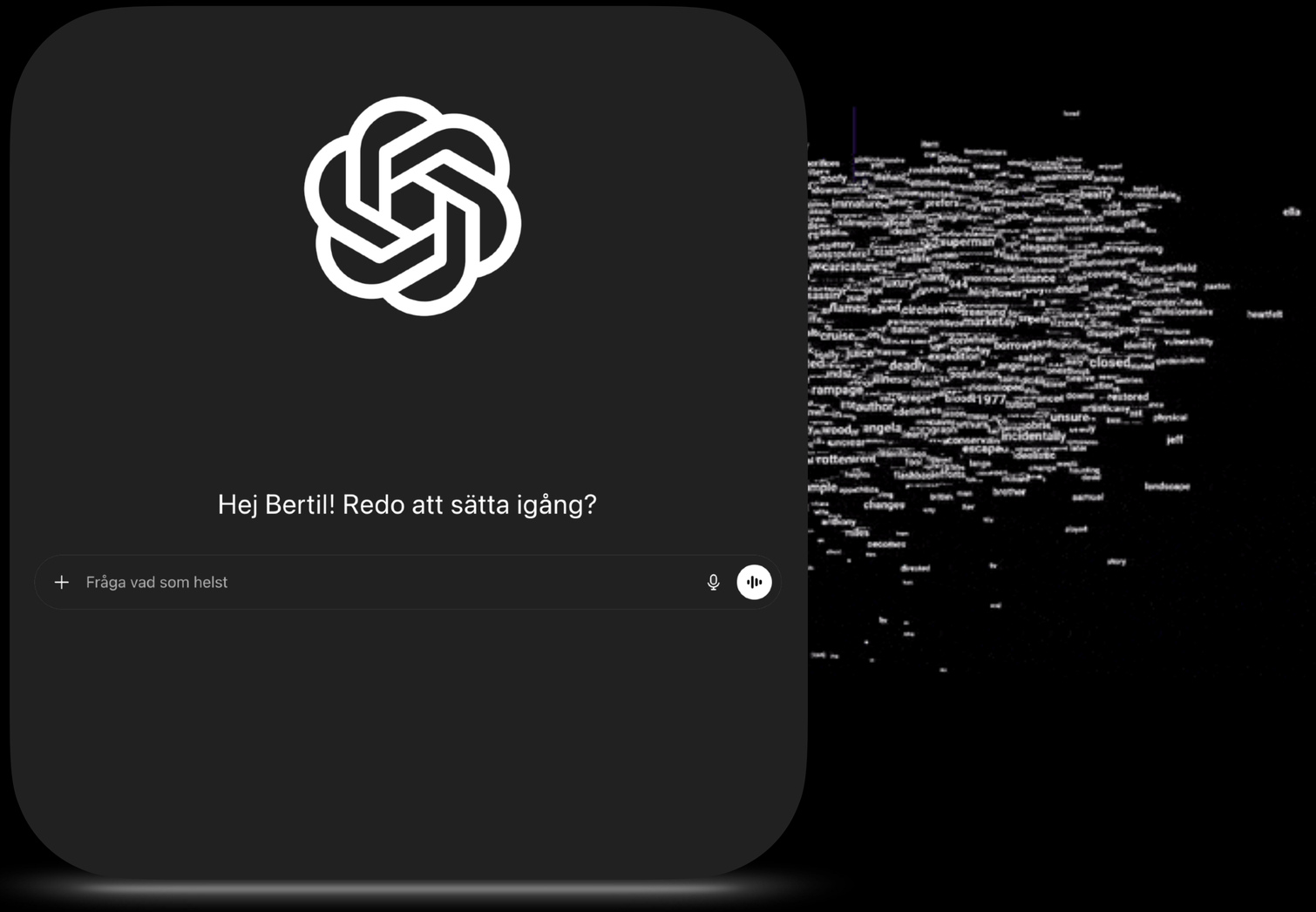
AI ASSISTANTS

INTELLIGENT HUMAN CENTRIC APPLICATIONS

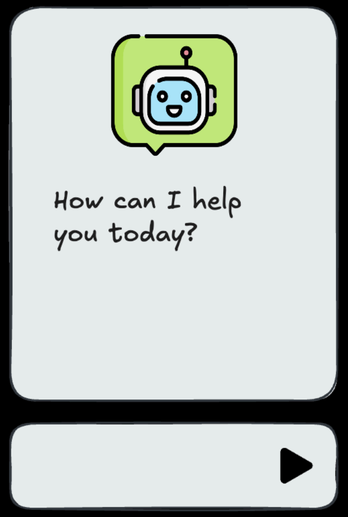
BERTIL HOLMSTRÖM

CADEC 2026.01.22 & 2026.01.28 | CALLISTAENTERPRISE.SE

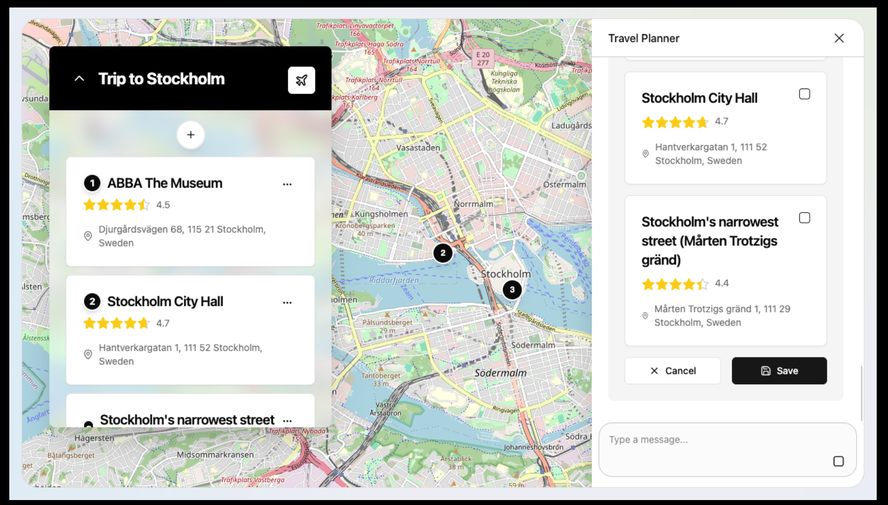
CALLISTA


Hej Bertil! Redo att sätta igång?
Fråga vad som helst

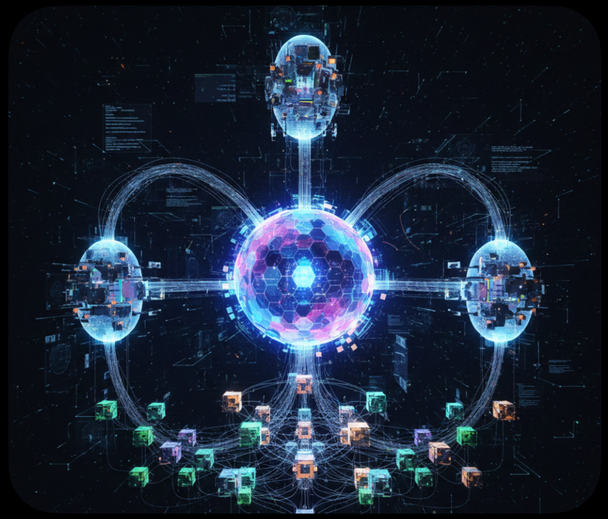
