

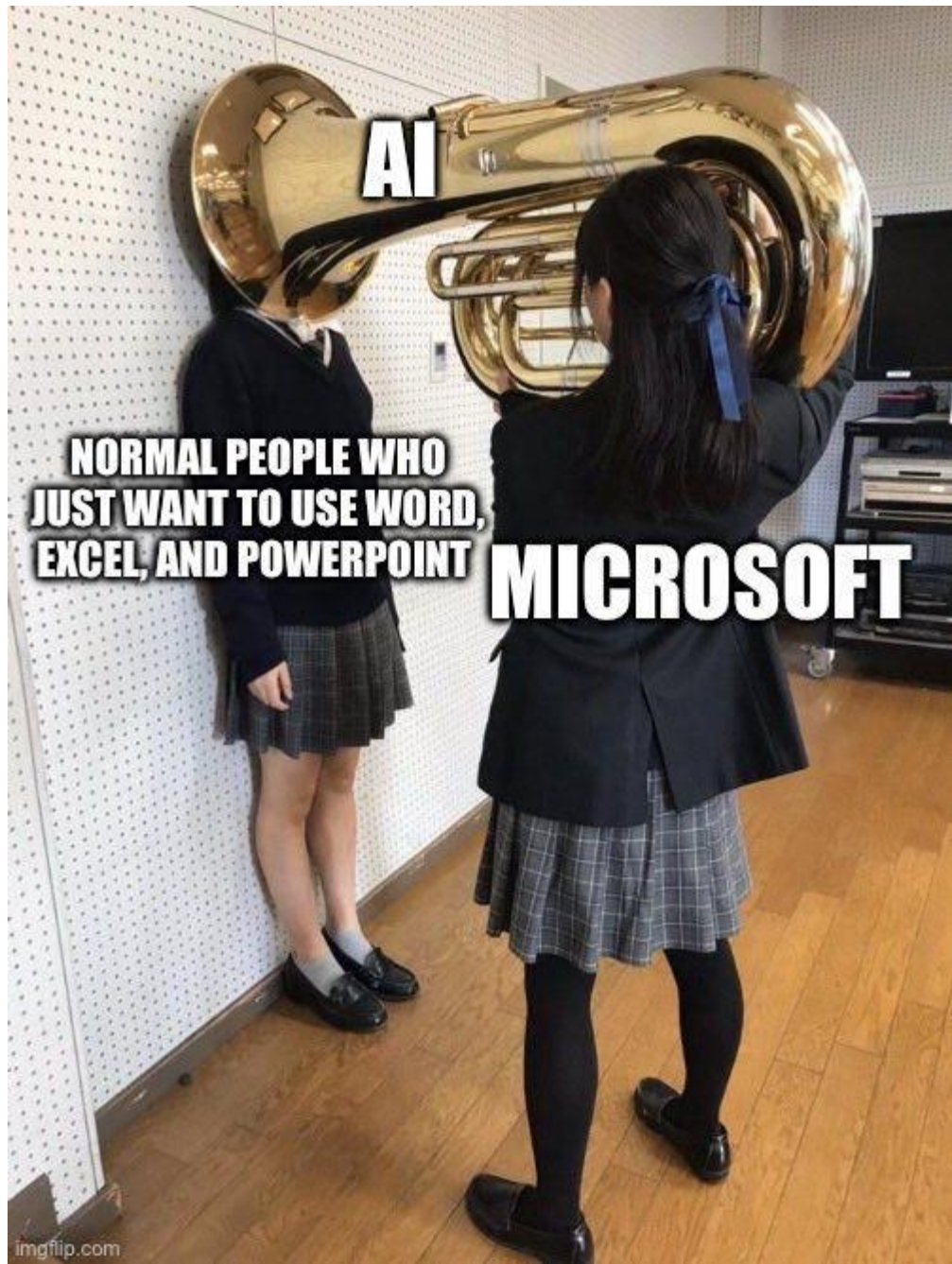


BUSINESS CENTRAL, AI EN DE PROMPTDIALOG

SPEAKERS INTRO

- Bert Verbeek
- Working with NAV/BC for 16 years in several roles
- Technical Solution Architect @ 4PS Group
- Microsoft MVP – Business Applications
- Twitter and LinkedIn: bertverbeek
- Blog: bertverbeek.nl





