



# GenAI in SDLC: What top performers do differently – and what leaders should do next

Key findings from GenAI in SDLC survey (November 2025)

# Call to action: What top performers do differently

Key findings from the 2025 GenAI in SDLC Survey

a

## Leaders are seeing step-change improvements – proving GenAI is materially shaping how software gets built

- Top decile performers achieve >30% productivity gains – and leaders at the forefront with bold ambitions are targeting 2x improvements, indicating an accelerating trajectory with greater gains ahead

b

## But most organizations are leaving value on the table

- Most orgs continue to use general-purpose AI assistants not specific to SDLC (e.g., 44% of dev. & coding tools)
- GenAI usage remains low beyond dev. & coding (e.g., <10% deploy GenAI tools for ops. & support, legacy code, testing & QA, etc.)

c

## Top performers are seen across all tech stacks, industries, and company sizes – and they do things differently:

- Embed SDLC-specific agents/copilots from AI-natives/frontier labs (e.g., ~50% of such users saw >20% productivity gains)
- Scale GenAI across SDLC stages (~45% of orgs with top decile productivity gains have GenAI scaled across 4+ SDLC stages)
- Fundamentally change how teams work – moving beyond one-off townhalls to changing SDLC processes and ongoing enablement

d

## Bottleneck is process and people – not tools

- ~27% cite IT / cyber approval as most time-consuming (though once approved, ~50% deploy tools to end users within 3 months)
- Even after deployment, change mgmt. cited as top challenge in adoption (e.g., change inertia, upskilling, training)

e

## Leadership actions must go beyond tooling and drive forward-looking momentum

- Set bold, forward-looking targets – leaders are already seeing >40% productivity gains; avoid anchoring to past benchmarks
- Accelerate rollout – remove approval bottlenecks and enable teams to test, learn, and scale rapidly
- Drive usage and impact, beyond tool deployment – tools don't deliver outcomes without investing in fundamental behavior change

f

## What we will be watching in 2026

- Top performers emerge across all tech stacks, industries, and company sizes
- The next frontier – measurement, legacy modernization, and testing & QA
- Characteristics that will define winning tools as experimentation winds down

# In November 2025, we asked ~500 C-suite tech leaders about how they were adopting GenAI across the SDLC

| Theme                   | Key focus areas for the survey                                                                                                                                                                                                                                                                                                     |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tool usage across SDLC  | <ul style="list-style-type: none"><li>Usage of GenAI tools across all SDLC stages (e.g., coding &amp; development, product mgmt. &amp; requirements, design &amp; prototype, ops. &amp; support, legacy code, knowledge and documentation, testing and QA, monitoring &amp; observability, and productivity measurement)</li></ul> |
| Buying patterns         | <ul style="list-style-type: none"><li>Preferences in selecting and purchasing GenAI tools</li><li>Top challenges with selecting GenAI tools</li><li>Ranking of selection criteria and associated tools</li></ul>                                                                                                                   |
| Organizational enablers | <ul style="list-style-type: none"><li>Top challenges with adoption</li><li>Investment in change management, training, and other related organizational enablers</li><li>Adoption process timeline and barriers to implementation</li></ul>                                                                                         |
| Impact                  | <ul style="list-style-type: none"><li>Quantified productivity and quality gains from GenAI tools</li><li>Preferred measurement methods</li><li>Developer allocations based on productivity gains</li></ul>                                                                                                                         |
| Agentic coding tools    | <ul style="list-style-type: none"><li>Agentic coding tools practices (e.g., policies around autonomy, use cases, concerns with adoption)</li></ul>                                                                                                                                                                                 |

Note: To track trends over time, we compared results to a comparable survey, State of GenAI across Engineering, conducted in January 2025 with 100 CIOs/CTOs.