CHATBOT

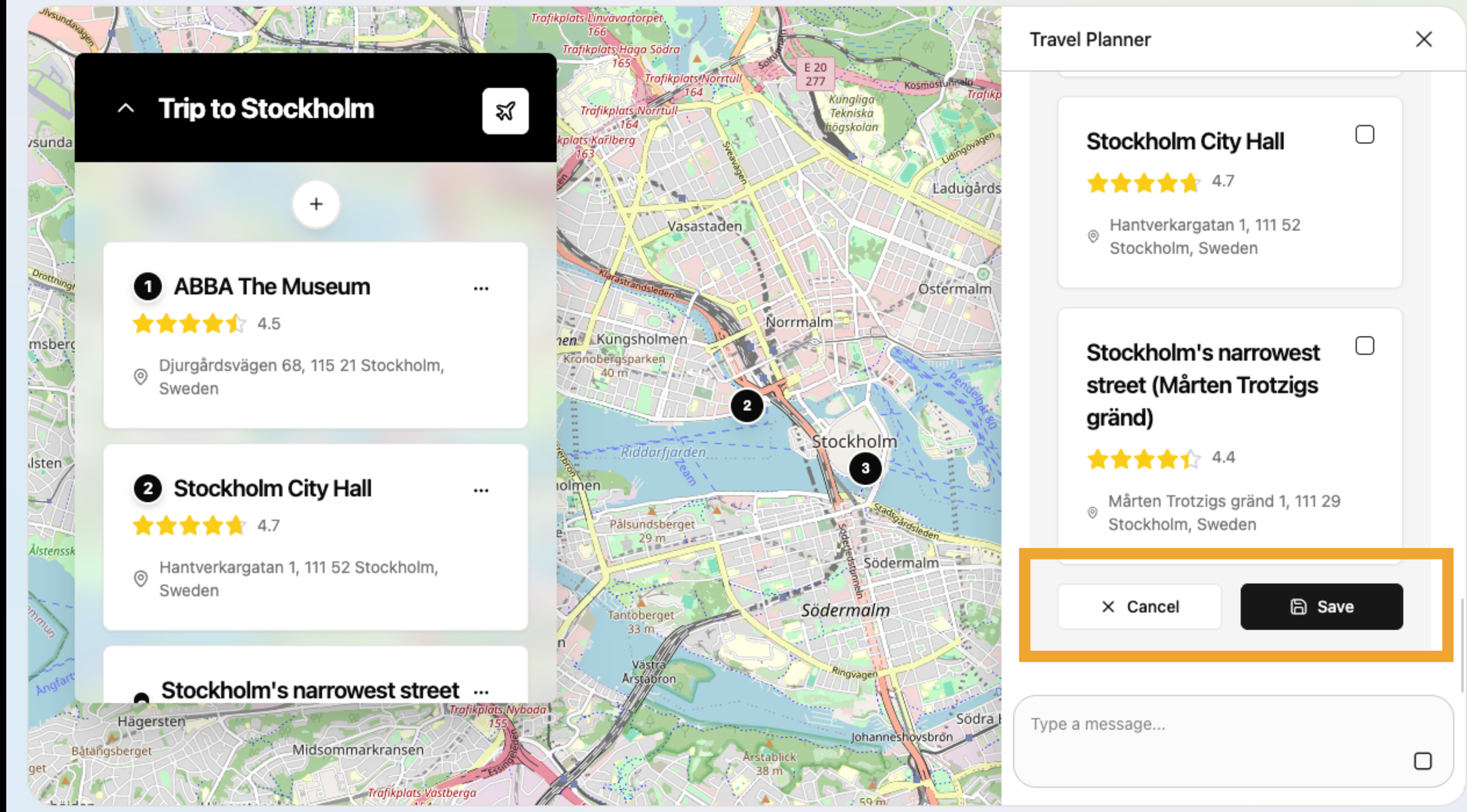


AI ASSISTANT



AUTONOMOUS AGENTS

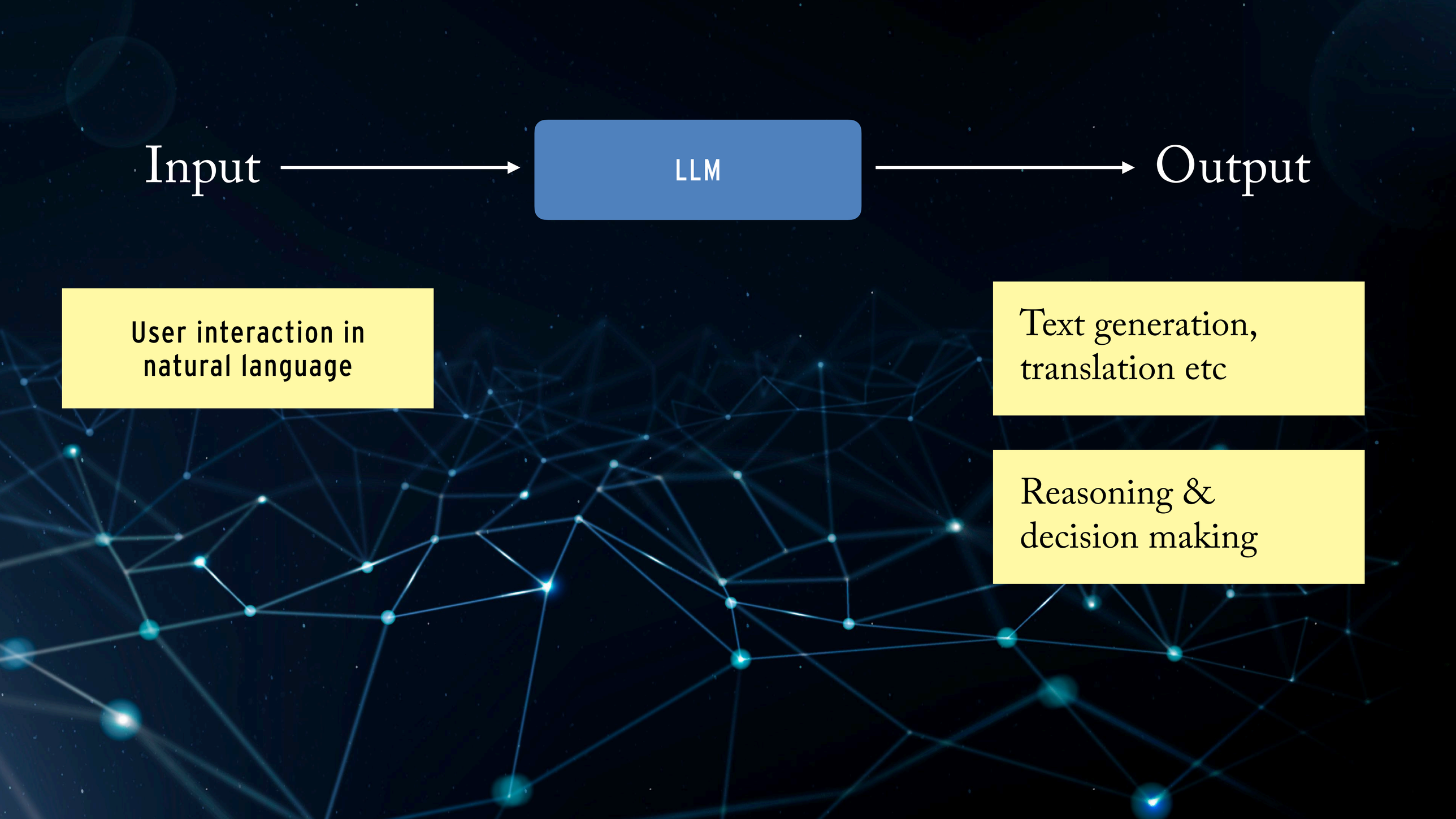



Trip to Stockholm
1 ABBA The Museum
4.5
Djurgårdsvägen 68, 115 21 Stockholm, Sweden
2 Stockholm City Hall
4.7
Hantverkargatan 1, 111 52 Stockholm, Sweden
Stockholm's narrowest street
Travel Planner