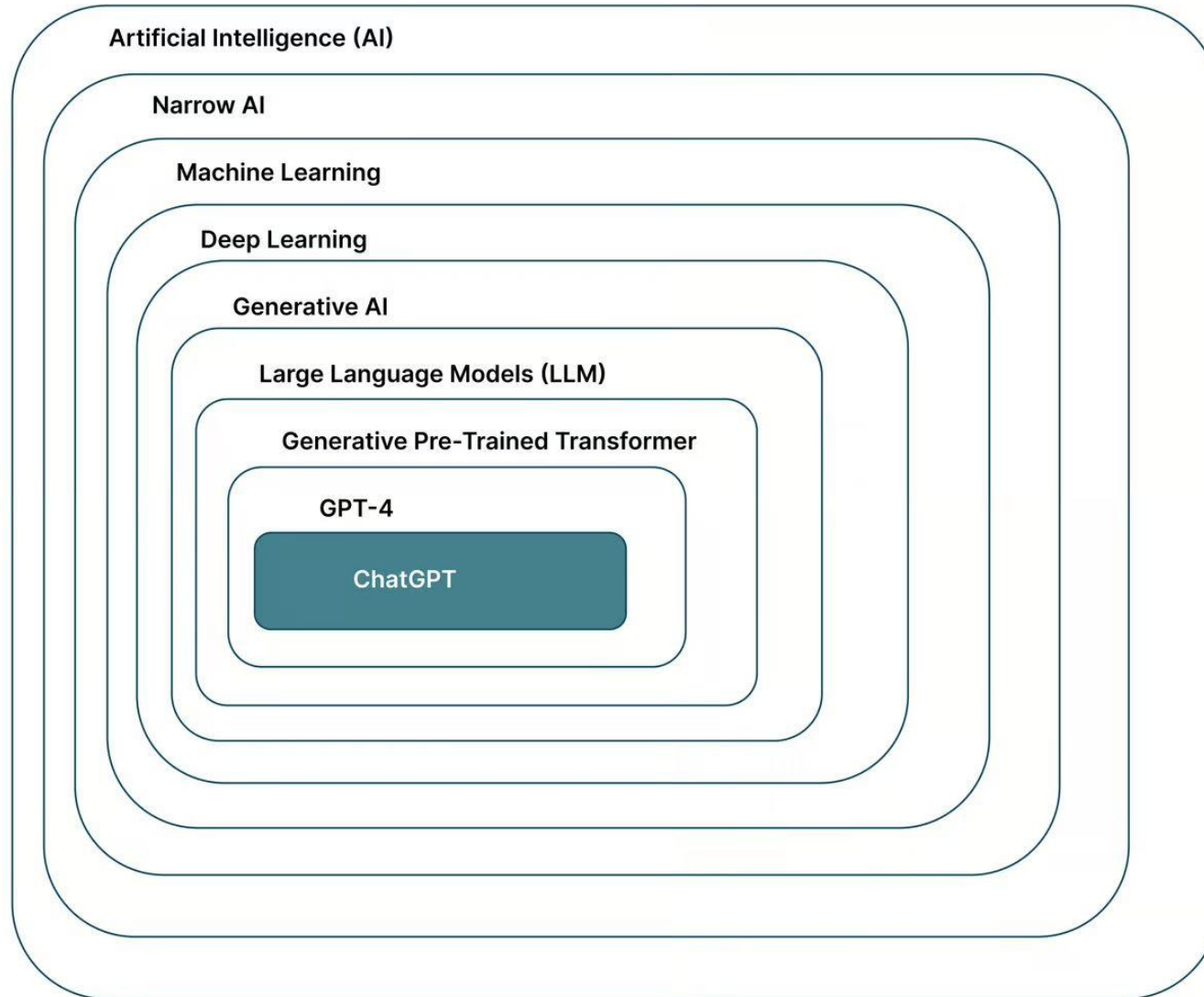
imgflip.com

WHAT TO EXPECT?