## Target respondent demographics

**50%** respondents from North America  
**30%** respondents from Europe  
**20%** respondents from APAC

**~35%** annual revenues >\$1B  
**~45%** annual revenues >\$100M  
**~20%** annual revenues \$25-\$100M

**At least 80%** of companies using paid/enterprise GenAI tools  
**Up to 20%** planning to adopt within the next 12 months  
**Excluded** companies with no plans to adopt GenAI

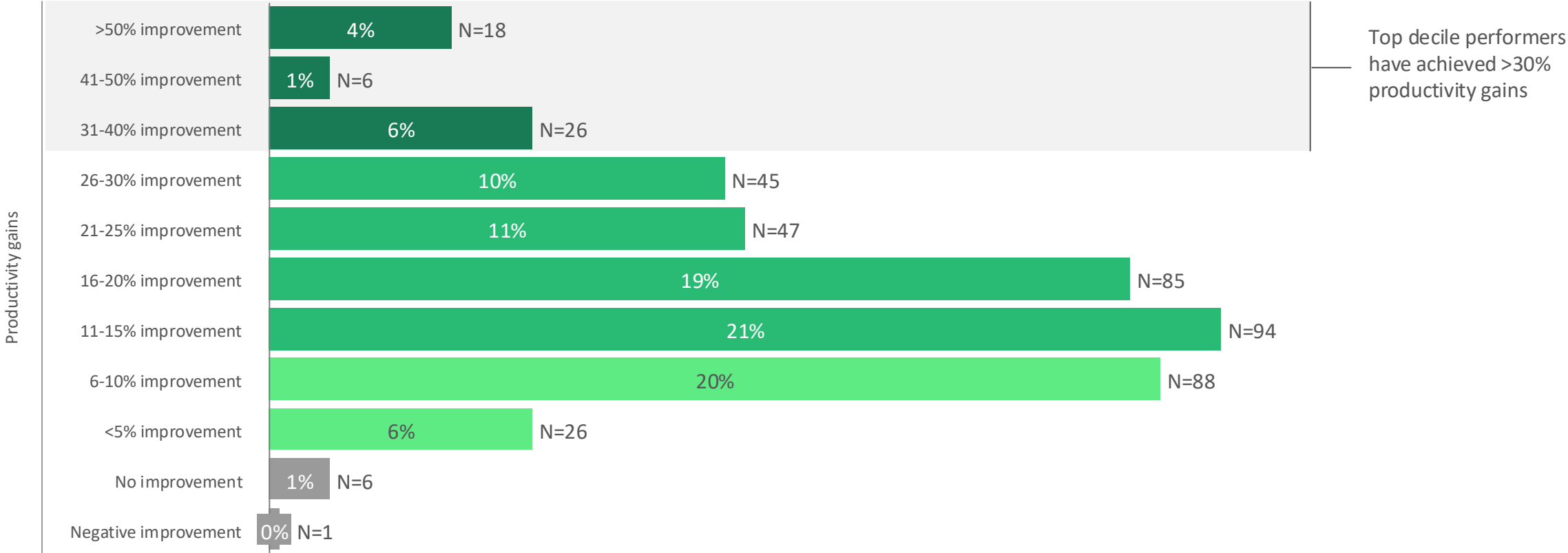
**~500 CTOs, CIOs, CPTOs, and CPOs** from scaled software orgs (>50 engineers)

**TMT & Financial Institutions (~50% combined)**, plus balanced representation across Consumer, Industrial, Healthcare, Insurance, and Energy

# Leaders are seeing step-change improvements, with top decile performers reporting >30% productivity gains till date

## Breakdown of productivity improvement across software development (% of respondents)

Question: For active users of GenAI tools (defined as 20+ interactions with GenAI tool per day), what percentage improvement have you seen in software development productivity due to GenAI adoption to date? Please estimate to the best of your knowledge.



