



ML10: How to Identify and Operationalize GenAI Use Cases Which Really Help You

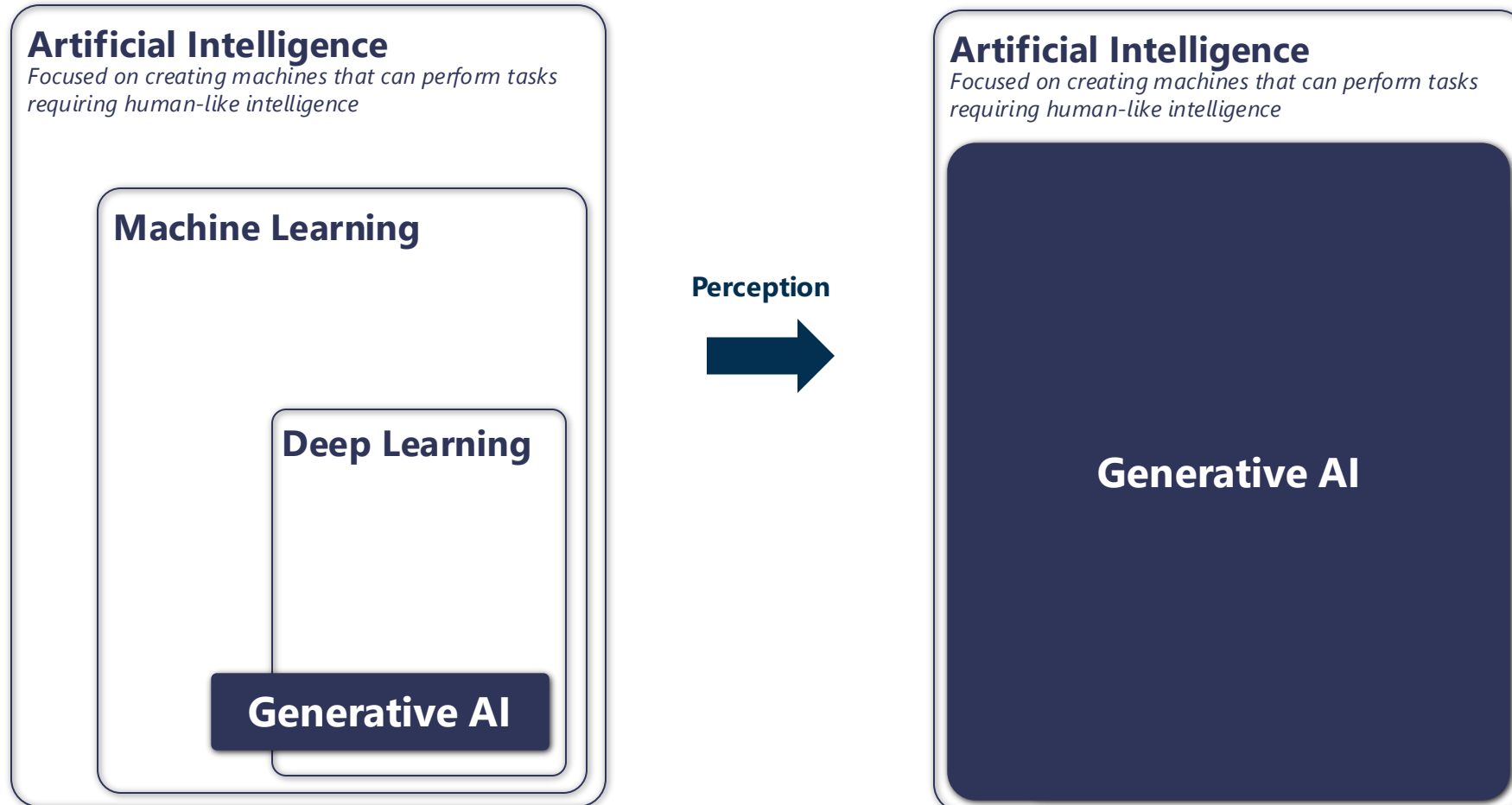
Phuse EU Connect 2025 Machine Learning, AI and Large Language Models (ML)
Stream – 17.10.2025

Agenda

- 01 | Flavors of AI – an Overview
- 02 | Identifying GenAI Use Cases
- 03 | GenAI Operationalization
- 04 | Agentic AI The Next Topic
- 05 | Question and Answers