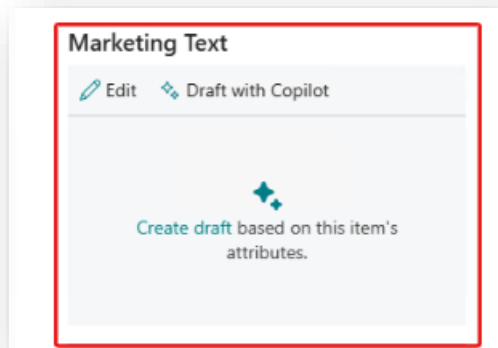
- Copilot en Business Central
- Azure Open AI
- Promptdialog



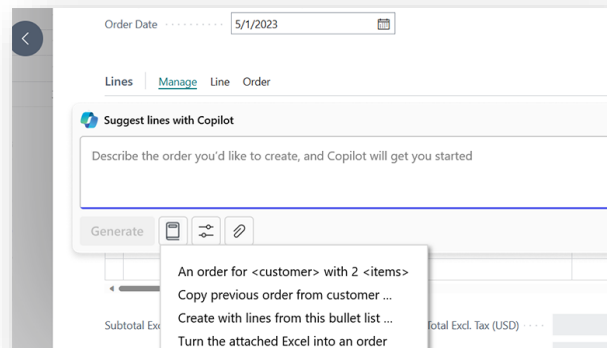
Artificial Intelligence Taxonomy



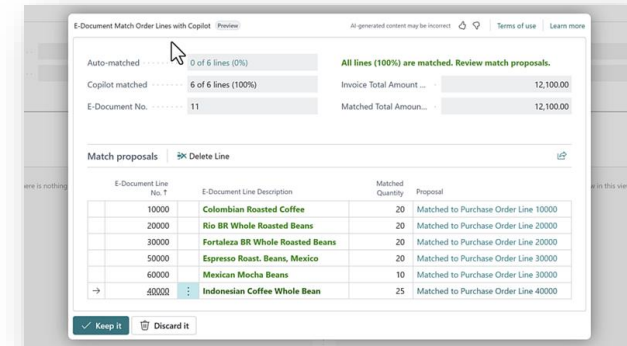
COPILOT IN BUSINESS CENTRAL



Marketing text



Verkoopregel suggesties

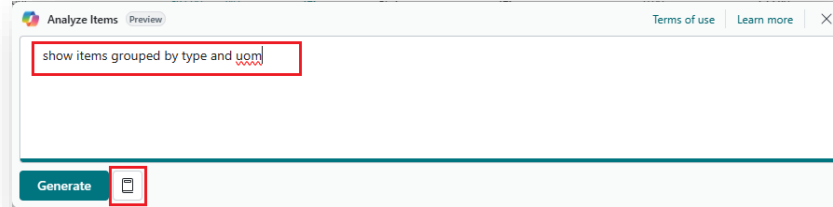


Map e-documents

COPILOT IN BUSINESS CENTRAL

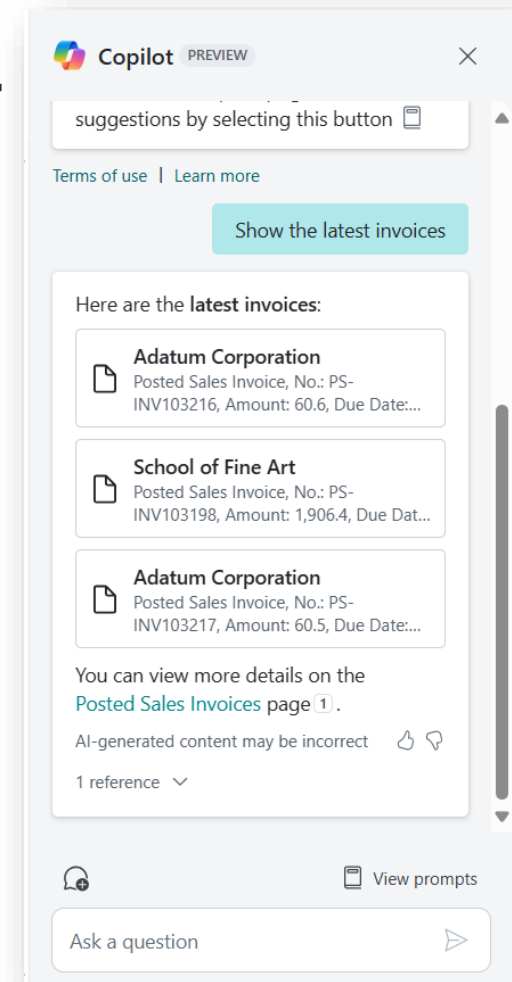
Transaction Date	Description	Amount to Apply	Proposal
7/16/2023	deposit 518250 280097 382750	177.51	Apply to multiple entries. Drill down to ...
7/14/2023	deposit 187204 956423 948161	-560.25	Apply to multiple entries. Drill down to ...
7/5/2023	deposit 553122 401192 94190	760.71	Apply to multiple entries. Drill down to ...
7/9/2023	deposit 553246 997913 228024	-120.03	Apply to multiple entries. Drill down to ...
7/22/2023	deposit 678652 478146 530991	792.84	Apply to multiple entries. Drill down to ...
7/20/2023	deposit 719567 23479 860157	-297.90	Apply to multiple entries. Drill down to ...
7/30/2023	deposit 497165 72083 393007	-591.27	Apply to multiple entries. Drill down to ...
7/13/2023	deposit 17525 838231 97959	212.64	Apply to multiple entries. Drill down to ...
7/23/2023	deposit 807997 874223 191207	-218.61	Apply to multiple entries. Drill down to ...
7/31/2023	deposit 493172 36387 92962	676.11	Apply to multiple entries. Drill down to ...

