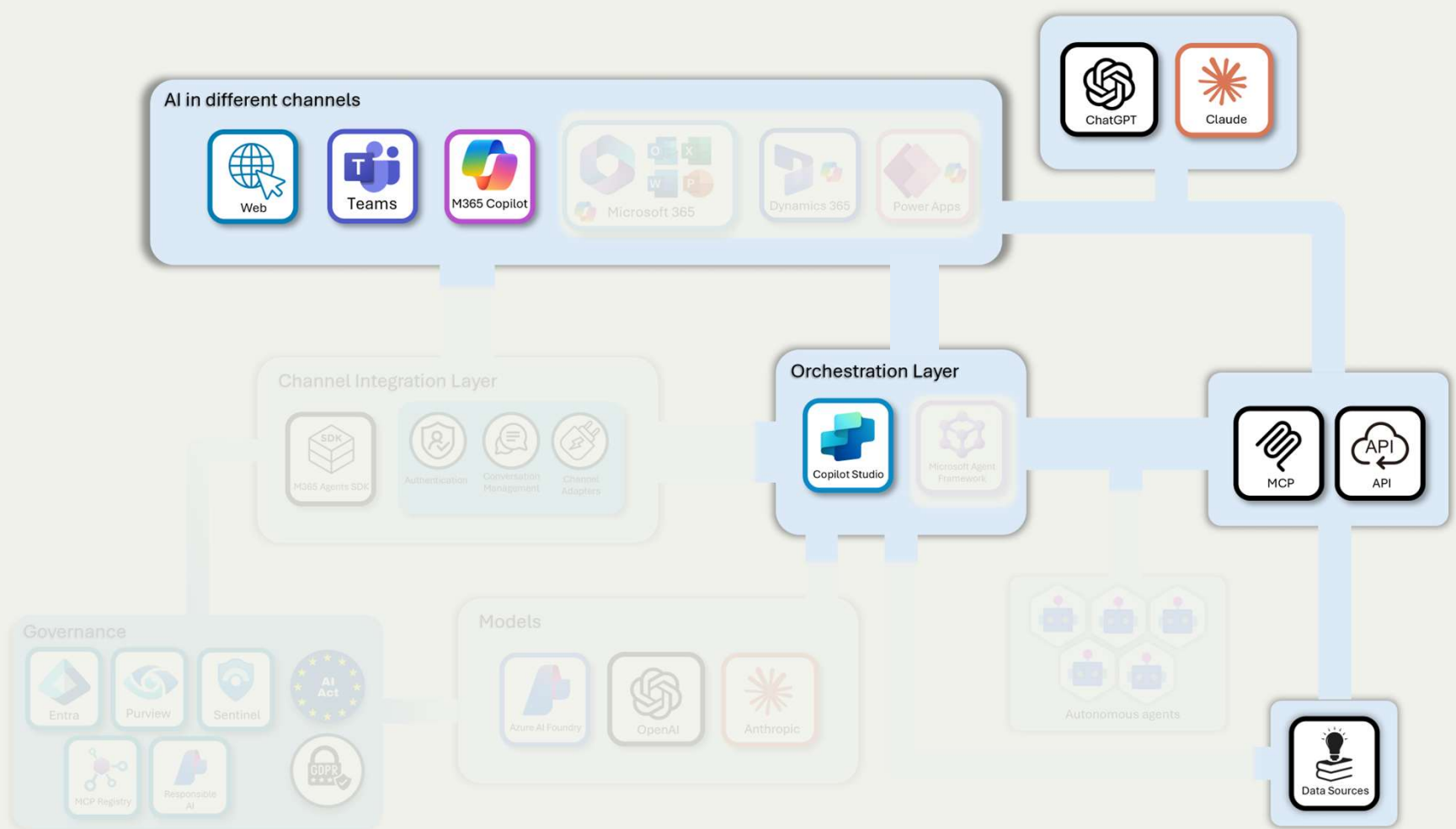
- GPT-5, Claude 4.5 – biljoner parametrar
- Oftast viktigare att AI:n kan följa instruktioner och använda verktyg, än att den “vet allt”.
- Små modeller som är bra på att använda verktyg, t ex:
  - Qwen3-4B
  - granite-4.0-h-tiny
- Paper – [Small language models are the Future of Agentic AI](#)