Stockholm City Hall
4.7
Hantverkargatan 1, 111 52 Stockholm, Sweden
Stockholm's narrowest street (Mårten Trotzigs gränd)
4.4
Mårten Trotzigs gränd 1, 111 29 Stockholm, Sweden
Cancel
Save
Type a message...
Stockholm
Vasastaden
Norrmalm
Kungsholmen
Östermalm
Södermalm
Hägersten
Midsommarkransen

AGENDA

- Understanding our toolbox
  - Language models & semantic similarity
  - Tool calling & agents
- AI assistants
  - Design principles
  - Architecture
- Demo

OUR TOOLBOX


Input
LLM
Output
User interaction in natural language
Text generation, translation etc
Reasoning & decision making

SEMANTIC SIMILARITY

SWEATER

CHRISTMAS

RAINDEER

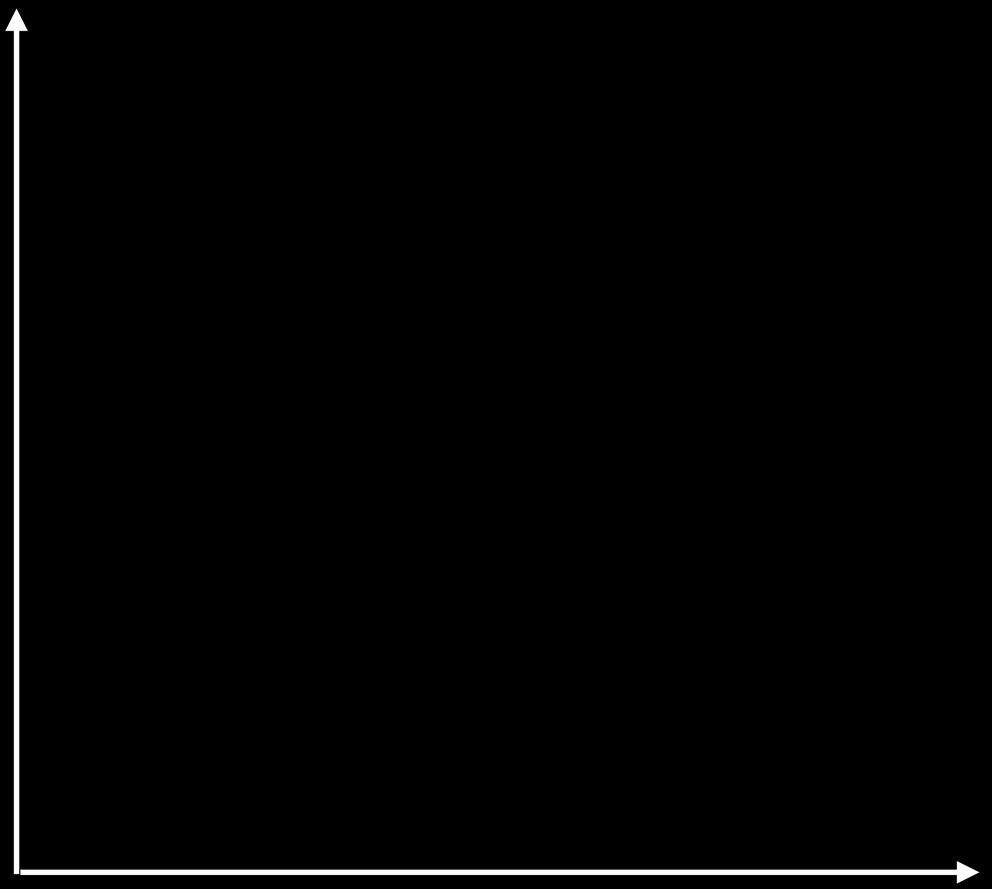
[0, 5, 10]

[5, 5, 3]