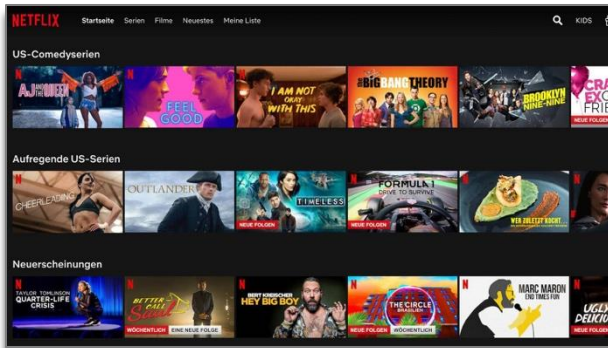
01 | Flavors of AI – an Overview

AI is a prominent topic in the public sphere – but everyone “only” knows ChatGPT



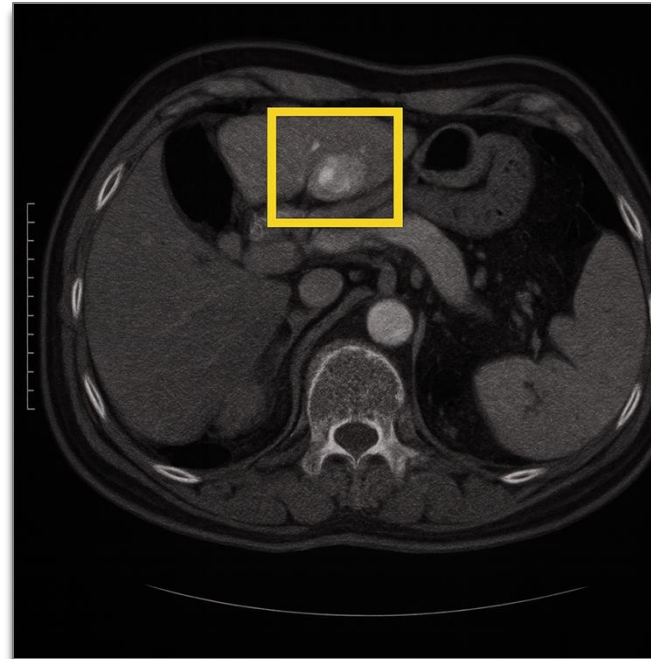
Overview: Machine Learning, Deep Learning, and Generative AI

Machine Learning



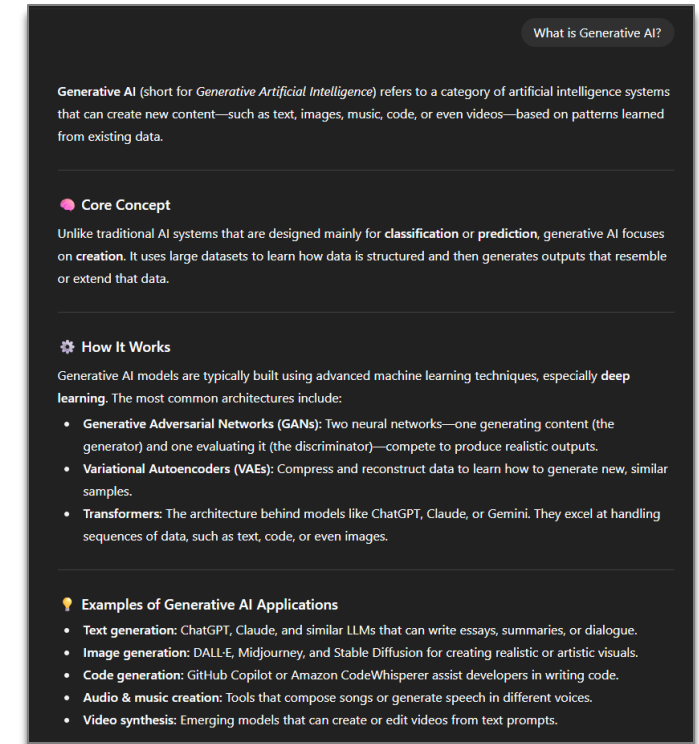
- › E.g. prediction based on tabular data