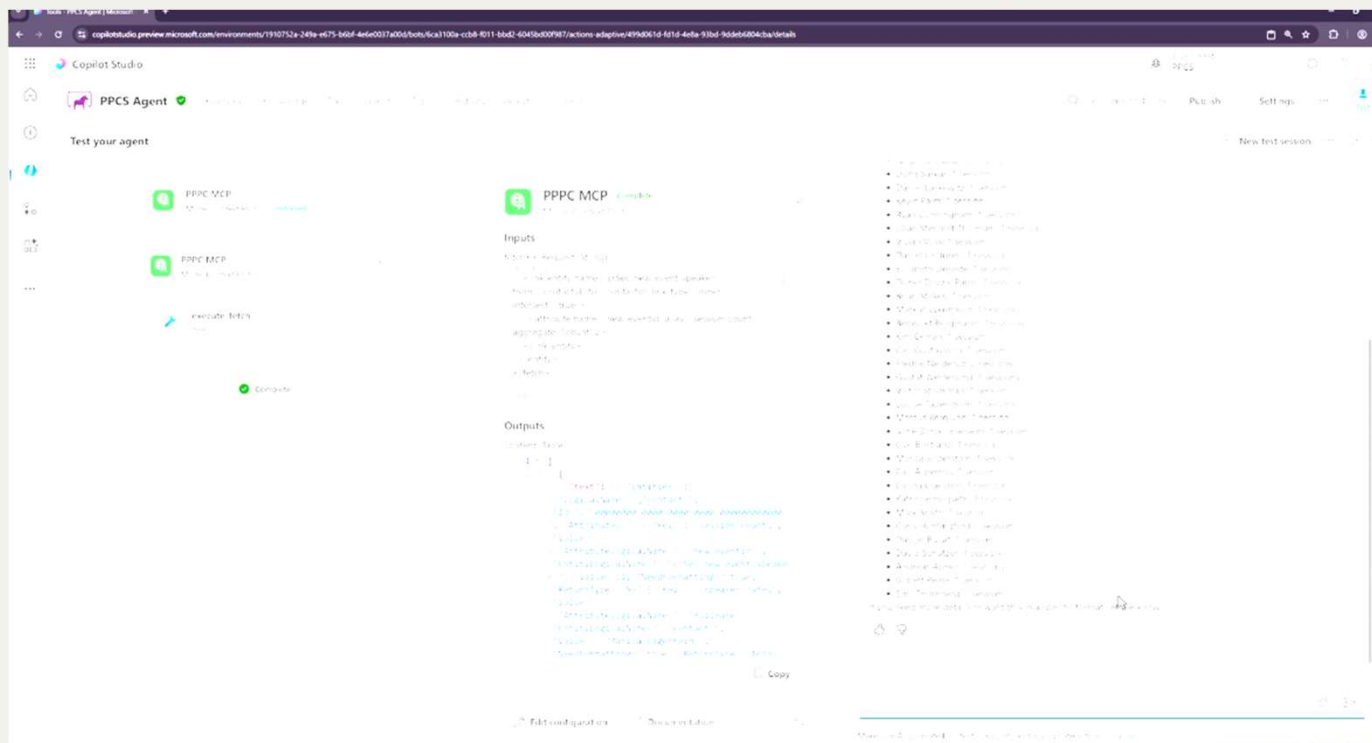




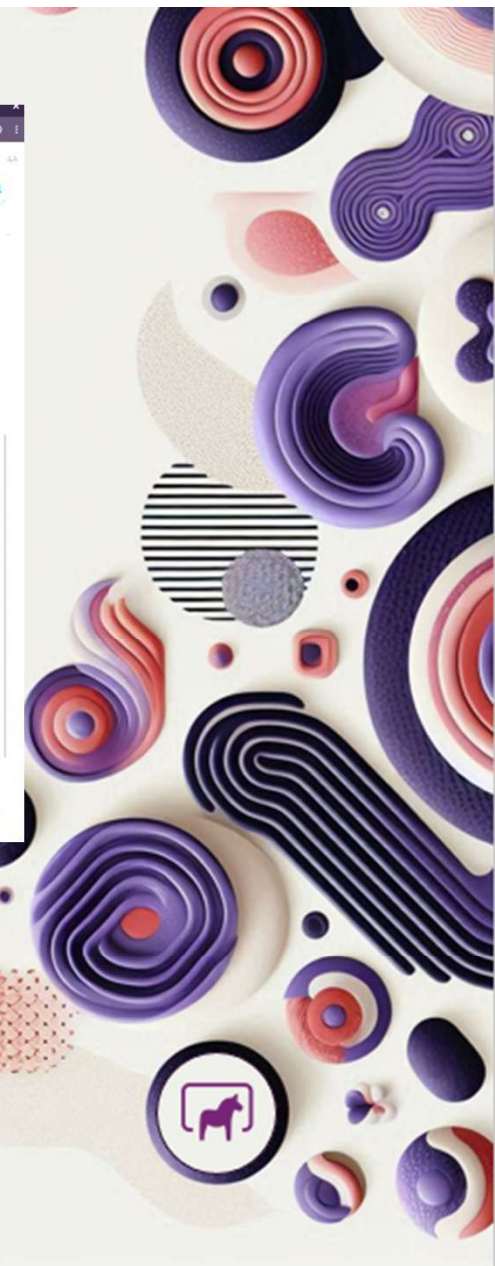
# Version 2 av PPCS-agenten

- [Copilot Studio](#) – no-code orkestrering
  - Lätt att lägga till nya funktioner
- Vi vill fortfarande använda samma verktygslåda
  - [PPCS Remote MCP](#)
- Göra agenten tillgänglig i fler kanaler
  - Teams
  - M365 Copilot