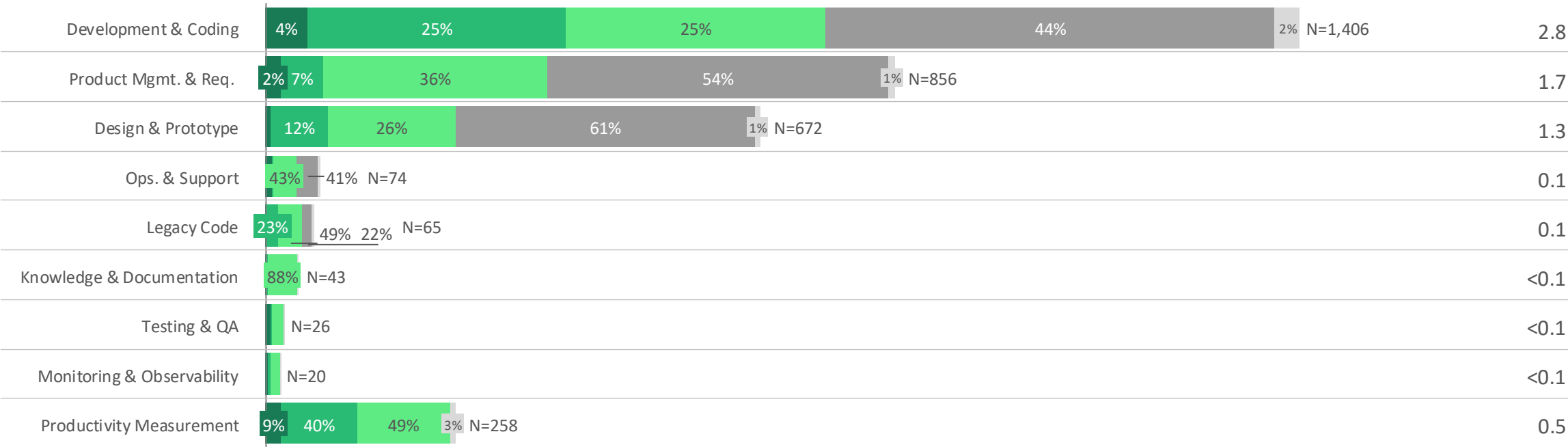
Note: Respondents who answered N/A or Not Sure were excluded from data analysis  
Source: BCG GenAI in SDLC Survey (November 2025), N=500, conducted in collaboration with GLG

# Market is underpenetrated outside of development & coding; across SDLC, general-purpose AI assistants dominate

## Breakdown of purchased and deployed tools by SDLC stage (% of tools)

Question: Which paid enterprise version of the following GenAI tools [for a given SDLC stage] have you evaluated?

Avg. # of deployed tools per stage



- In-house custom-built GenAI tools
- SDLC-specific agents/copilots - from AI-natives / frontier labs (e.g., Claude Code, OpenAI Codex, Cursor)
- SDLC-specific agents/copilots - from "traditional" enterprise vendors (e.g., GitHub Copilot, Figma Make, Atlassian Rovo)
- General-purpose AI assistants (e.g., OpenAI ChatGPT, Claude, Google Gemini)
- Other

Note: N is larger than survey respondents as respondents may purchase and deploy multiple tools  
Source: BCG GenAI in SDLC Survey (November 2025), N=500, conducted in collaboration with GLG

# Top performers differentiate through integrating SDLC-specific agents/copilots across SDLC and investing heavily in change management

Deep dive to follow



## Embed SDLC-specific agents/copilots

**~50%**

of companies using SDLC-specific agents/copilots from AI-natives / frontier labs saw >20% productivity gains



## Scale GenAI across SDLC

**~45%**

of the top decile in productivity gains<sup>1</sup> have deployed GenAI tools in 4+ stages<sup>2</sup>



