

# Turbocharging software with Gen AI

How organizations can realize the full potential of generative AI for software engineering

## Organizations are reaping multiple benefits from leveraging generative AI for software engineering

One in two organizations adopting generative AI sees improvements in enabling innovative work and quality of software.

Percentage of organizations seeing benefits through the adoption of generative AI, as mentioned by software leaders



Organizations with active\* generative AI initiatives have seen 7–18% improvement in total productivity across the SDLC#

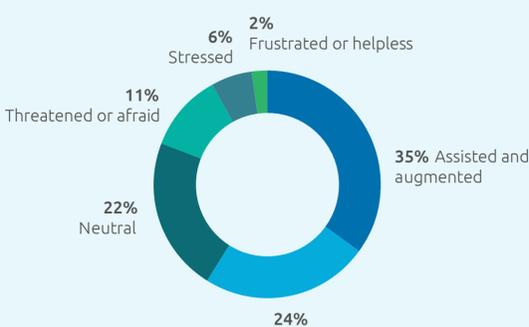
Source: Capgemini Research Institute, Generative AI in Software Engineering, Senior Executive Survey, April 2024, n = 412 software leaders that have scaled up or are running pilots with generative AI in software engineering.

\* active initiatives are those generative AI deployments that are in the pilot or scaling stages.

# Total productivity improvement refers to overall improvement in the productivity of the software professionals from all types of tasks accelerated by generative AI.

## Generative AI benefits extend to job satisfaction and happiness.

How does the workforce feel as regards to the adoption of generative AI

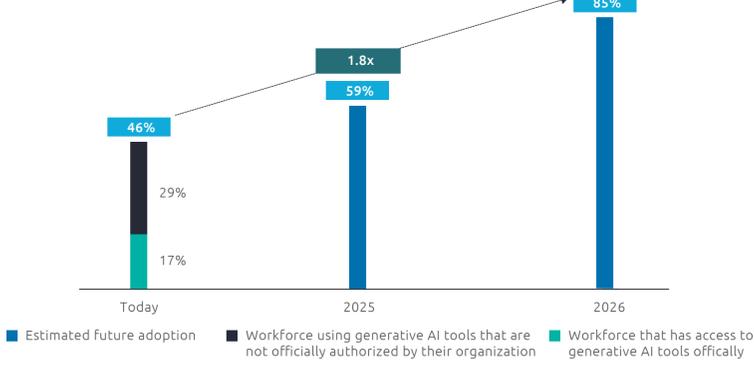


Source: Capgemini Research Institute, Generative AI in Software Engineering, Software Professionals Survey, April 2024, N = 1,092 software professionals

## Generative AI adoption is at an early stage but will accelerate sharply

Adoption of generative AI in software engineering is in its early stages, but more than four in five software professionals are estimated to leverage\* it by 2026

Percentage of workforce leveraging generative AI tools in the workforce



Source: Capgemini Research Institute, Generative AI in Software Engineering, Senior Executives Survey, April 2024, N=1,098 Senior Executives

Note: Today's data is representative of the survey results, while 2025 and 2026 is estimated on senior executive's future deployment plans and the trends in unofficial usage.

\* both officially and with unauthorized access

## Coding assistance is the leading use case, but generative AI also finds applications in other software development lifecycle (SDLC) activities.

Percentage of organizations focusing on the following use cases for implementation



Source: Capgemini Research Institute, Generative AI in Software Engineering, Senior Executive Survey, April 2024, N = 1,098 senior executives; Software Professionals Survey, April 2024, N = 1,092 software professionals.

## Lack of foundational prerequisites and unofficial usage of generative AI pose significant risks

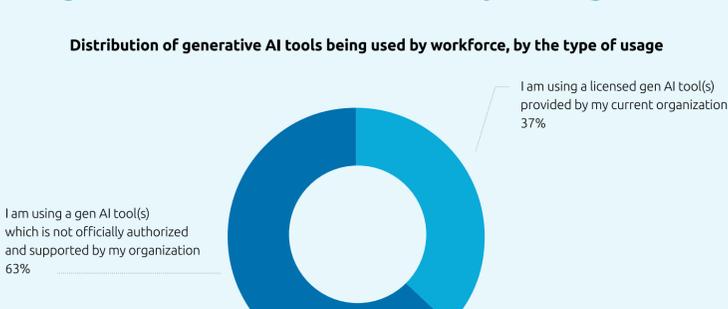
Organizations lack the governance framework and upskilling and reskilling programs for leveraging generative AI for software engineering.

61% organizations lack a **governance framework** for generative AI in software engineering

61% also lack an **upskilling/reskilling program** for generative AI

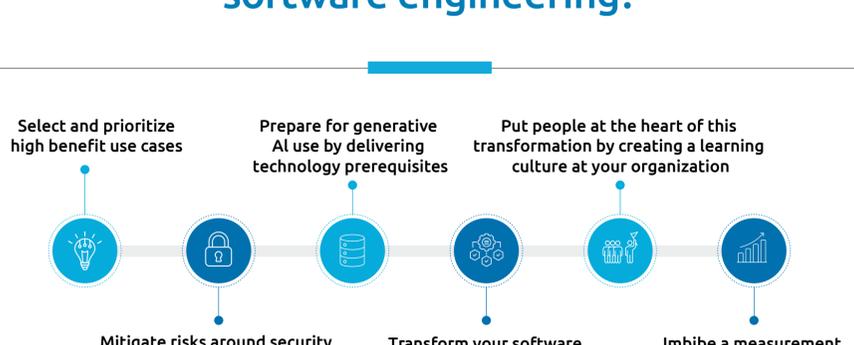
More than three in five professionals are using generative AI without organizational approval, exposing organizations to functional, security, and legal risks.

Distribution of generative AI tools being used by workforce, by the type of usage



Source: Capgemini Research Institute, Generative AI in Software Engineering, Senior Executive Survey, April 2024, N = 1,092 organizations represented by 1,092 software professionals.

## How can organizations harness the full potential of generative AI for software engineering?



Source: Capgemini Research Institute.

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