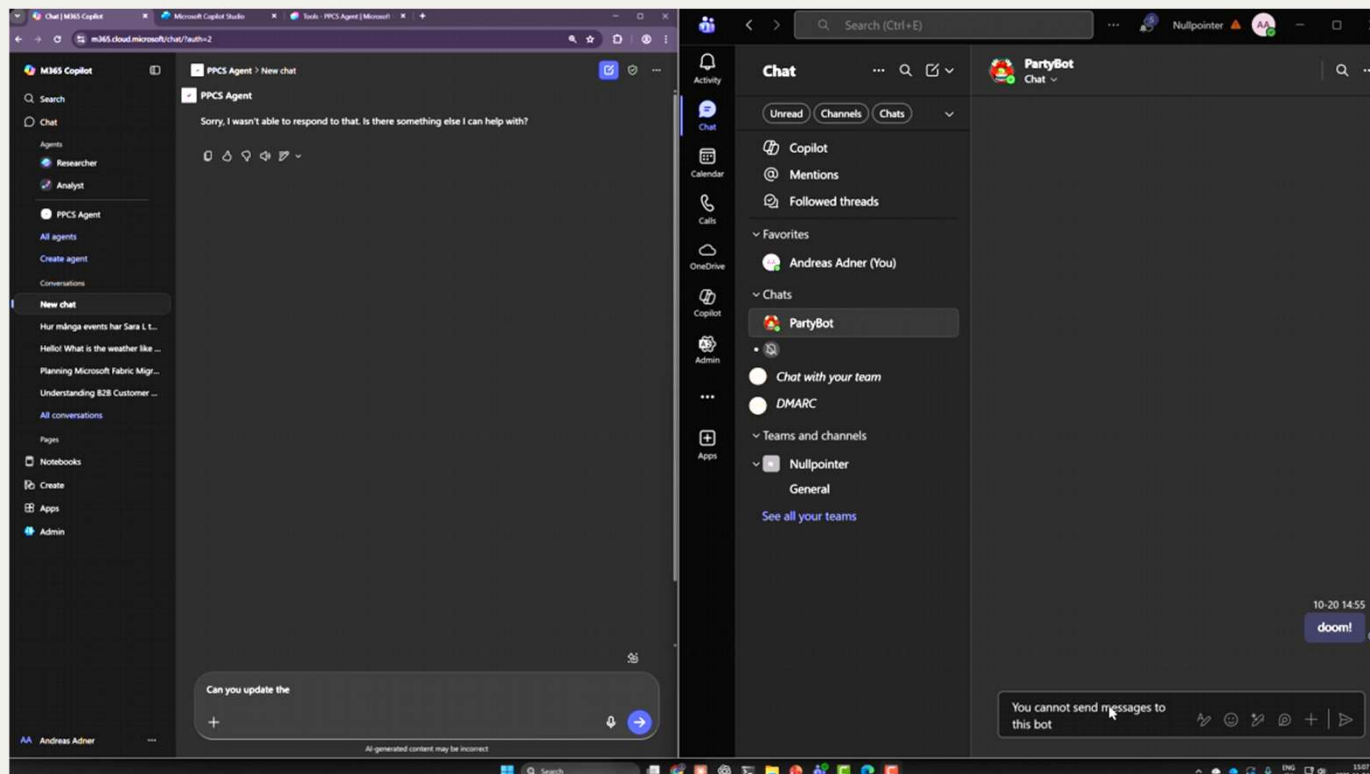
<https://www.youtube.com/watch?v=vODwdwF0gUQ>



# Publicering av agenten

- Teams
- M365 Copilot
- Power Pages
- Sharepoint
- Azure Bot Service
- WhatsApp
- Native Apps
- ...



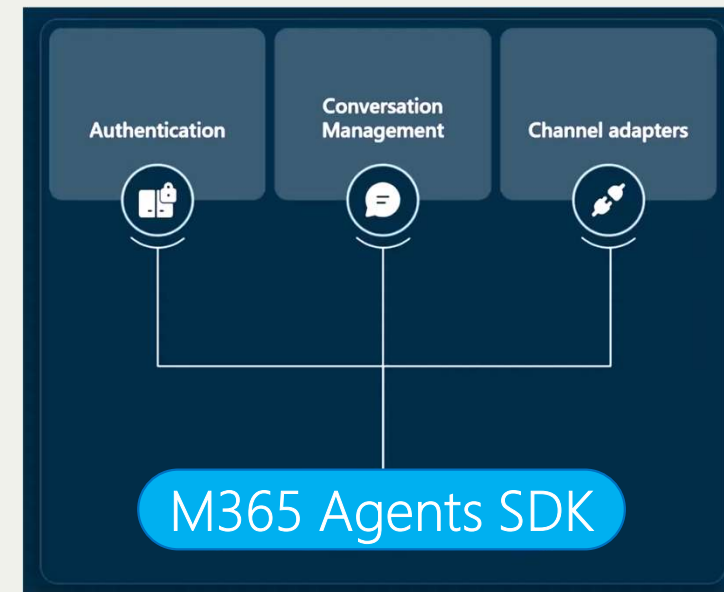


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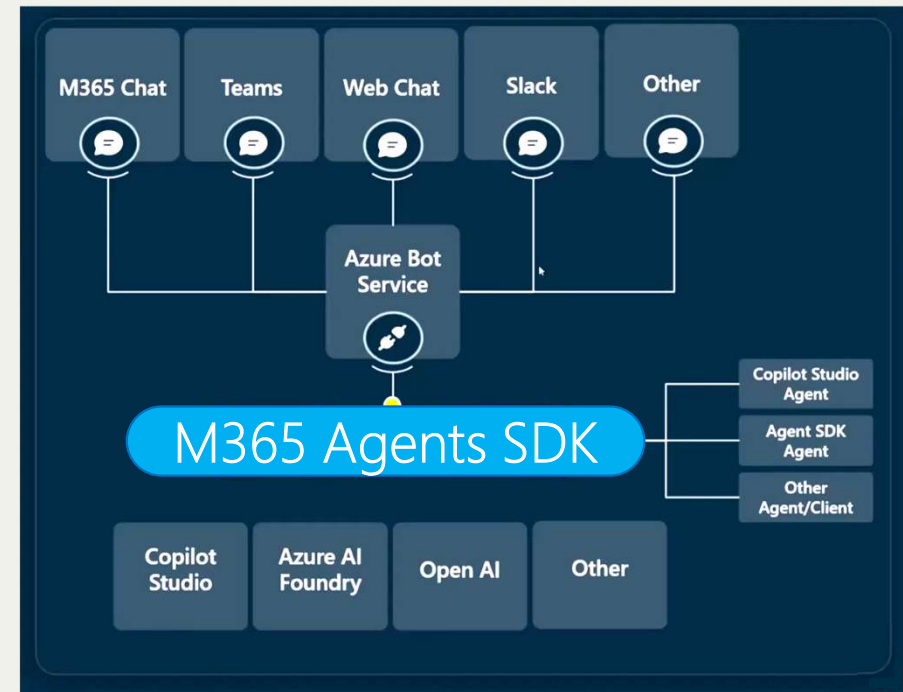