## Fundamentally change in ways of work

Top decile performers in productivity gains<sup>1</sup> are

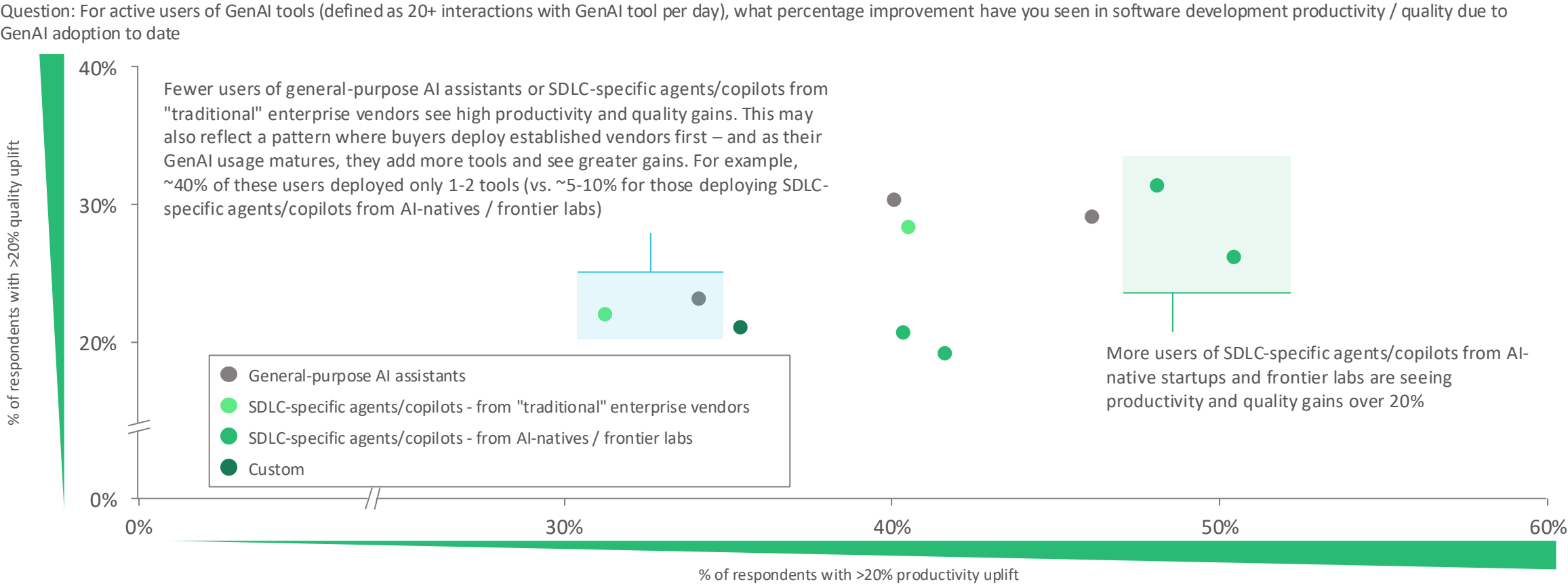
**1.2-1.4x**

more likely to invest in key change mgmt. activities (e.g., redesigning ways of working, learning events), moving beyond townhalls and launch events

1. Top decile performers are top decile in productivity gains (>30%) 2. Total 9 stages assessed; tools in productivity measurement includes telemetry tools  
Source: BCG GenAI in SDLC Survey (November 2025), N=500, conducted in collaboration with GLG

# Deep dive | More users of SDLC-specific agents/copilots from AI-natives and frontier labs are seeing productivity and quality gains