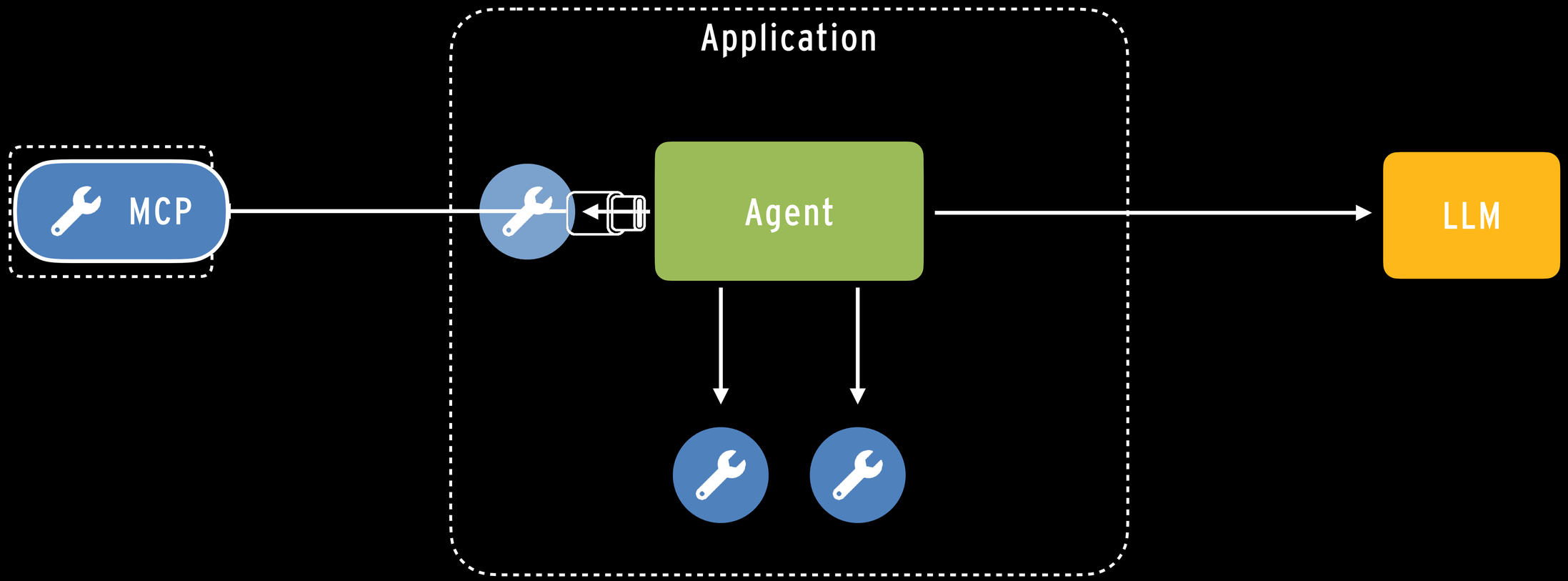
[0, 5, 0]

[5, 0, 0]