# Microsoft 365 Agents SDK

- Om man vill ha “mer kontroll” än vad t ex Copilot Studio ger.
- En samling av verktyg och ramverk för att utveckla och sjösätta agenter i olika kanaler.
- SDK:er för C#, JavaScript och Python.
- Förenklar:
  - Autenticering
  - Hantering av konversationer och persistering av state

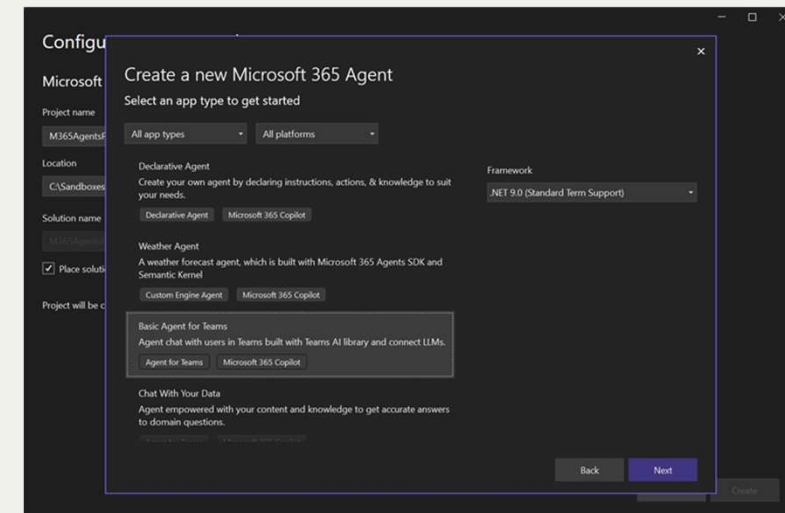


- Gör det enklare att "plugga in":
  - Ramverk för AI-orkestrering, t ex Microsoft Agent Framework.
  - AI-modeller från olika leverantörer.
- En uppsjö SDK:er för olika typer av klienter.
- Activity Protocol – ett standardiserat protokoll för kommunikationsflödet med agenter i olika kanaler.
- Använder Azure Bot Service "under huven" - lite krångligt...



# Tooling och SDK:er

- Microsoft 365 Agents Toolkit – förenklar utveckling och deployment.
  - Extension till Visual Studio och VS Code.
  - Förenklar deployment!
- Copilot Studio Client – ger möjlighet att koppla ihop en custom-application med en Copilot Studio-agent
- Microsoft 365 Copilot API – integrera med Copilot.



```
A complete log of validations can be found in C:\Users\andre\AppData\Local\Temp\VSTeamsToolkitExtension\20251018T153638.log
Action teamsApp/validateAppPackage in lifecycle provision succeeded with output {}
Executing action teamsApp/update in lifecycle provision
app 09af1ec9-21a9-4e7c-bc69-863fefa902f updated successfully
Action teamsApp/update in lifecycle provision succeeded with output {"TEAMS_APP_TENANT_ID":"ecd4deab-a1de-4d9d-a02a-2c87dfaSecf2","TEAMS_APP_UPDAT
Executing action teamsApp/extendToM365 in lifecycle provision
Acquiring package ...
TitleId: U_8778defb-bb36-a0b2-724f-260f7c32442b
AppId: 95889007-2a67-4101-bf77-519ede10e433
SideLoading done.
Action teamsApp/extendToM365 in lifecycle provision succeeded with output {"M365_TITLE_ID":"U_8778defb-bb36-a0b2-724f-260f7c32442b","M365_APP_ID":
Finished Executing lifecycle provision. Result: {"TEAMS_APP_ID":"09af1ec9-21a9-4e7c-bc69-863fefa902f","TEAMS_APP_TENANT_ID":"ecd4deab-a1de-4d9d-a
Execution summary:

Summary:
(√) Done: lifecycle stage provision was executed successfully.
(√) Done: teamsApp/create was executed successfully.
(√) Done: App with id 09af1ec9-21a9-4e7c-bc69-863fefa902f already exists, skipped creating a new app.
(√) Done: aadApp/create was executed successfully.
(√) Done: file/createOrUpdateJsonfile was executed successfully.
(√) Done: Json file has been successfully generated to ../MyM365Agent1/appsettings.Development.json.
(√) Done: botFramework/create was executed successfully.
(√) Done: The bot registration has been updated successfully (https://dev.botframework.com/bots?id=c67ca446-107e-45af-b090-3c3757860e13).
(√) Done: teamsApp/validateManifest was executed successfully.
(√) Done: teamsApp/zipAppPackage was executed successfully.
(√) Done: teamsApp/validateAppPackage was executed successfully.
(√) Done: teamsApp/update was executed successfully.
(√) Done: app 09af1ec9-21a9-4e7c-bc69-863fefa902f updated successfully
(√) Done: teamsApp/extendToM365 was executed successfully.
(√) Done: Microsoft 365 title acquired successfully (U_8778defb-bb36-a0b2-724f-260f7c32442b).

app prepared successfully.
9/9 actions in provision stage executed successfully.
App dependencies are set up.
```

Test Bot 5:09 PM ...  
How can I help you today?