## Share of users that show >20% gains in productivity and quality (% of respondents by deployed tools)

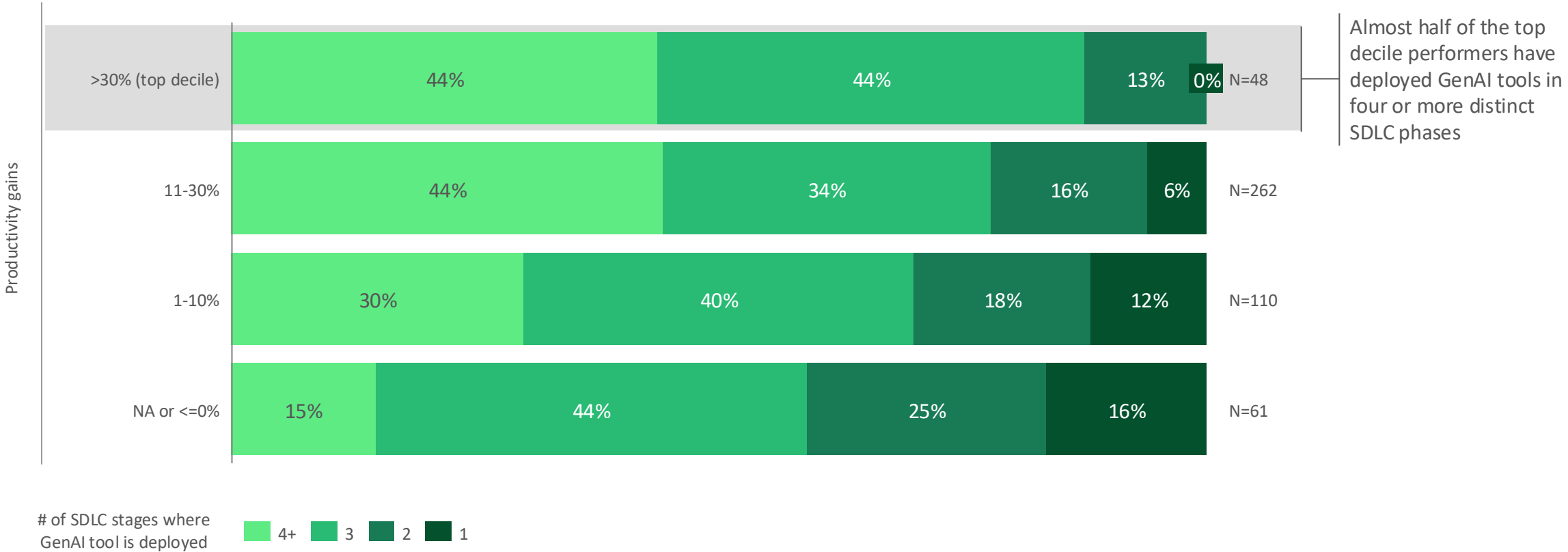


Note: Tools under 25 users have been removed; respondents may purchase and deploy multiple tools  
Source: BCG GenAI in SDLC Survey (November 2025), N=500, conducted in collaboration with GLG

# Deep dive | Organizations with top decile productivity gains integrate GenAI tools across multiple SDLC stages

## Breakdown of number of SDLC stages where GenAI tool is deployed (% survey respondents by productivity gain)

Question: Which paid enterprise version of the following GenAI tools [for a given SDLC stage] have you evaluated and purchased?