Bank account
reconciliation



DEMO

Analysis assist



DEMO

Chat

BESCHIKBAARHEID 24.2

- **Analyze lists (preview)**

- Supported languages: English
- Available in other languages: Yes
- Regional availability: All Business Central regions

- **Marketing text suggestions**

- Supported languages: English, French, German, Spanish, Danish, Dutch, Italian, Japanese
- Available in other languages: Yes
- Regional availability: All Business Central regions

- **Bank Account Reconciliation (preview)**

- Supported languages: English, French, German, Spanish, Danish, Dutch, Italian, Japanese, Portuguese (Brazil), Czech, Finnish, Greek, Korean, Norwegian (Bokmål), Polish, Russian, Swedish, Thai, Turkish
- Available in other languages: Yes
- Regional availability: All Business Central regions

BESCHIKBAARHEID 24.2



- **E-Documents Matching assistance (preview)**

- Supported languages: English
- Available in other languages: Yes
- Regional availability: All Business Central regions

- **Sales Lines Suggestions (preview)**

- Supported languages: English
- Available in other languages: Yes
- Regional availability: All Business Central regions

- **Chat (preview)**

- Supported languages: English
- Available in other languages:  No
- Regional availability:  Currently US only. Rolling out to other regions later this wave



CENTRALQ

- <https://www.centralq.ai/>
- Dmitry Katson



Central

AI search, fueled by the [collective knowledge](#) of Business Central community.

 Ask anything about Business Central... 