5:09 PM  
Hello!

Test Bot AI generated 5:09 PM ...  
Hello! How are you today?

5:09 PM  
What's going on?

Test Bot AI generated 5:09 PM ...  
I'm just here to chat with you and answer any questions you may have. How can I assist you today?

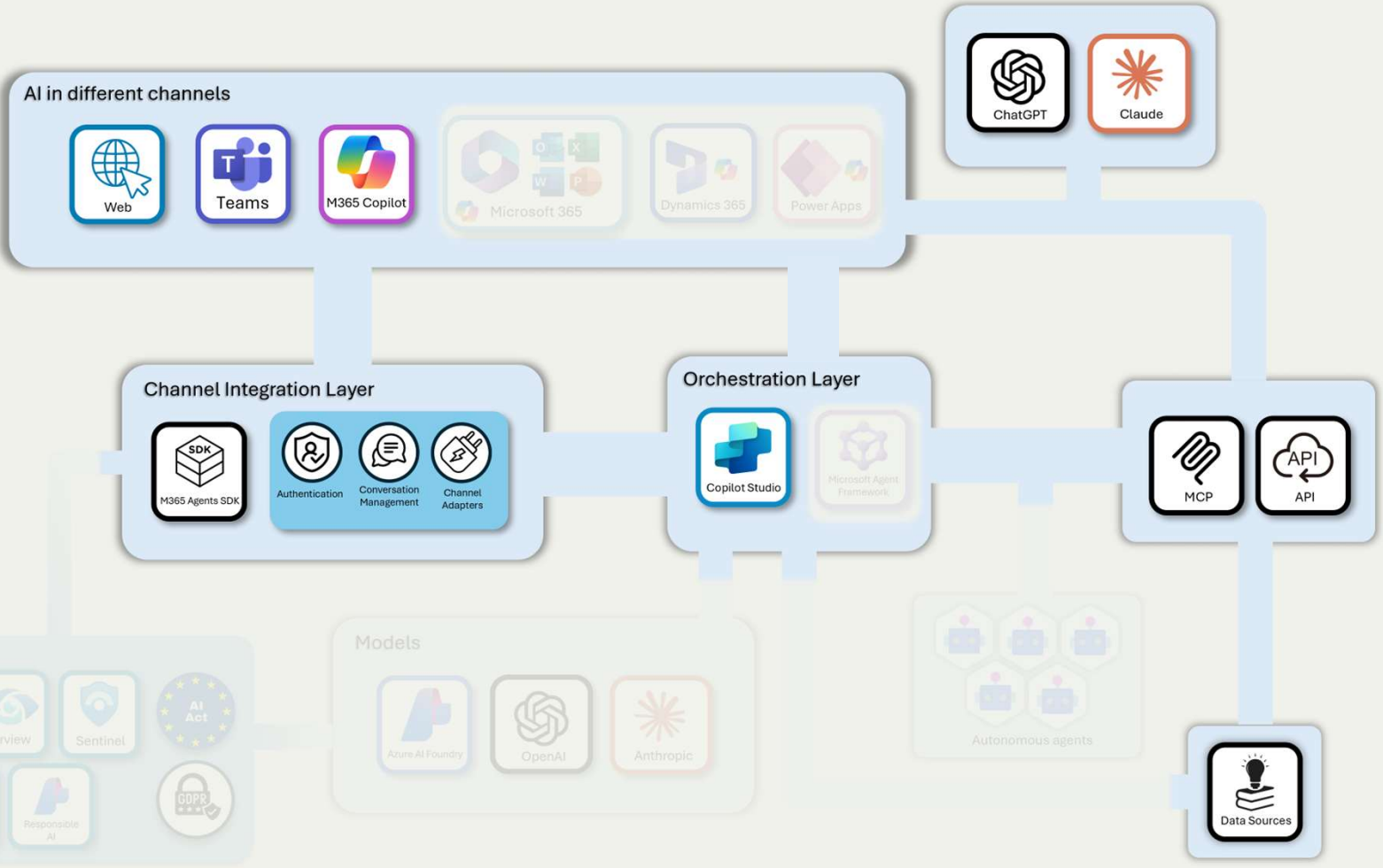
5:09 PM  
Who are you?

Test Bot AI generated 5:09 PM ...  
I am an AI chatbot designed to have conversations with users and provide information or assistance. Feel free to ask me anything!