Deep Learning



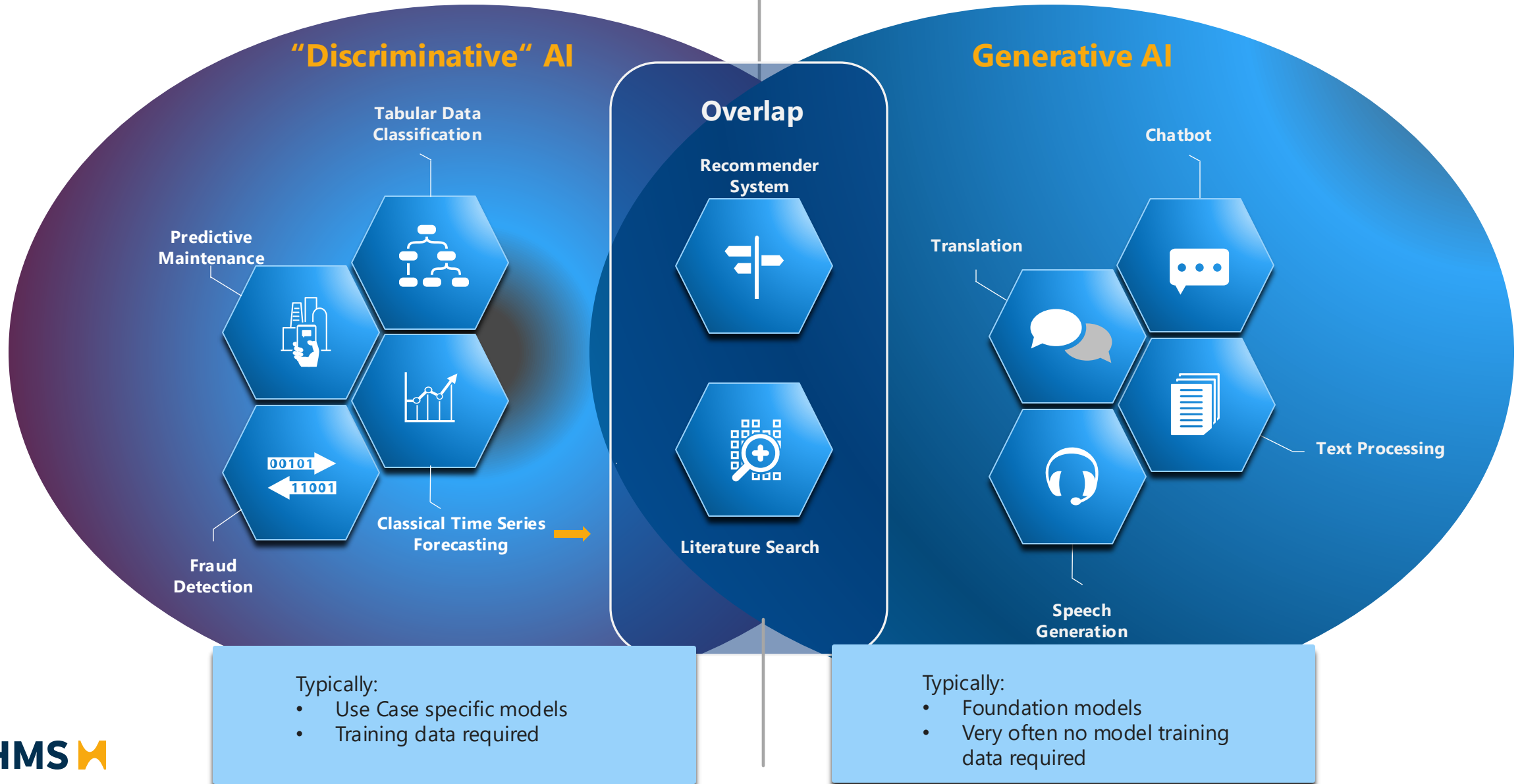
- › E.g. classification on visual data

Generative AI



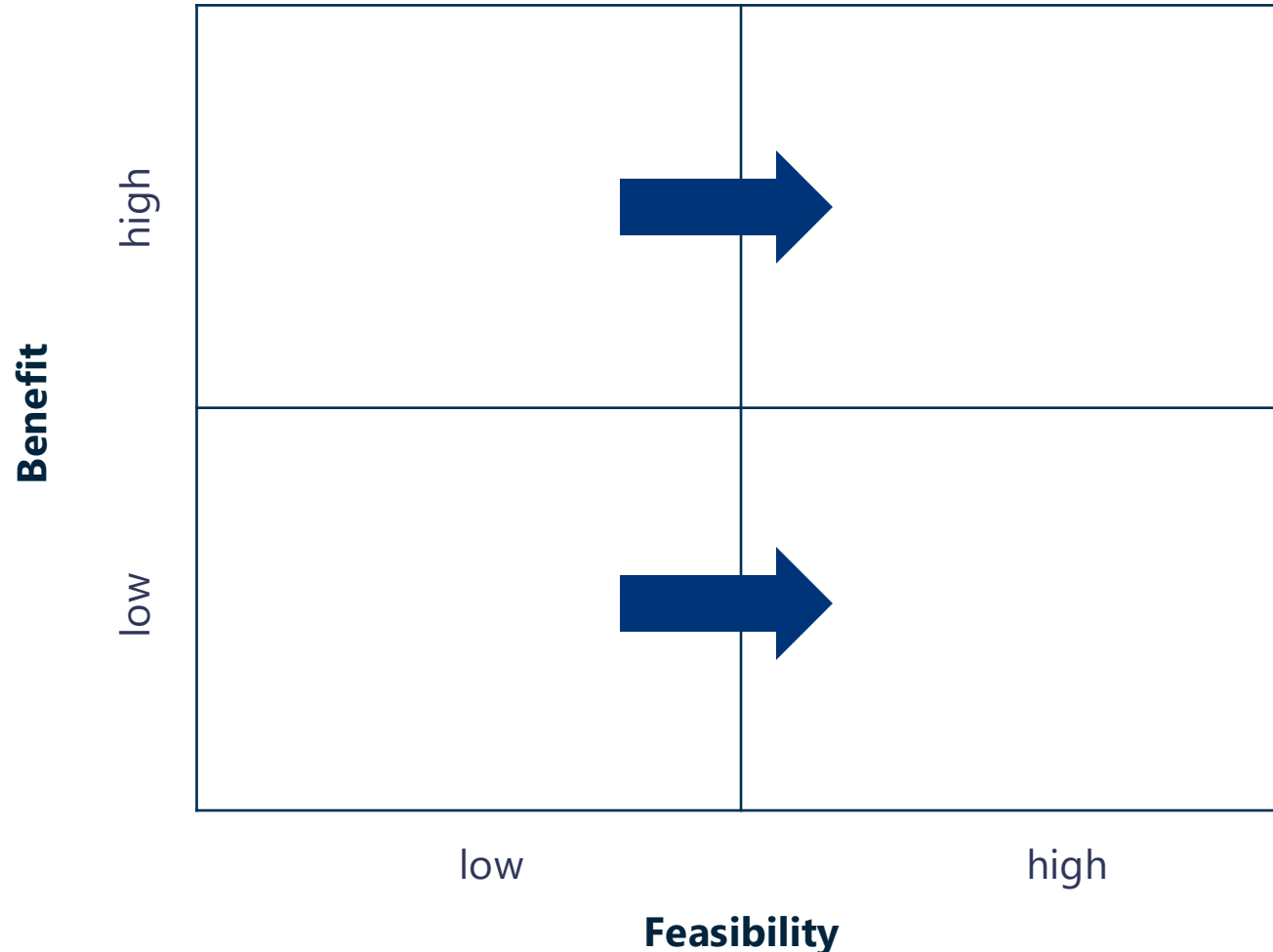
- › E.g. generation of text responses

What is Generative AI and what "not"?



02 | Identifying GenAI Use Cases

Generative AI imposed “Shift-to-the-right”– many use cases are now easier to implement and yield a higher benefit



Reasons for the “Shift”:

- High upfront training efforts are not required or reduced
- Quicker Feasibility Assessments through simplified prototyping
- The availability of **Generative AI as an API**¹ greatly reduces the integration complexity into IT systems

How to identify these Use Cases?

The many views on GenAI applications

Automated processing

System View

Preprocessing with human in the loop

Examples

- › Cleaning unstructured text data, extracting relevant information into a database schema. E.g., in pharmacovigilance

Way of interaction

- › REST calls to model API endpoint, no exposure to end users

Automation of tedious manual tasks or additional quality gate

Process View

Gen AI data product, e.g., competitor analysis, Sentiment Dashboard

- › generate an initial version of textual descriptions of statistical outputs

- › REST calls to model API endpoint, some exposure via UI components, Deep dive chatbot, ...