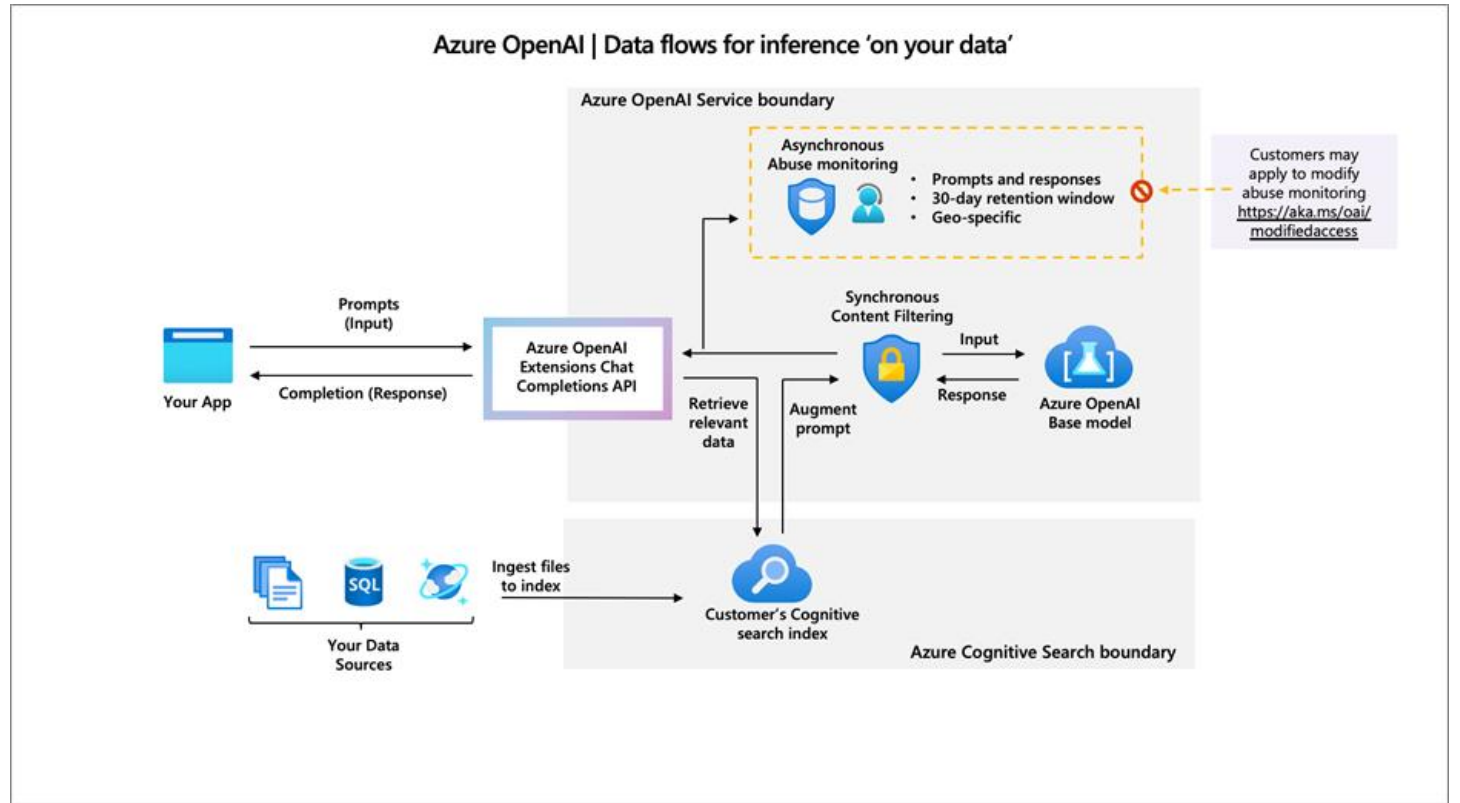
Focus on

AppSource

System App

AZURE OPEN AI

- Security / Trust



AZURE OPEN AI

- Endpoint:
- Deployment:
- API Key:

The screenshot shows the Azure portal interface for the 'Keys and Endpoint' section of an Azure OpenAI resource named 'fpsazureopenaiGPT4'. The left-hand navigation pane is visible, with 'Keys and Endpoint' highlighted in a red box. The main content area features a blue information banner with a key icon and text: 'These keys are used to access your Azure AI services API. Do not share your keys. Store them securely— for example, using Azure Key Vault. We also recommend regenerating these keys regularly. Only one key is necessary to make an API call. When regenerating the first key, you can use the second key for continued access to the service.' Below this banner is a 'Show Keys' button. Underneath, there are two key entries: 'KEY 1' and 'KEY 2'. Each key is displayed in a text box with a copy icon to its right. The 'KEY 1' entry is highlighted with a red border. Below the keys, the 'Location/Region' is set to 'uksouth' and the 'Endpoint' is 'https://fpsazureopenaigt4.openai.azure.com/'.

COPILOT CAPABILITIES

- Registeren van je copilot feature

← Copilot & AI capabilities

[Learn about Copilot](#)

Copilot and other generative AI capabilities use Azure OpenAI Service. Your environment connects to Azure OpenAI Service in your region. [How do I govern my Copilot data?](#)

Production ready previews | Deactivate [Supplemental Terms of Use](#)

Capability ↑	Status	Publisher	
→ Chat	Active	Microsoft	Learn More
Analyze list	Active	Microsoft	Learn More
E-Document Matching Assistan...	Active	Microsoft	Learn More
Bank Account Reconciliation	Active	Microsoft	Learn More
Sales Lines Suggestions	Active	Microsoft	Learn More
Predict customer ledger entries	Active	Bert Verbeek	Learn More