Type a message... +

Log Panel

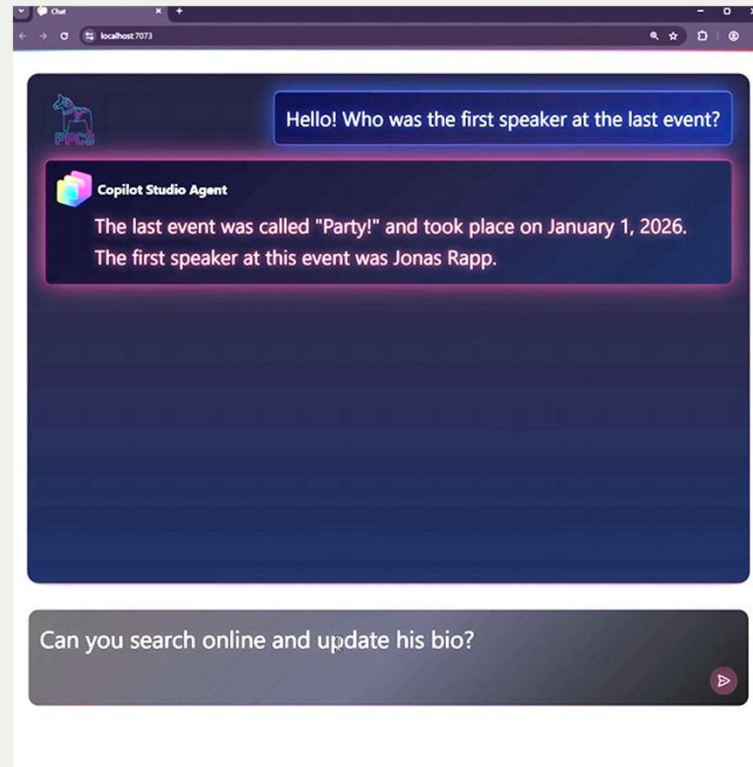
```
Hello!  
[5:09:14 PM] User Application → Microsoft 365 Agents Playground typing_202  
[5:09:14 PM] User Application → Microsoft 365 Agents Playground message_201 Hello!  
How are you today?  
[5:09:26 PM] Microsoft 365 Agents Playground → User Application message_200  
What's going on?  
[5:09:26 PM] User Application → Microsoft 365 Agents Playground typing_202  
[5:09:26 PM] User Application → Microsoft 365 Agents Playground message_201 I'm just here to chat with you and answer any questions you may have. How can I assist you today?  
[5:09:31 PM] Microsoft 365 Agents Playground → User Application message_200  
Click on a log item in the panel above to see log details.
```





# Version 3 av PPCS-agenten

- Vi vill ha en agent med ett egenutvecklat användargränssnitt!
- Mer uttrycksfullt UI som möjliggör användarinteraktioner som inte Teams och Copilot klarar (i dagsläget).
- [Copilot Studio Client](#)
- GitHub: [CustomCopilotStudioAgentUI](#)

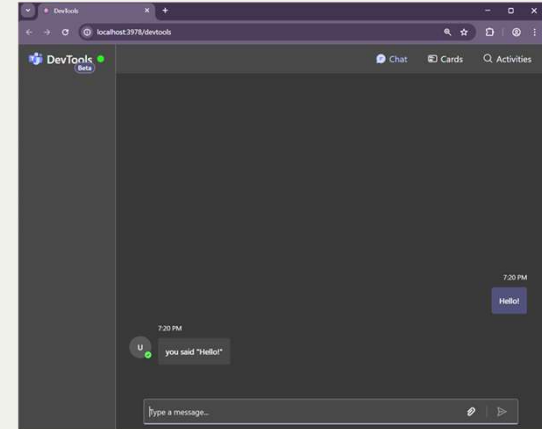


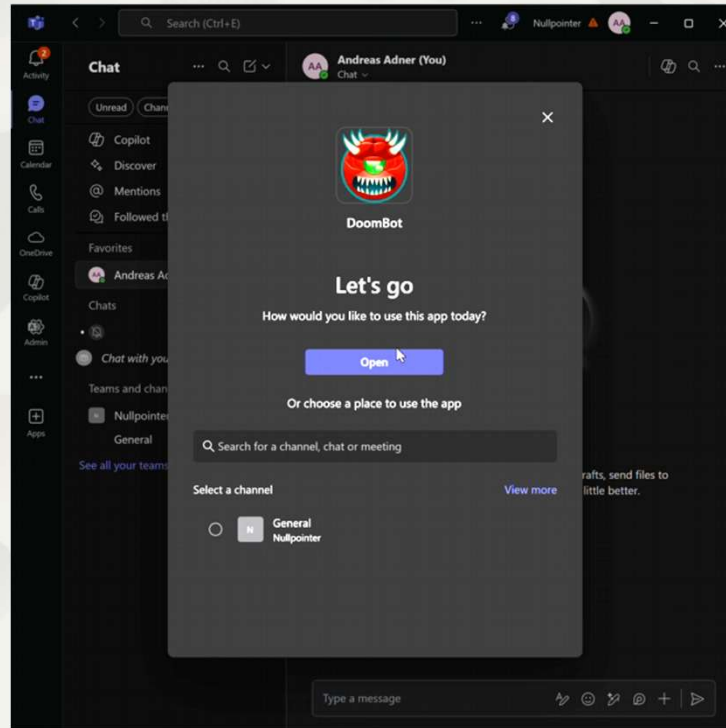
<https://www.youtube.com/watch?v=worTdNcGtq4>



# Teams SDK

- [Teams SDK](#) – Ett "förenklat" ramverk som gör det enklare att bygga Teams-agenter (enklare än med M365 Agents SDK).
- Inte lika flexibelt som M365 Agents SDK, men kan vara ett alternativ om Teams är den enda kanalen.
- Lite skum AI-programmeringsmodell om man är van vid andra ramverk.
- Gör det MYCKET enklare att använda Teams-specifikt UI, såsom:
  - Dialoger
  - Tabs (möjlighet att host:a webapplikationer i Teams!)