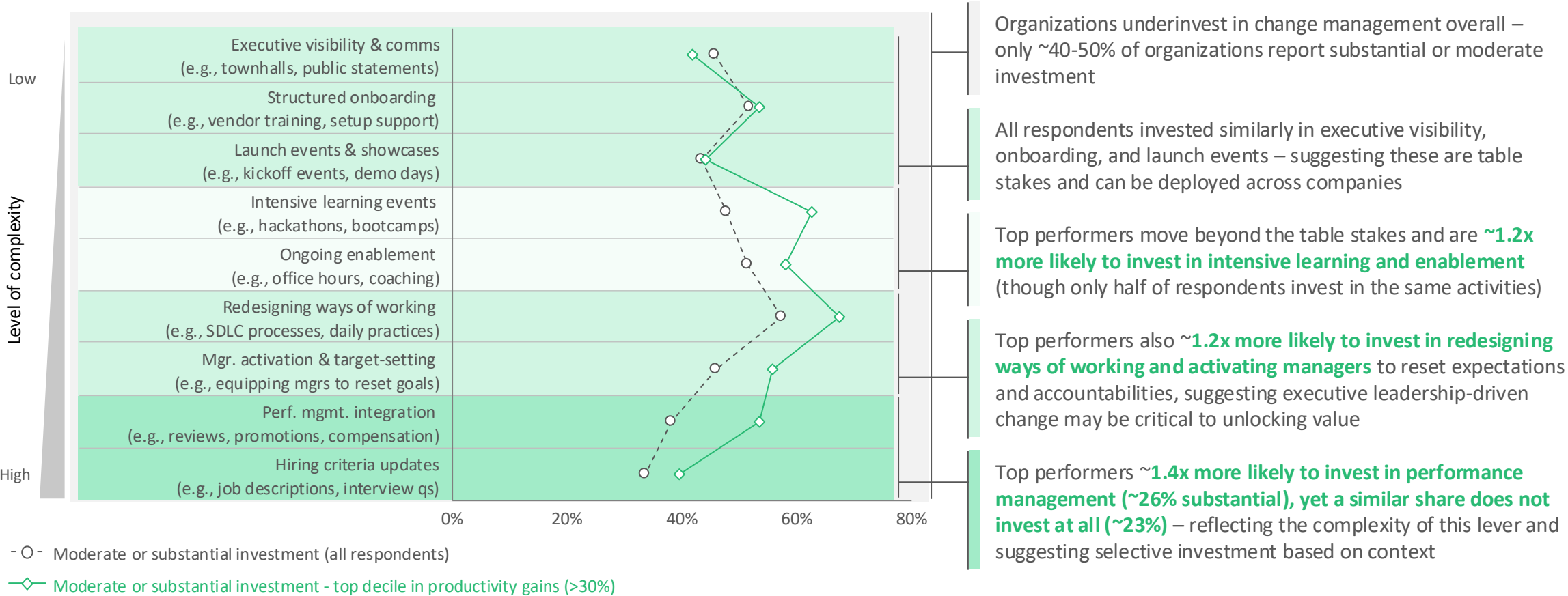
Note: Survey respondents may purchase and deploy multiple tools within a single stage; deployed tools may include telemetry tools (for Productivity Measurement) or general-purpose AI assistants, alongside SDLC-specific agents/copilots

Source: BCG GenAI in SDLC Survey (November 2025), N=500, conducted in collaboration with GLG

# Deep dive | Top decile performers with >30% productivity gains invest in fundamental behavior changes, moving beyond townhalls and launch events

## Respondents investing in change management activities (% of respondents)

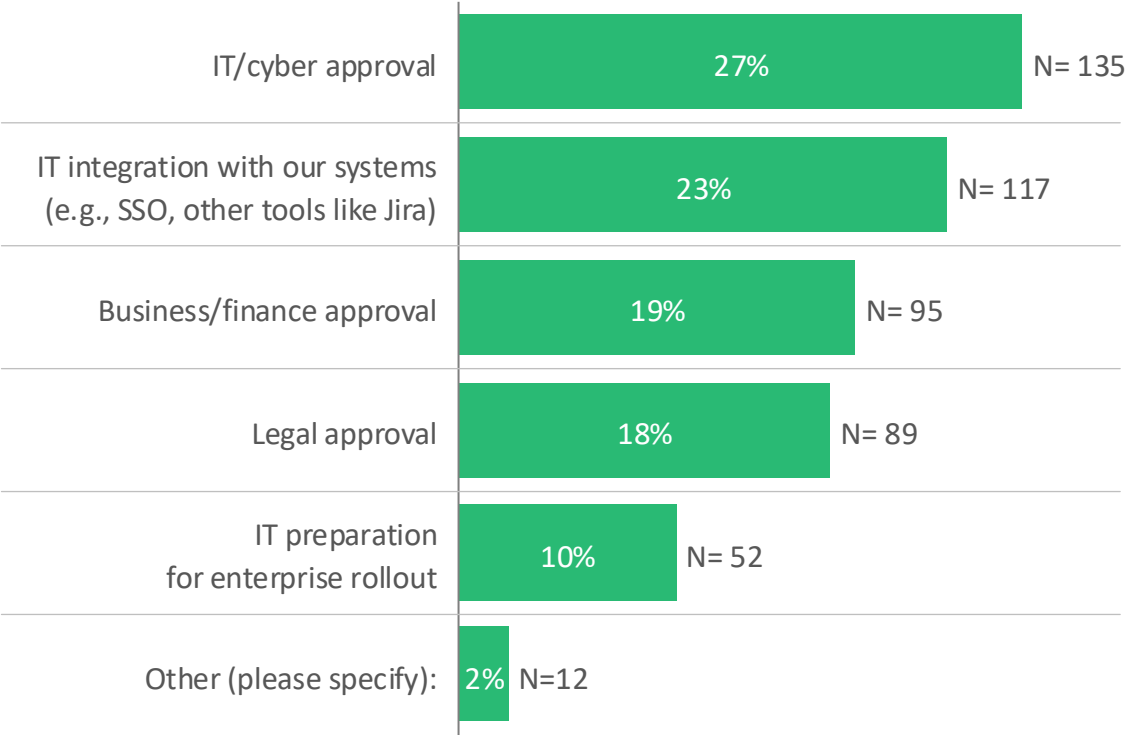
Question: Focusing specifically on your change management and enablement efforts, how much effort is your organization investing in each of the following types of activities? (For each, please select between "No investment," "Low investment," "Moderate investment," "Substantial investment")