Semantic search in knowledge base

User View

Assistant tool in daily work

- › Copilot-like-support, Chatbots, RAG Systems, Coding-Assistants, exploratory data analysis via Chatbot

- › Chatbots, custom systems, software built-ins

Generation of content for customer (e.g., summaries)

Customer View

Interface to (parts of the) application (e.g., FAQ)

- › Low barrier entrypoint into product (e.g., data analysis).
- › QnA / FAQ Answering

- › Chatbots, software built-ins

Generative AI use cases can be categorized into distinct archetypes

The resulting AI components can be integrated into any existing business process

Thought model: Where do we find promising processes that have potential for support or automation?

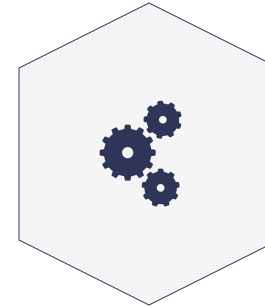
Chat for knowledge acquisition (e.g. RAG)

- Chats involving documents
- Chats involving structured data (e.g. databases)
- Chatbots



Automation of text-based tasks

- Summarization
- Categorization
- Comparison of texts and documents



Text Creation

- Document Creation
- Creative Writing
- Improvement, Revision



Archetypes¹

User Assistance

- Translation
- Explanation
- Text-to-Speech, Speech-to-Text



Code

- Source Code Creation
- Code Migration



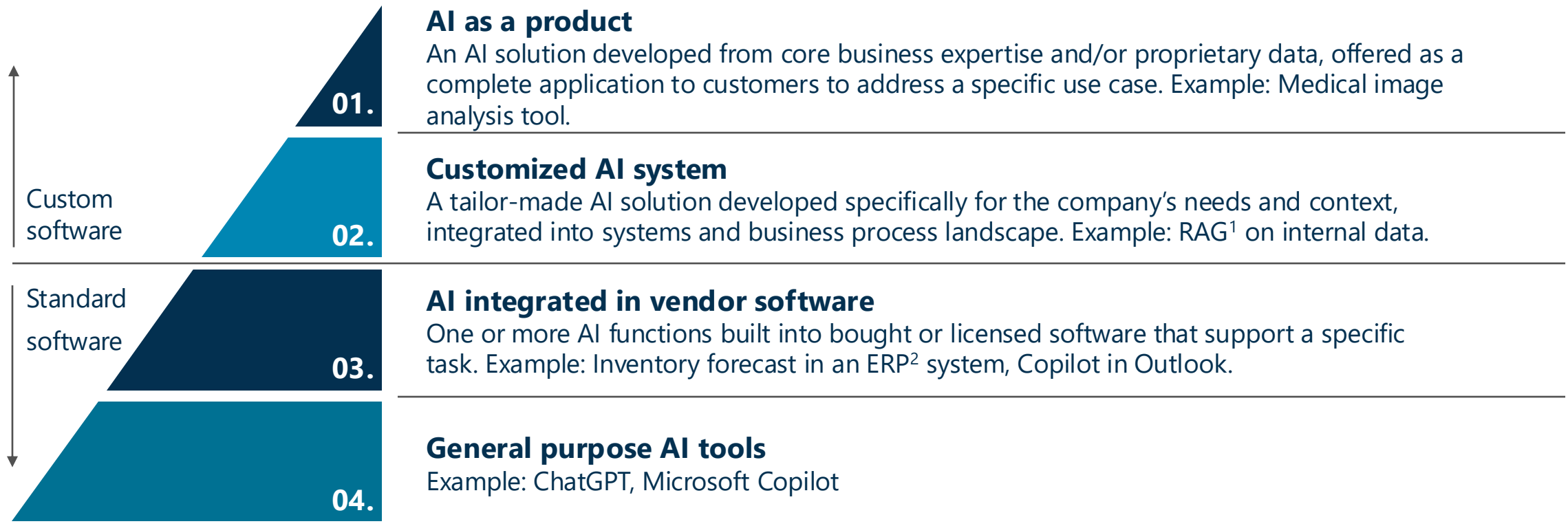
Images and Videos

- Image and video generation
- Image-/ Video-to-Text



Flavors of AI systems from using off-the-shelf tools to creating own products

Adopting AI can mean different approaches for companies.



