



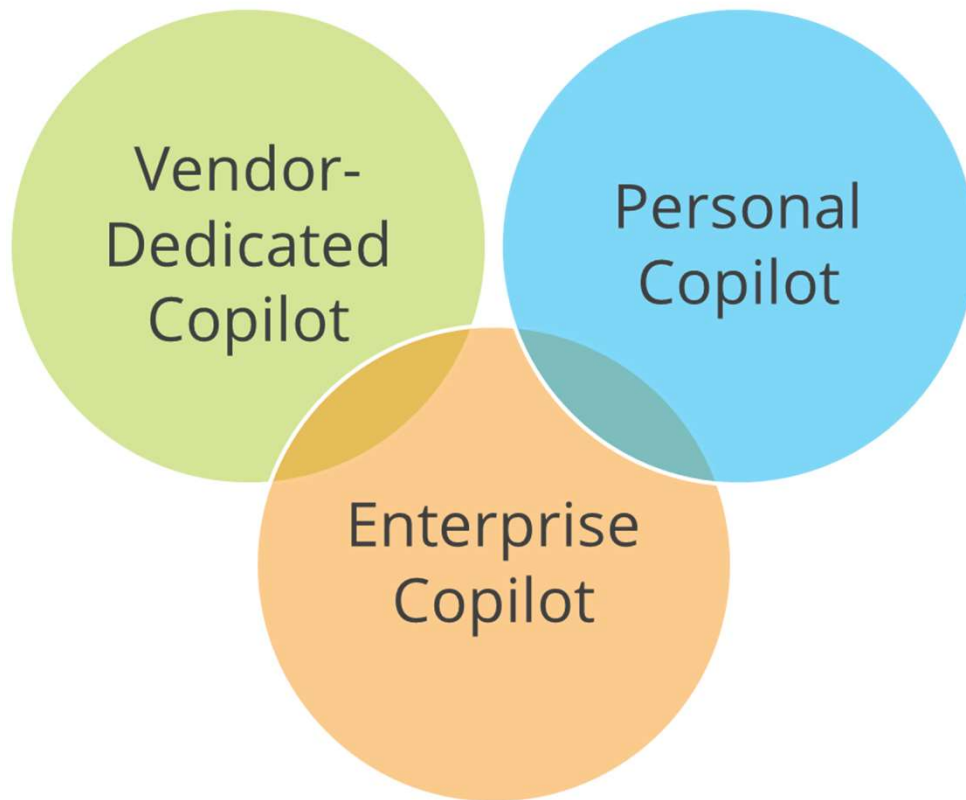
The Impact of GenAI and Automation

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Prediction

By 2025, 50% of organizations will use enterprise agents configured for specific business functions, instead of focusing on individual co-pilot technologies to achieve faster business value from AI

Copilots Become Foundational to How We Work



By 2025: All modern applications, platforms and tools will have an embedded copilot capability

- This simplifies the use of applications, decreasing training requirements as users bypass direct use of the application in favor of copilots