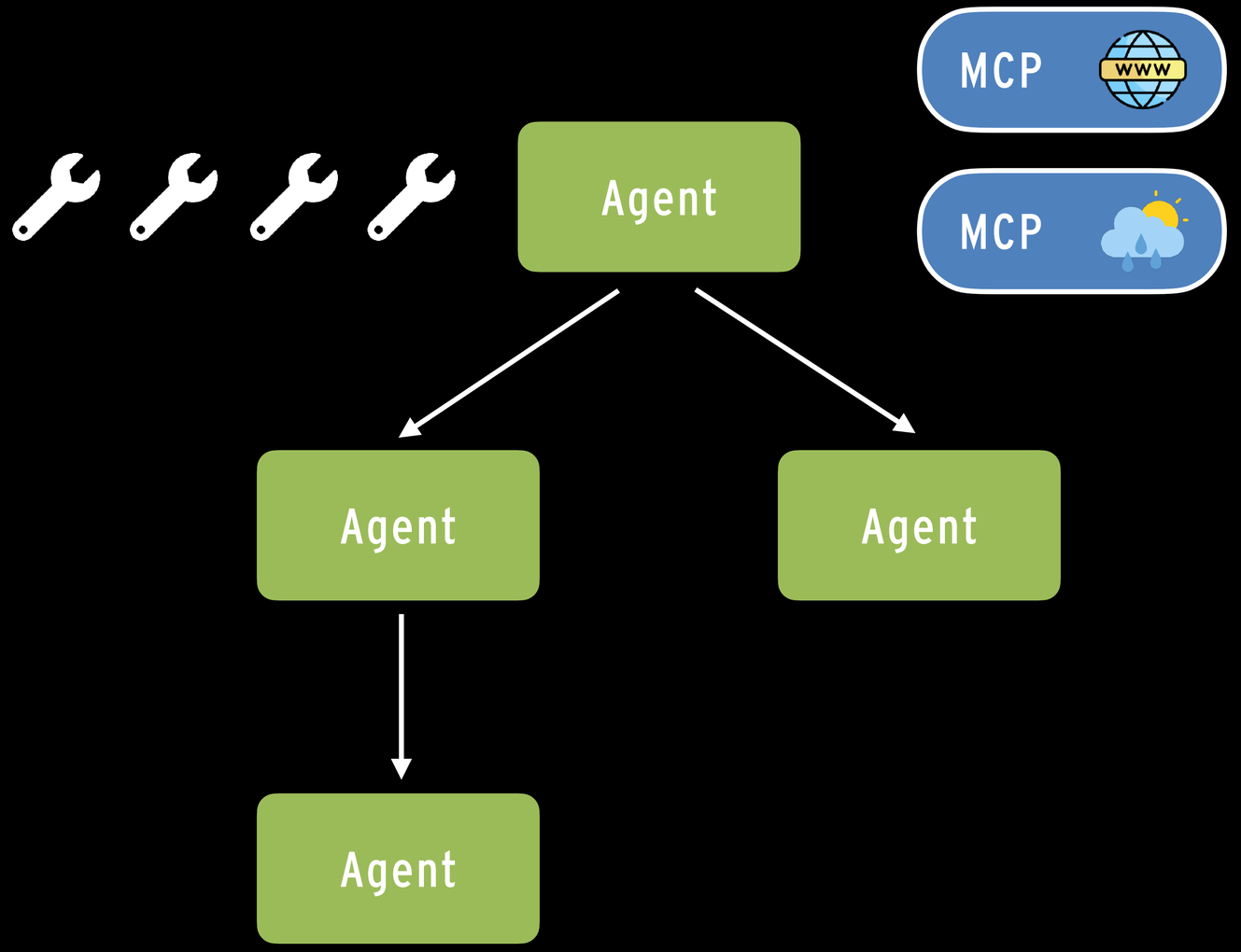
SEMANTIC SIMILARITY



TOOL CALLING & MCP



AGENTS



OUR TOOLBOX - SUMMARY

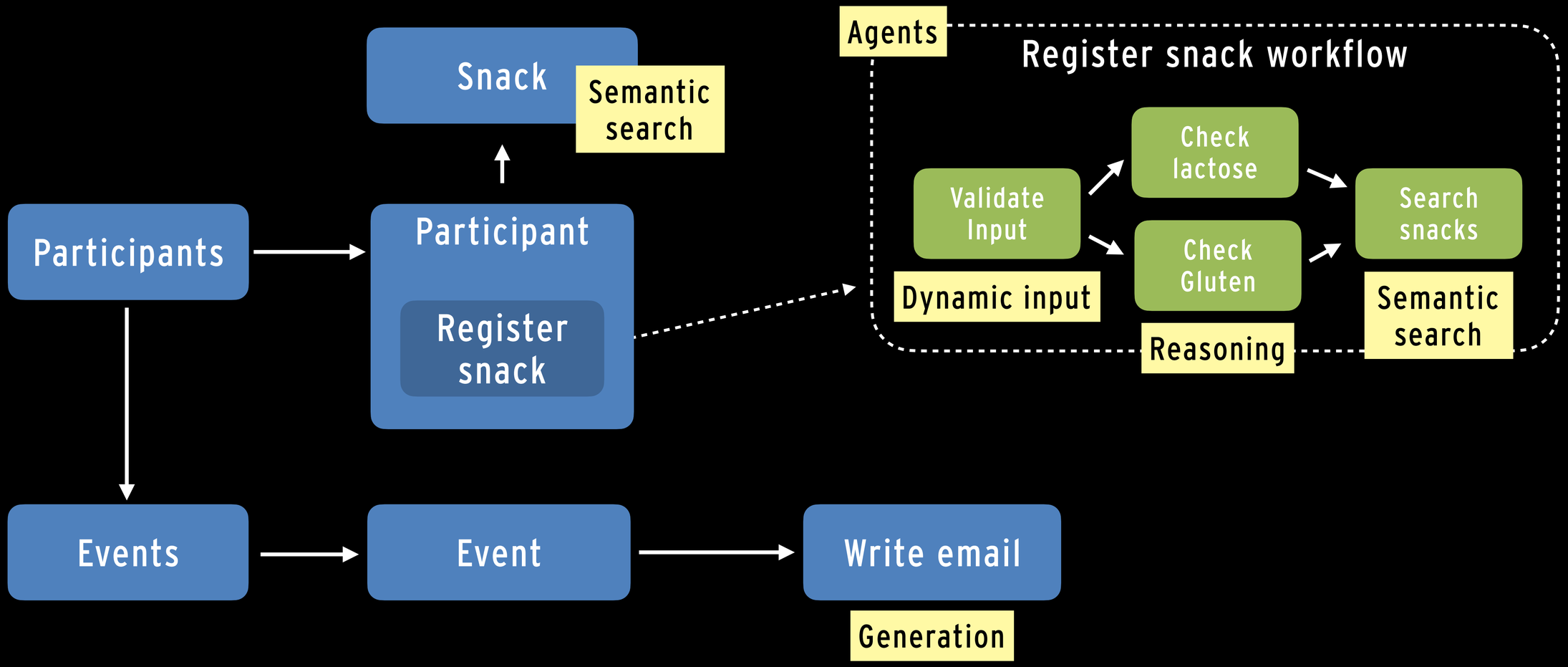
- LLM
  - Input using natural language
  - Text generation
  - Reasoning
- Semantic similarity
  - Find similar items
- Tool calling
  - Allows the LLM to interact with our system
- Agents
  - Manage complex tasks

BUILDING AN AI ASSISTANT

DESIGN PRINCIPLES

- User is in control
- AI will make mistakes
  - Seamless handover
  - Graceful failure
- Transparency & trust

APPLICATION OVERVIEW



HIGH LEVEL ARCHITECTURE

FRONTEND (REACT)