03 | GenAI Operationalization

Operationalization



Operationalization encompasses the organizational, technical, and strategic decisions that determine whether GenAI efforts evolve into sustainable capabilities or remain isolated prototypes.

AND NOT

"Only" the process of bringing an AI model or system into operations.

Goal of the next section:

- › Providing an overview of the various elements and types of options available to companies in multiple areas relevant to operationalization.
- › Supporting **navigation within your organization** and understanding the available options when planning to implement a GenAI initiative.

1/2 | Where and how does operationalization take place in organizations?

Dimension	Key Choices / Models	Implications & Considerations
Leadership and Governance	› Bottom-up (domain-driven pilots) › Top-down (executive-led programs) › Hybrid (strategic direction + domain experimentation)	› Bottom-up fosters quick adoption but limits scalability. › Top-down provides clarity but risks bureaucracy. › Hybrid balances relevance, scalability, and alignment.
Organizational Structure	› Centralized Center of Excellence (CoE) › Decentralized business ownership › Federated model	› CoE ensures standardization but slows responsiveness. › Decentralization increases agility but risks fragmentation. › Federated combines consistency and domain ownership.
Technology and Platform Strategy	› Scattered pilots vs. unified platform › Build vs. buy vs. hybrid sourcing	› Shared data & platform enable reuse and scalability. › Hybrid sourcing balances control and speed.

2/2 | Where and how does operationalization take place in organizations?

Dimension	Key Choices / Models	Implications & Considerations
Talent and Change Management	› Upskilling programs › New roles (AI engineers, AI architects) › Cross-functional teams	› Training supports adoption and responsible use. › Framing GenAI as “assistant” helps increase acceptance.
Portfolio Management	› Stage-gated investments › Use case categorization (quick wins, strategic bets)	› Structured prioritization ensures focus on high-value, feasible, and compliant initiatives.
Value Delivery Model	› From project-by-project to capability-driven operations	› Reuse of compliant data and tools enables consistent deployment across geographies and products.

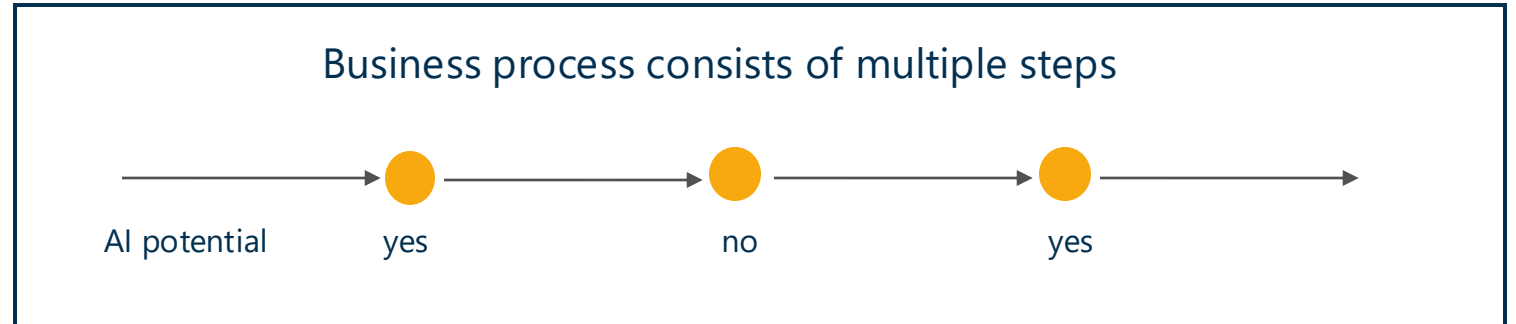
Strategic AI use case delivery



- › Learning from use cases is important, whereas reinventing the wheel every time is ineffective
- › **AI use case != AI use case** -> some use cases might require specialized, non-standard components -> trade-off between guidelines and degrees of freedom
- › Keep end user value in mind -> adopt a "delivery" / end-to-end mindset -> plan for MLOps / AIOps¹ + non-AI efforts (like Data Engineering, SWE, UI/UX, etc.)
 - › **A successful AI Team consists of more than 'just' Data Scientists, AI Engineers**