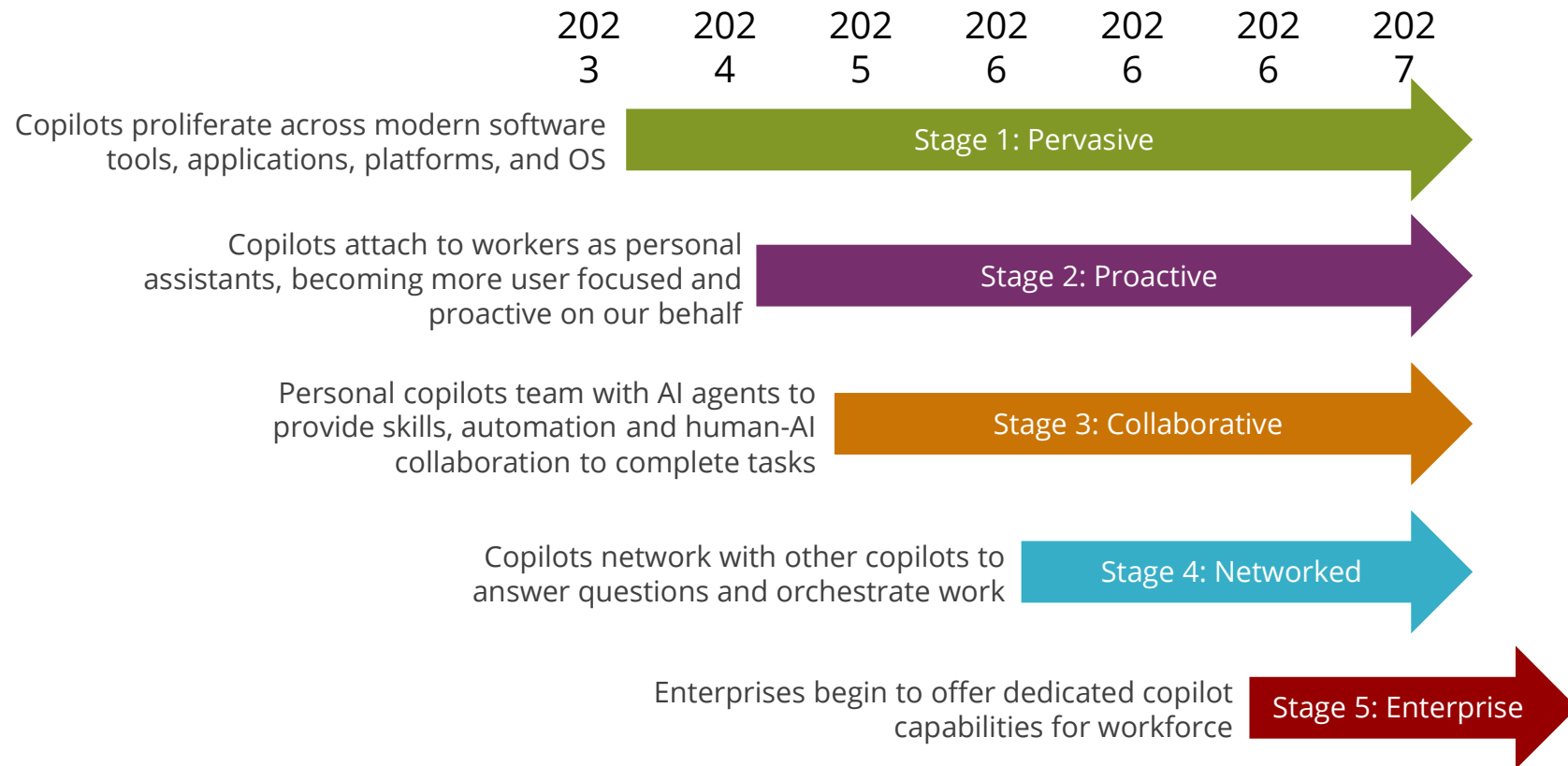
By 2026: Personal copilots will act as digital assistants across workforce

- This means part-time users of applications no longer need to go to applications to perform work.

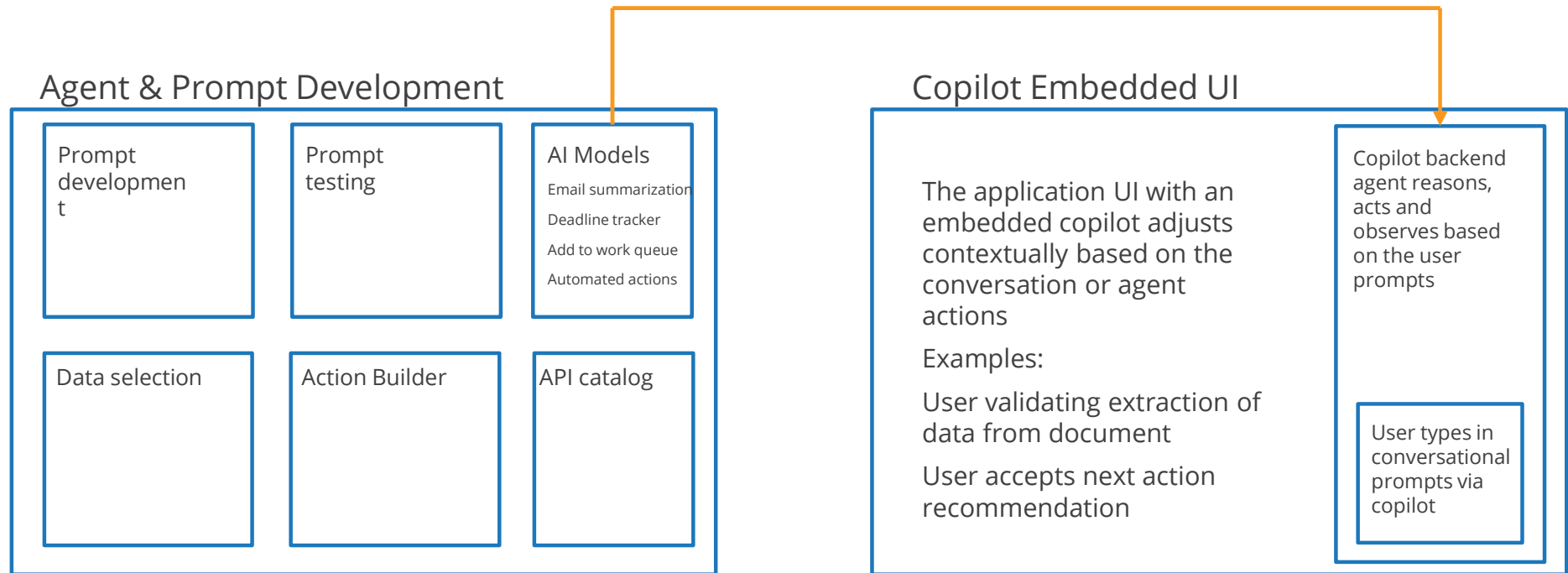
By 2027: Enterprises will begin to offer internal copilots