<https://www.youtube.com/watch?v=RfGVMNfKjtE>

# Microsoft Agent Framework

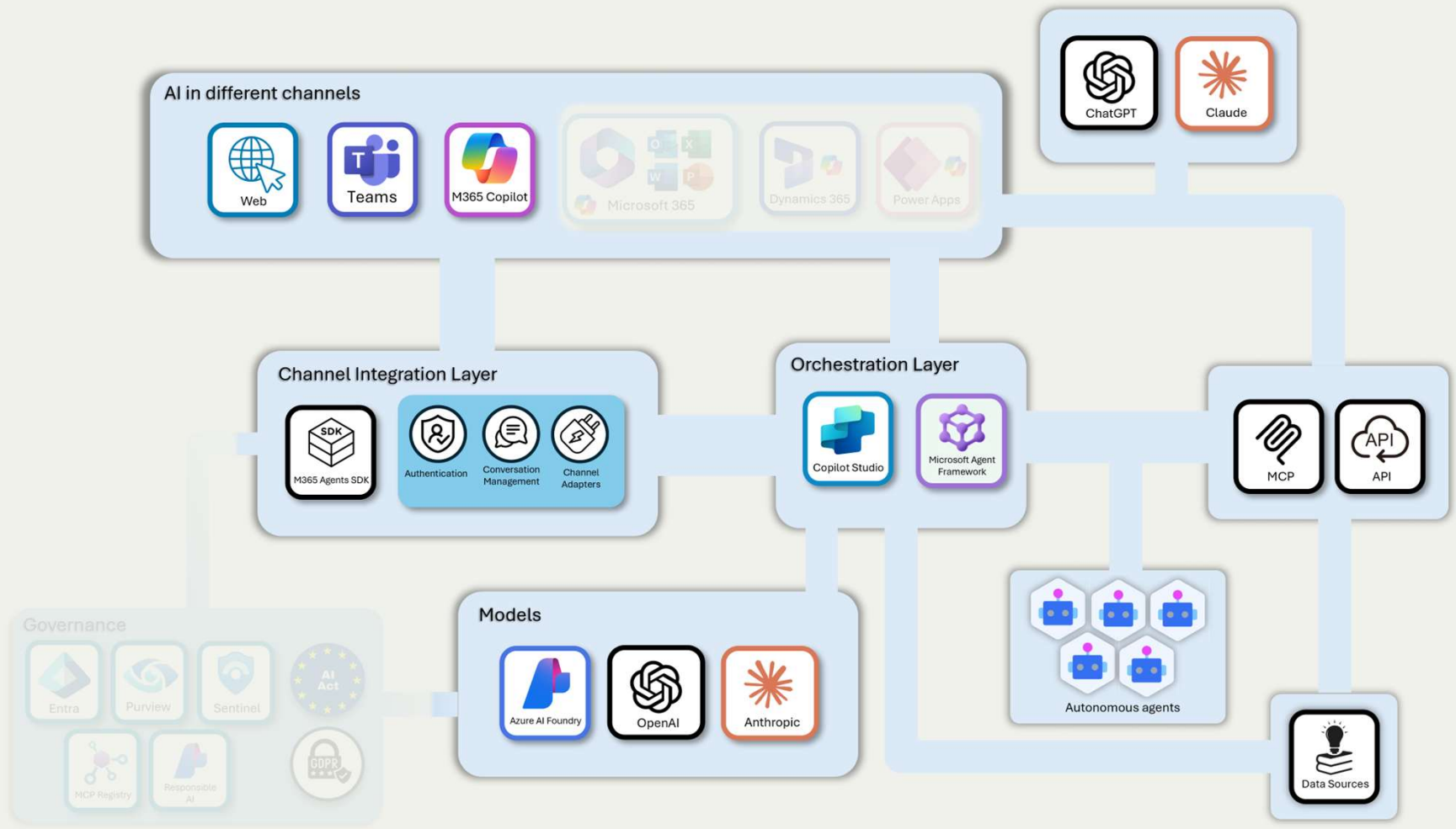
- Om man vill ha ännu mer kontroll.
- [Open-source ramverk](#) för att bygga agenter i C# och Python.
- Förenklar avsevärt jämfört med att använda AI-leverantörernas API:er direkt.
- Ersätter Semantic Kernel och Autogen – Microsoft satsar på MAF framåt!
- Kan med fördel användas som orkestreringsramverk tillsammans med M365 Agents SDK.



Microsoft  
Agent  
Framework



- Abstraktioner ovanpå OpenAI:s API:er, men enkelt att använda alla möjliga modeller genom IChatClient.
- Förenklar hantering av konversationer – Agent threads.
- Enklare hantering av verktyg, och MCP – med "human in the loop".
- Retrieval Augmented Generation (RAG).
- SDK:er för att använda modeller i Azure AI Foundry.
- Agenter kan exponeras som verktyg åt andra agenter.
- Observerability med OpenTelemetry.
- En infrastruktur för "middleware" för agenter.
- Infra för "minne" (kontext) för agenter + chat history reduction.
- Workflows! (Tänk Zapier, N8N, Power Automate...)
- Kolla in Rasmus Wulff Jensens [YouTube](#)-kanal



The background features a complex, colorful pattern of concentric circles, wavy lines, and organic shapes in shades of purple, red, and blue. A semi-transparent white rectangular box is centered over this pattern, containing the text.