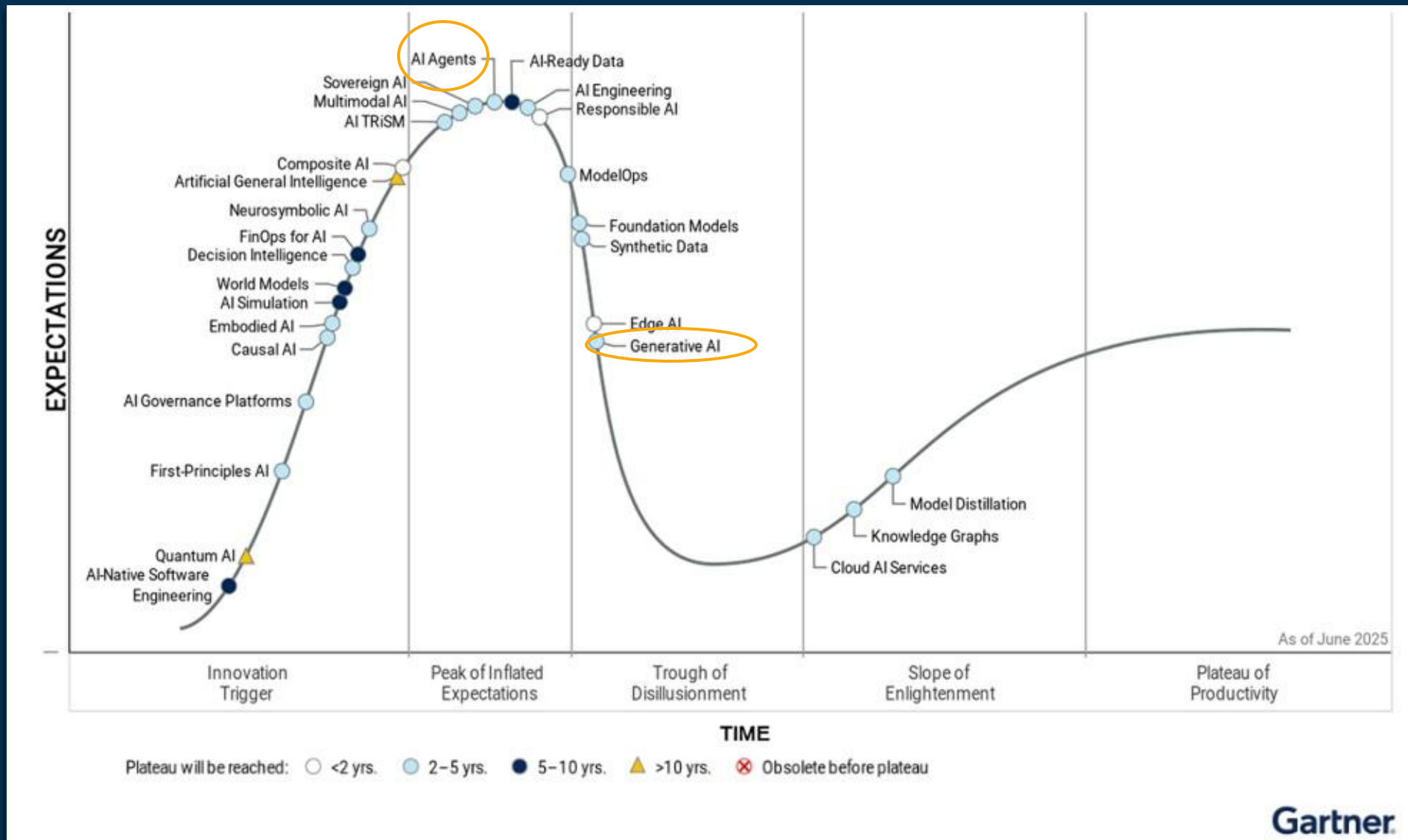
Example: Strategic AI adoption of a business unit

- › A business unit responsible for a data centric core business process aims to “transform” to be AI enabled
- › Identification of suitable entrypoints