Generally available | Deactivate [Supplemental Terms of Use](#)

Capability ↑	Status	Publisher	
→ Marketing text suggestions	Active	Microsoft	Learn More

PROMPTDIALOG

- Speciale pagetype

```
page 70101 Copilot
{
    PageType = PromptDialog;
    Extensible = false;
    ApplicationArea = All;
    SourceTable = "Customer";
    SourceTableTemporary = true;
    Caption = 'Copilot Fps';
    IsPreview = true;
}
```

ZICHTBAARHEID

- Sparkle

 Propose due date

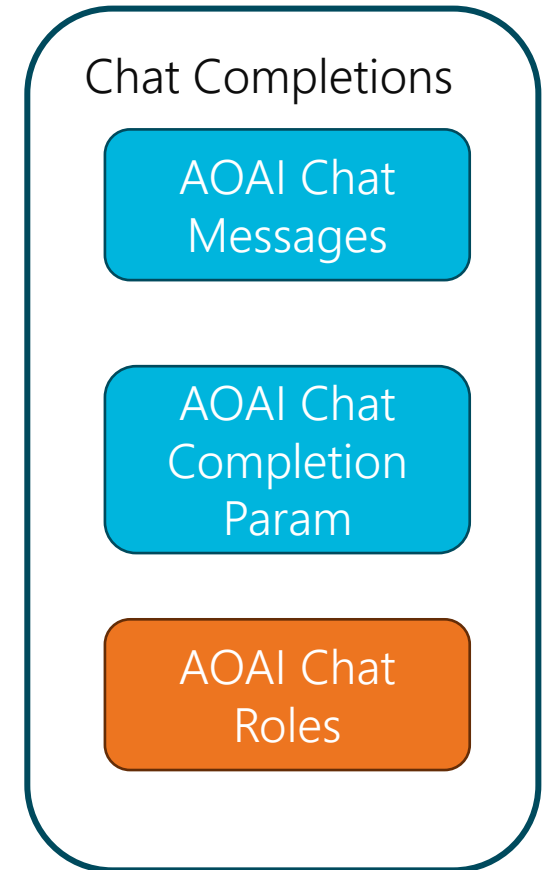
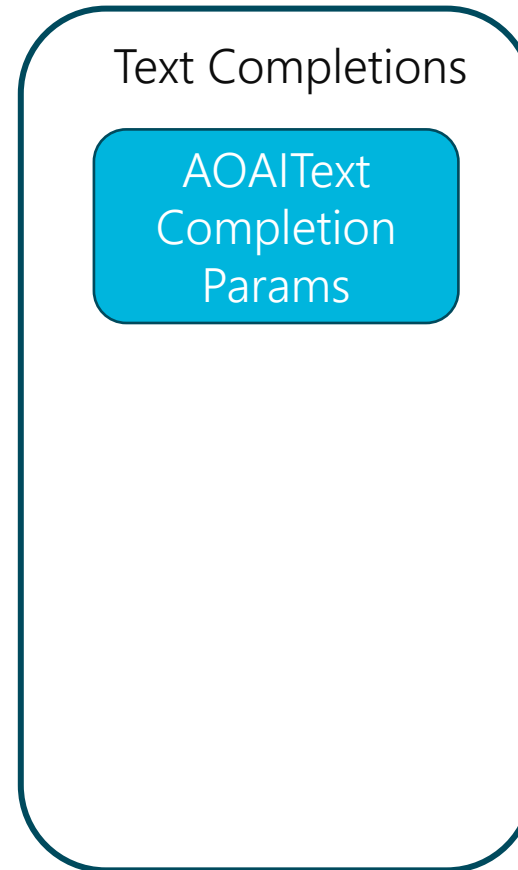
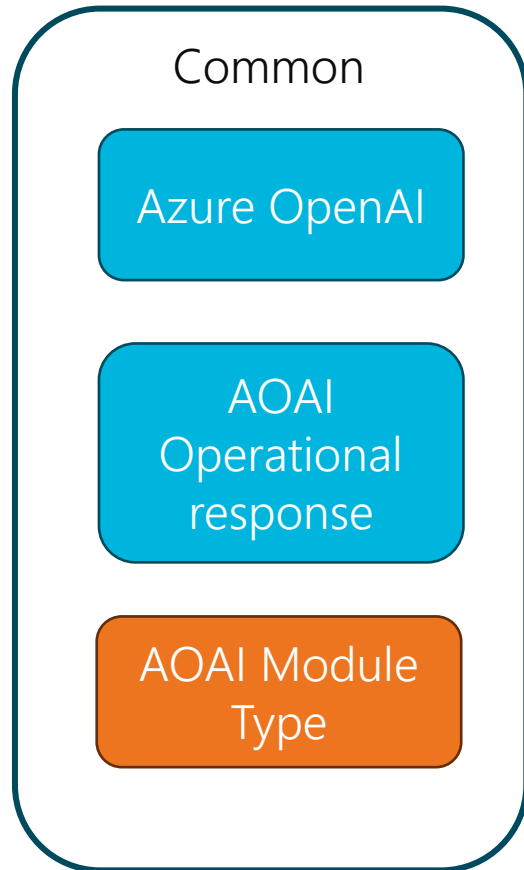
- SparkleFilled