- Will provide Q&A capabilities for internal policies, processes, procedures, and systems. Will be able to access and execute skills that converge AI with automation

Rapid Evolution of Copilots



Low Code Environments for Skills, Prompts and Agent Enablement



Personal Copilots Disrupt the Flow of Work

A personal copilot is a standalone or embeddable single page web app to assist workers in performing their jobs. These assistants shift the flow of work from users accessing applications to interacting with their copilot to execute tasks

- At a technical level, the copilot is the UI for AI and rules-driven agents to execute tasks more efficiently and in a highly automated way

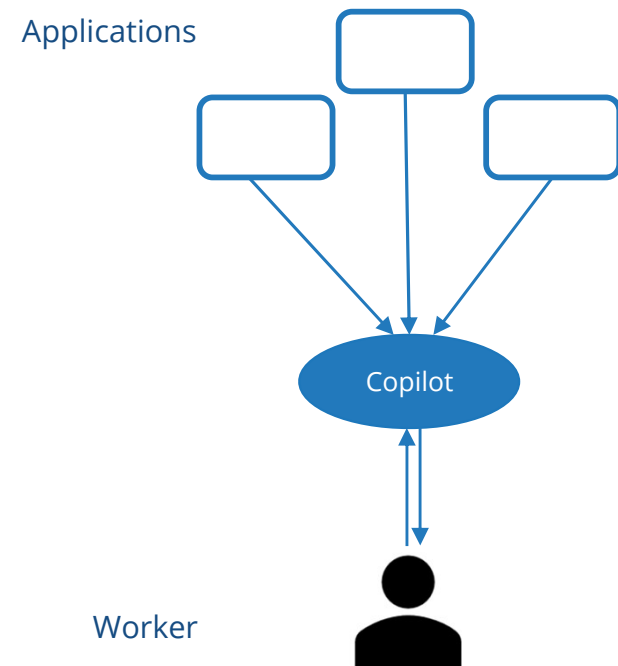
Copilots increasingly become the UI for casual and part-time users of applications. The use of APIs and front-end automation replace the need for manually performing the work in using the native application UI

Personal copilots will increasingly

- Manage task queues
- Prioritize work and deadlines
- Interact with applications via APIs

Disrupting the flow of work is likely to disrupt enterprise application subscription models for part-time users, shifting from annual subscription fees to consumption-based APIs