CopilotKit

Page

Page

UI LAYER

AGENT LAYER

mastra

BACKEND (JAVA)

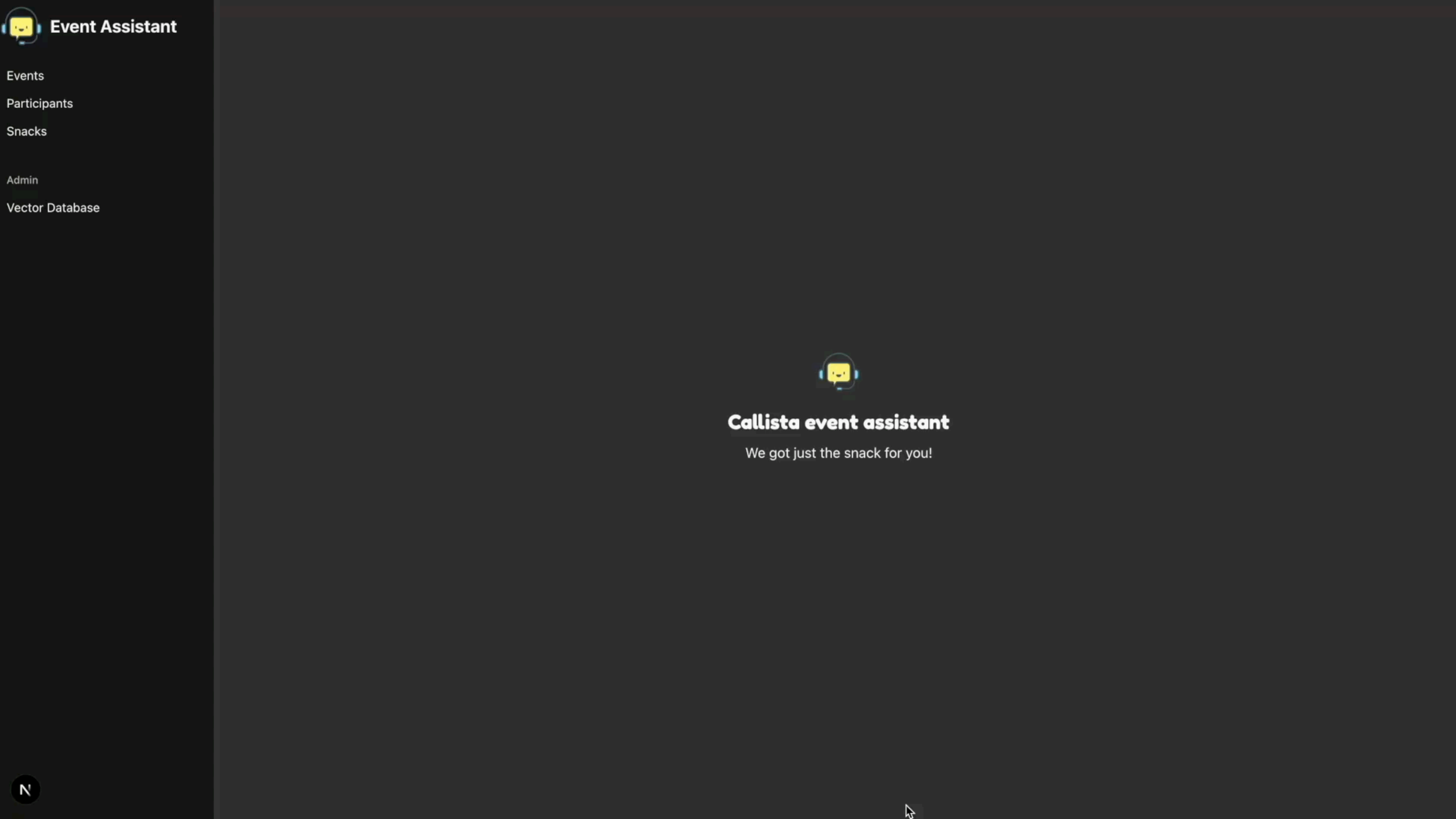
Vector DB

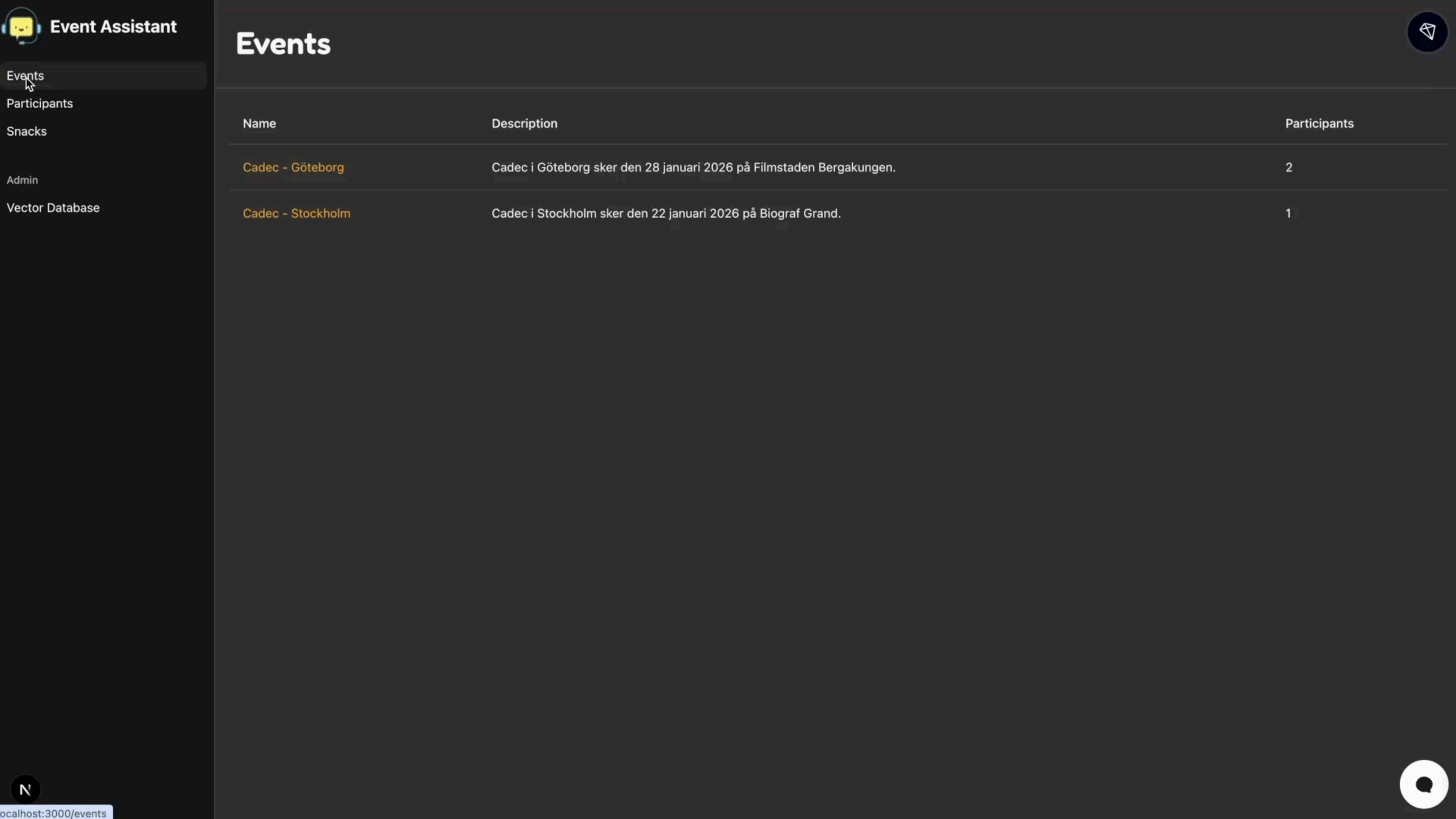
SQL

GraphQL

Domain model

DEMO


Event Assistant
Events
Participants
Snacks
Admin
Vector Database
Callista event assistant
We got just the snack for you!



Event Assistant

Events
Participants
Snacks

Admin
Vector Database

Events

Name	Description	Participants
Cadec - Göteborg	Cadec i Göteborg sker den 28 januari 2026 på Filmstaden Bergakungen.	2
Cadec - Stockholm	Cadec i Stockholm sker den 22 januari 2026 på Biograf Grand.	1

ocalhost:3000/events

Snacks

Show internal description

Image	Name	Description	EAN	Gluten	Lactose	Nuts
	Dammsugare	En klassiker på fikabordet. Läckert grön med smak av arrak.	2	✓	-	-
	Kanelbulle	Den klassiska kanelbullen med strösocker på toppen.	1	✓	-	-
	Toscabulle	Knäckig bulle med mandelspån på toppen.	22	✓	✓	-
	Prinsesstårta	En härlig prinsesstårta med grön marsipan	567	✓	✓	-
	Semla	En klassisk svensk semla	789	✓	✓	✓
	Chokladbiskvi	Smarrig chokladbeskvi	89	-	✓	-
	Limepaj	Härligt syrlig paj	11	-	-	-

Snacks

Show internal description

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	Prinsesstårta	En härlig prinsesstårta med grön marsipan	567	✓	✓	-
	Semla	En klassisk svensk semla	789	✓	✓	✓
	Chokladbiskvi	Smarrig chokladbeskvi	89	-	✓	-
	Limepaj	Härligt syrlig paj	11	-	-	-

Participants

Name	Company	No of events	Snack
Andreas Tell	Callista Enterprise	1	
Bertil Holmström	Callista Enterprise	2	Kanelbulle

SUMMARY

WHY AI ASSISTANTS?

- Combine human strengths with AI capabilities
- Humans make decisions, limiting risk with AI

DESIGN PRINCIPLES

- Design for AI failures
- Build trust and transparency

THANK YOU!

Linkedin: bertilholmstrom
Email: bertil.holmstrom@callistaenterprise.se