***AI-spaning #2***  
***"Är agenten det  
framtida  
användargränssnittet?"***



# Tecken i tiden...

- *"...I think, the notion that business applications exist, that's probably where they'll all collapse, right in the Agent era..."* — Satya Nadella
- Power Platform API and SDKs – From UX-first to API first
- Det börjar komma "standarder" för GUI för agenter:
  - MCP UI
  - OpenAI Apps SDK
  - Bygger på Model Context Protocol – Resources

[View the first](#)

### TrailMaster GPS Watch - Altimeter Readings Inaccurate

High 8/12/2025 9:45 AM In Progress AA Andreas Adler

Case - Case for interactive experience

**Phone to Case Process**  
Active for 1 hour

Identify stress

Review it

Review

Summary Details Case Relationships SQA Related

Summary TrailMaster GPS Watch - Altimeter Readings Inaccurate

Details LabMaster 3000

Customer Andreas Adler

Product TrailMaster GPS Watch

Issue Altimeter Readings Inaccurate

Priority High

Status In Progress

Product TrailMaster GPS Watch

Issue Altimeter Readings Inaccurate

Product

TrailMaster GPS Watch

Issue

Altimeter Readings Inaccurate

Priority

High

Status

In Progress

Product

TrailMaster GPS Watch

Issue

Altimeter Readings Inaccurate

Priority

High

Status

In Progress

Product

TrailMaster GPS Watch

Issue

Altimeter Readings Inaccurate

Priority

High

Status

In Progress

Product

TrailMaster GPS Watch

Issue

Altimeter Readings Inaccurate

Priority

High

Status

In Progress

#### Assistant

The first high priority case, "TrailMaster GPS Watch - Altimeter Readings Inaccurate" has been opened for viewing. Let me know if you need more actions or details regarding this case.

[How do I fix this?](#)

[Is a firmware update available?](#)

[Can I contact the customer?](#)

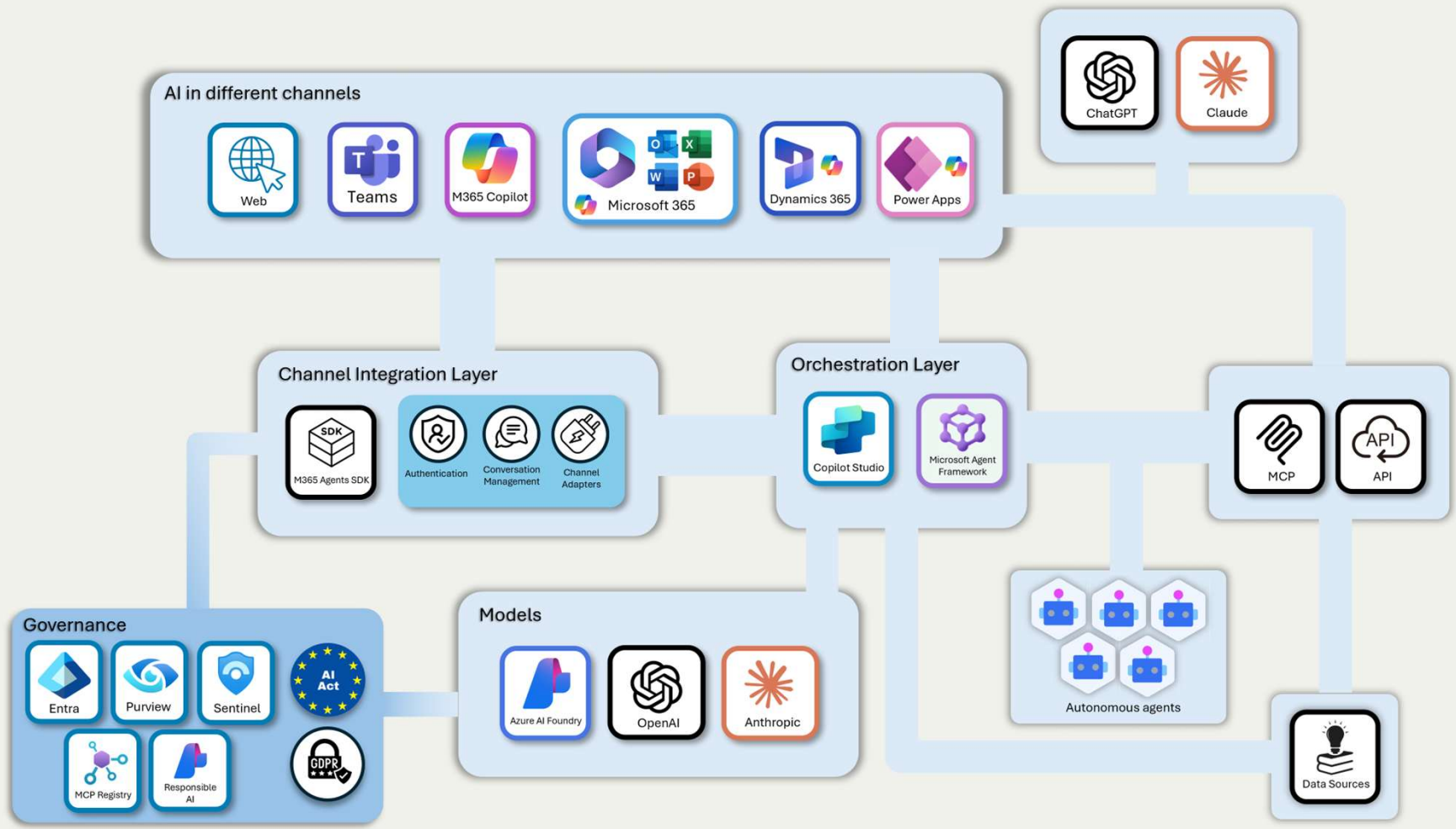
Choose File (No file chosen)

<https://www.youtube.com/watch?v=6Hjx59CQTbA>



# Är AI-agenten framtidens UI för affärsapplikationer?

- Vad är Microsofts svar på OpenAI Apps SDK?
- Nya möjligheter till rika gränssnitt i Teams, Copilot?







**Tack!**

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