 Propose due date

ZICHTBAARHEID

- Copilot actions
- Alleen op Lists, Listparts, Worksheets en StandardDialogs

SYSTEM MODULE



PARTS

- Parts

```
layout
{
  0 references
  area(Prompt)
  {
    3 references
    part(custLedgerEntries; "Cust Ledger Entries Copilot")
    {
      Caption = 'Closed Entries';
    }
    3 references
    part(custLedgerEntriesOpen; "Cust Ledger Entries Copilot")
    {
      Caption = 'Select open entry';
    }
  }
}
```

DEMO

Gold
Microsoft Partner



FILES

- Upload een bestand

```
systemaction(Attach)
{
  Caption = 'Attach a file';
  ToolTip = 'Upload a file to import.';
  0 references
  trigger OnAction()
  begin
    UploadIntoStream('Select a file...', '', 'All files (*.*)|*.*', Filename, InStr);
  end;
}
```

DEMO

JSON MODE

- Vanaf 24.2
- Zorgt ervoor dat je altijd in Json terug krijgt

```
procedure Generate(Prompt: Text): Text
var
  AzureOpenAI: Codeunit "Azure OpenAI";
  AOAIOperationResponse: Codeunit "AOAI Operation Response";
  AOAIChatCompletionParams: Codeunit "AOAI Chat Completion Params";
  AOAIChatMessages: Codeunit "AOAI Chat Messages";
  MetaPrompt: Text;
  Result: Text;
begin
  AOAIChatCompletionParams.SetJsonMode(True);

  AOAIChatMessages.SetPrimarySystemMessage(MetaPrompt);
  AOAIChatMessages.AddUserMessage(Prompt);

  AzureOpenAI.GenerateChatCompletion(AOAIChatMessages, AOAIChatCompletionParams, AOAIOperationResponse);

  if AOAIOperationResponse.IsSuccess() then
    Result := AOAIChatMessages.GetLastMessage();
  exit(Result);
end;
```

FUNCTION CALLING

```
{
  "type": "function",
  "function": {
    "name": "find hotels",
    "description": "Find hotels based on location and price",
    "parameters": {
      "type": "object",
      "properties": {
        "location": {
          "type": "string",
          "description": "The city and state or country"
        },
        "max_price": {
          "type": "number",
          "description": "The maximum price per night"
        }
      },
      "required": ["location", "max_price"]
    }
  }
}
```

```
ChatMessages.AddTools(Findhotels());
ChatMessages.AddTool(...);
....
ChatMessages.AddUserMessage(Message);
AzureOpenAI.GenerateCompletion(ChatMessages,...);
```

Find hotels in Amsterdam, for less than 150 euro



1



6

BC Copilot Toolkit

4

fn

FindHotels()

fn

Function_2

fn

Function_3

5

```
ToolResponses :=
FunctionResponse.GetResults();
```

```
FindHotels.Execute();
```

```
codeunit 70101 FindHotels implements "AOAI Function"
procedure GetName(): text
begin
    exit('FindHotels');
end;

procedure GetPrompt(): JsonObject
begin
    exit(
        "type": "function",
        "function": {
            "name", "FindHotels",
            "description", "Find hotels based on location and price",
            "parameters": {
                "type": "object",
                "properties": {
                    "location": {
                        "type": "string",
                        "description": "The city and state or country"
                    },
                    "max_price": {
                        "type": "number",
                        "description": "The maximum price per night"
                    }
                },
                "required": ["location", "max_price"]
            }
        }
    );
end;
```