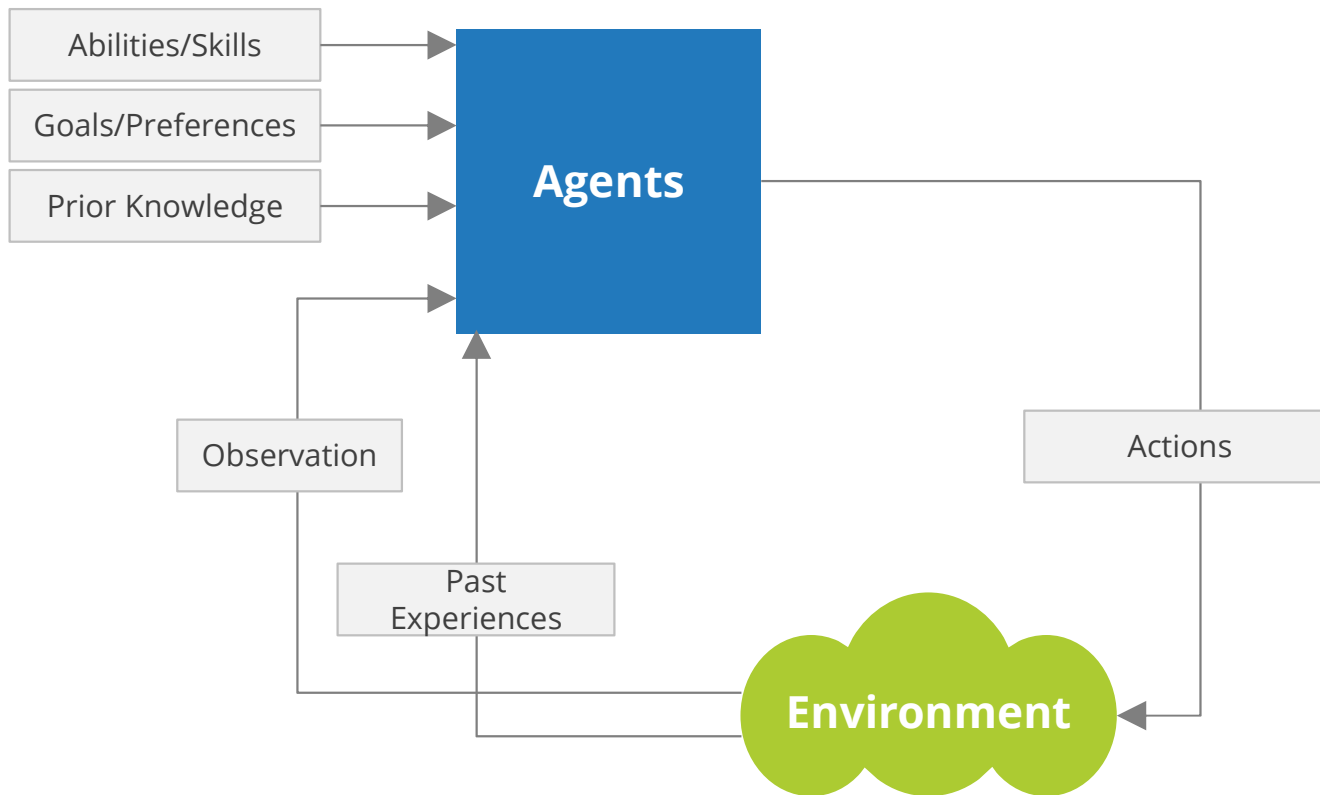
- Whether enterprises gain any benefit from lower subscription fees depends on how application vendors react to personal copilots



Prediction

By 2026, 20% of frustrated knowledge workers with no development experience will take charge of transforming how they work by building their own agentic workflows, improving cycle times by 40%.

AI Agents: A New Software Paradigm Enabled by Large Language Models (LLMs)



AI Agents are LLM-powered autonomous software entities that perceive their environment, make decisions, act upon them and interact with users or other systems in a manner like a human.

AI Agents Characteristics

Unlike standalone large language models (LLMs) or rule-based software/hardware systems, AI agents have these common features:

Planning: AI agents can plan and sequence actions to achieve specific goals. The integration of LLMs has revolutionized their planning capabilities.



Tool usage: Advanced AI agents can use various tools, such as code execution, search, and computation capabilities, to perform tasks effectively. AI agents often use tools through function calling.



Perception: AI agents can perceive and process information from their environment, to make them more interactive and context aware. This information includes visual, auditory, and other sensory data.