# Organizational processes are time-consuming bottlenecks to deploying GenAI tools

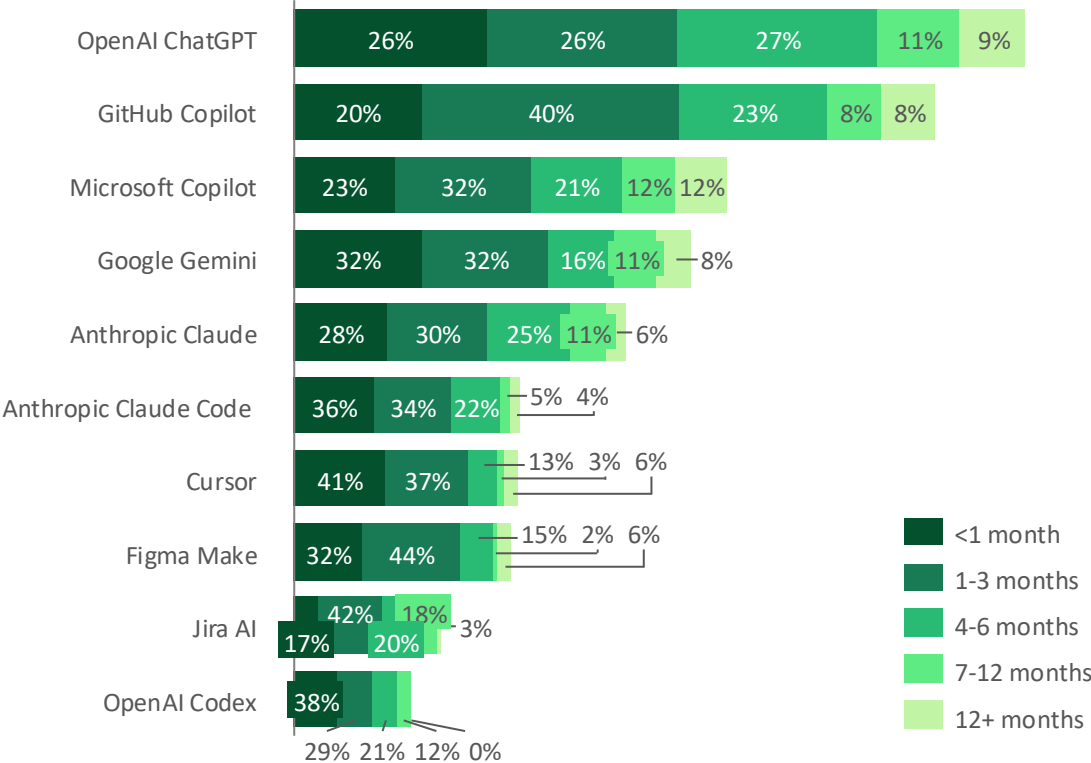
## ~27% of orgs. cite IT/cyber approval as a bottleneck to adopting GenAI ...

Question: What part of the process represented the most time-consuming part of the adoption / implementation process?