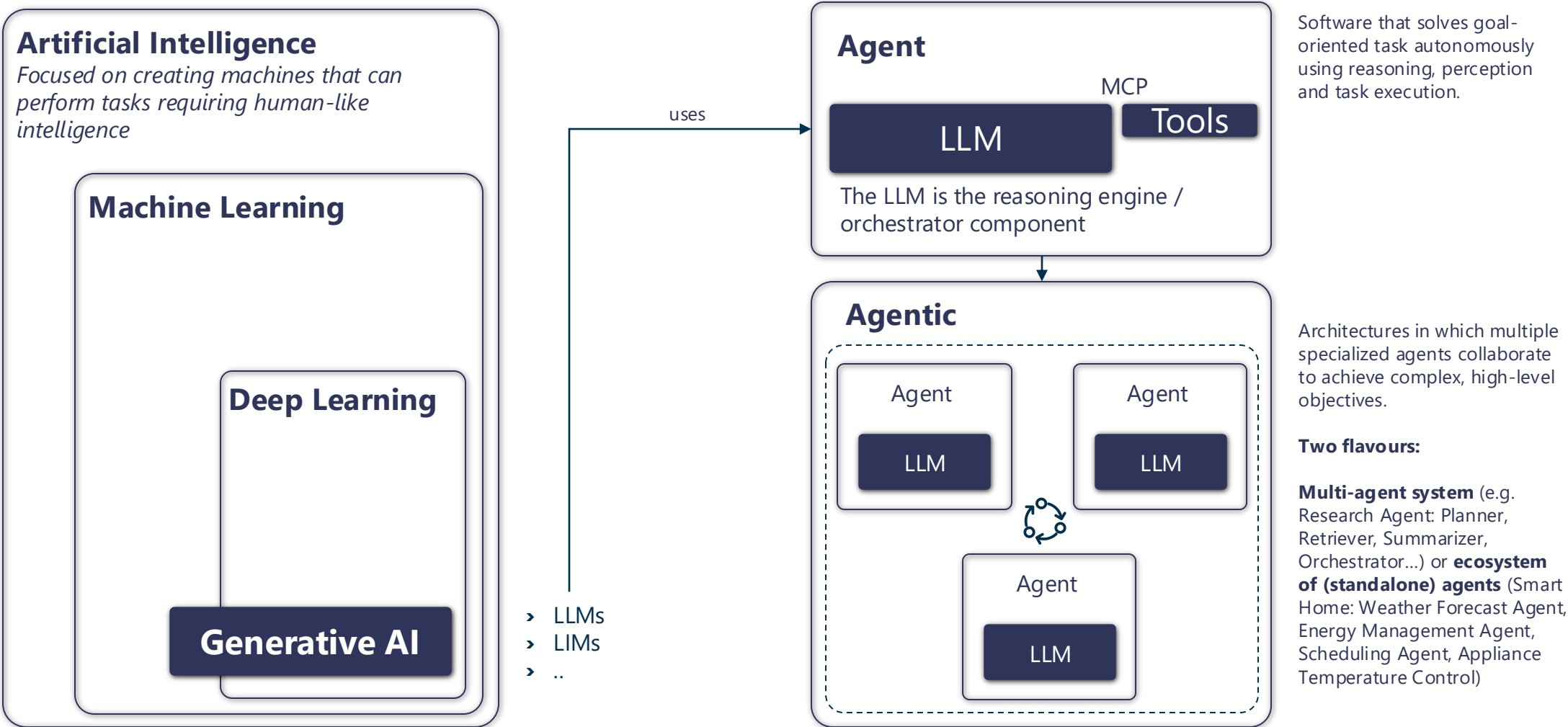
- › **Task:** Create a unified approach to implement and adopt AI solutions along the business process
- › Technical:
 - › Framework, agentic approach, solid foundation to scale
- › Organizational:
 - › Identification, consulting, enablement, change

04 | Agentic AI – The Next Topic



From Generative AI to Agents to Agentic AI

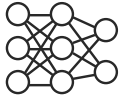
Where GenAI is a model type – Agents and Agentic AI is a software system perspective



05 | Question and Answers

Key takeaways of this talk

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1. Not every AI use case is GenAI

Differentiate between the types of AI approaches



2. GenAI use cases can be quickly prototyped...

Due to quick access to API based foundation models and strong frameworks



3. ... but operationalization is a multi-dimensional endeavor

It consists of organizational, technical, and strategic elements



4. Agentic AI opens the door to solve complex use cases

But also standardization is an important aspect



5. Change management

AI systems and workflows work differently compared to traditional IT Systems



6. Is it an AI Problem?

Or are you just asked to do something with AI?

Thank you very much for your
Attention (is All You Need...¹⁾)

Contact



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