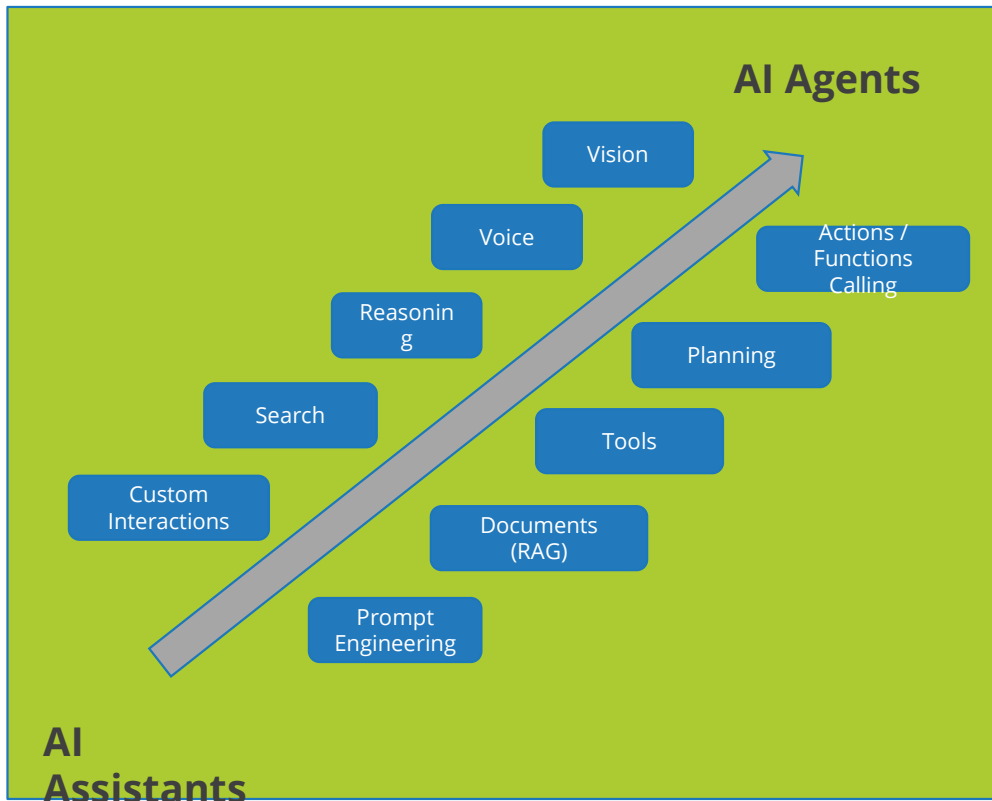


Memory: AI agents have the ability to remember past interactions (tool usage and perception) and behaviors (tool usage and planning). They store these experiences and even perform self-reflection to inform future actions. This memory component allows for continuity and improvement in agent performance over time. Note: The usage of the term memory in the context of AI agents is different from the concept of computer memory (like volatile, nonvolatile, and persistent memory).



The Evolution from AI Assistants to AI Agents

Expansion of Autonomy



Key Upgrades from AI Assistants to AI Agents

Prompt Engineering and Custom Instructions

- This process involves being clear about what we expect from these AI assistants, including the personas they should assume and behaviors to avoid.

Reference Documents

- Enable AI assistants to reference domain-specific or corporate knowledge before responding to a user, reducing errors and increasing expertise in specific fields.

Search Integration

- By integrating search capabilities, AI assistants can now look up and incorporate current information, ensuring they stay relevant and up-to-date.

Tool Integration

- AI assistants have also gained access to mathematical engines like Wolfram Alpha or dedicated compute environments allows them to handle complex tasks more effectively.

Improved Reasoning and Planning

- Using advanced prompt engineering and orchestration techniques, AI assistants can now plan steps in advance to solve more complex problems..

Action Capabilities

- A major upgrade is the ability of AI assistants to interact with external systems. They can now pull data from business systems and push tasks to external systems for completion, significantly expanding their utility.

Multi-modal Interactions

- Recent advancements have enabled AI assistants to interact with users beyond just text. Users can now upload images and soon, leverage cameras and video, opening up a range of new use cases.

How do Chatbots and Copilots fit in here?

- A **chatbot** is a computer program that simulates human conversation with an end user. Not all chatbots are equipped with artificial intelligence (AI), but modern chatbots increasingly use conversational AI techniques such as natural language processing (NLP) to understand user questions and automate responses to them. Many of the current **customer service agents** are evolution of chatbots. Many refer to them as an AI Assistant or a type of AI Agent with limited autonomy.
- **Copilots** are essentially an AI Assistant powered by LLMs/generative foundation models. However, many folks consider Copilots as a type of an AI agent as well. They work alongside users rather than operating independently. Unlike fully automated AI agents, copilots provide suggestions and recommendations to assist users in completing tasks. For instance, when a user is writing an email, a copilot might suggest phrases, sentences, or paragraphs. The user might also ask the copilot to find relevant information in other emails or files to support the suggestion. The user can accept, reject, or edit the suggested passages.



Recommendations



While copilots will be ubiquitous, adoption will tie to financial benefits

GenAI promises to disrupt how work is performed to drive efficiency and reduce costs – particularly related to harnessing unstructured assets

This technology is also ripe for technology disruptions and greater cost efficiencies – even with the relatively high cost of using it



Organizations will need to consider how and when to use agent technologies

Vendors will begin offering agentic capabilities in various GenAI studios that will allow organizations to build their own agent workflows and applications.

Enterprise applications with embedded GenAI capabilities will increasingly offer agent capabilities as well.



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