FUNCTION CALLING

```
procedure BookingCopilot(): text
var
    ...
begin
    SetAuthoration(AzureOpenAI);
    AOAIChatMessages.AddTool(FindHotels);
    AOAIChatMessages.AddUserMessage('Find hotels in Amsterdam for les then 150 euro');

    AzureOpenAI.GenerateChatCompletion(AOAIChatMessages, AOAIChatCompletionParams, AOAIOperationResponse);

    if AOAIOperationResponse.IsFunctionCall() then begin
        AOAIFunctionResponse := AOAIOperationResponse.GetFunctionResponse();
        exit(AOAIFunctionResponse.GetResult());
    end else
        Error(AOAIOperationResponse.GetError());
end;
```

FUNCTION CALLING

```
procedure BookingCopilot(): text
var
    ....
begin
    SetAuthoration(AzureOpenAI);
    AOAIChatMessages.AddTool(FindHotels);
    AOAIChatMessages.AddUserMessage('Find hotels in Amsterdam for les then 150 euro');

    AzureOpenAI.GenerateChatCompletion(AOAIChatMessages, AOAIChatCompletionParams, AOAIOperationResponse);

    if AOAIOperationResponse.IsFunctionCall() then begin
        AOAIFunctionResponse := AOAIOperationResponse.GetFunctionResponse();

        AOAIChatMessages.AddToolMessage(AOAIFunctionResponse.GetFunctionId(), AOAIFunctionResponse.GetFunctionName(), AOAIFunctionResponse.GetResult());
        AzureOpenAI.GenerateChatCompletion(AOAIChatMessages, AOAIChatCompletionParams, AOAIOperationResponse);
        exit(AOAIChatMessages.GetLastMessage());
    end else
        Error(AOAIOperationResponse.GetError());
end;
```


WAT ZIJN TOKEN?

Tokens

Characters

10

56

What is the Dutch Dynamics Community in the Netherlands?

- "AOAI Token" codeunit

TOKEN COUNTING

- Waarom token counting?
 - Evalueer hoeveel token je gaat gebruiken
 - Bereken de eventuele kosten

Modellen	Context	Invoer (per 1000 tokens)	Uitvoer (per 1000 tokens)
Algemene implementatie van GPT-4o	128K	€0,0047	€0,0139
Regionale API van GPT-4o	128K	€0,0047	€0,0139
GPT-3.5-Turbo-0125	16K	€0,0005	€0,0014
GPT-3.5-Turbo-Instruct	4K	N/A	N/A
GPT-4-Turbo	128K	N/A	N/A
GPT-4-Turbo-Vision	128K	N/A	N/A
GPT-4	8K	€0,028	€0,056
GPT-4	32K	€0,056	€0,111

MANAGED AI RESOURCES

- Private Preview 12th of June
- Geen eigen resource meer
- Geen reden meer om gebruik / kosten te bepalen
- Geen beheer van AOAI resources

- aka.ms/BCManagedAiSignup



DOCUMENTATIE

- Developer resources
 - aka.ms/BCStartCodingWithAILearn
- How-to guide
 - <https://learn.microsoft.com/en-us/dynamics365/business-central/dev-itpro/developer/ai-build-experience-overview>
- Business Central under the hood episode 1
 - <https://www.youtube.com/watch?v=jdevJbGgB-k&t=792s>



directions
for
partners | share
the
future



- Webinar 27 juni
 - **Developing generative AI experiences for your extensions (in AL)**

Want to add Copilot functionalities to your own products?

Join this webinar to learn how you can create your own Copilot experiences in Business Central. This webinar is ideal for those keen to understand the technical details behind implementing AI in your extensions. You'll learn about the latest advancements and how to incorporate unique Copilot UI elements into your applications.

You will gain essential knowledge and practical insights into AI integration for Business Central. You'll leave inspired and equipped with the tools to start your own AI-driven projects.



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Gold
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BEDANKT!



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