## ... however, deployment of GenAI tools post-approval is within 3 months

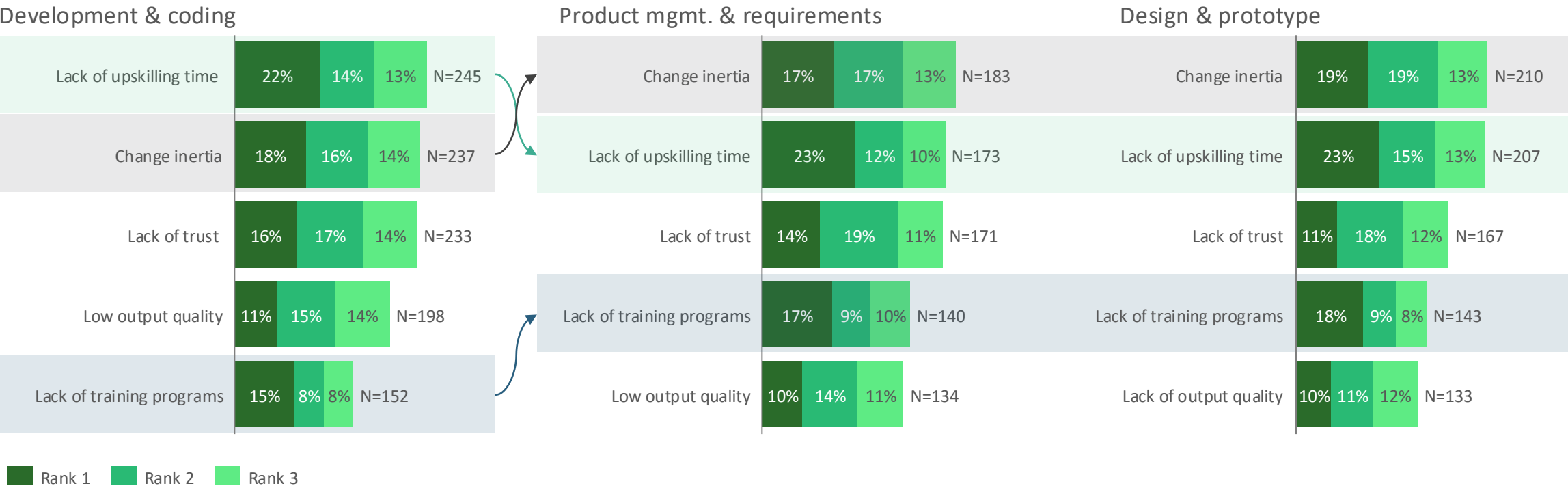
Question: For each tool that you adopted, from the time you decided to adopt a tool to when the tool was made available to end-users within your organization, how much time elapsed?



Even after deployment, change mgmt. cited as top challenge in adoption – most orgs. struggling with change inertia, upskilling, and training programs

Top 5 challenges for adoption of GenAI tools (% of respondents)

Question: [For a given SDLC Stage] tools you have deployed, what are the biggest challenges to drive adoption of the tools and realize impact?



Additional challenges not shown (ranked by less than 25% of respondents): cultural barriers, non-compatible tech stacks, unclear ROI, and lack of management support

Note: SDLC stages are non-exhaustive  
Source: BCG GenAI in SDLC Survey (November 2025), N=500, conducted in collaboration with GLG

# Leaders must set bold targets, accelerate rollout, and empower teams to drive adoption rather than usage



## Set bold, forward-looking targets

Set forward-looking targets of >50% productivity and quality gains; avoid anchoring to past benchmarks

Leaders at the forefront with bold ambitions are on track to achieve **2x improvements**



## Accelerate rollout and remove bottlenecks

Simplify approvals, set expectations for speed through clear timelines, and enable teams to test and scale rapidly

IT or cyber approvals cited as the top **bottleneck by ~27%** respondents (though approved tools are deployed within 3 months)



## Drive usage and impact, beyond tool deployment

Empower teams to fundamentally change how they work – moving beyond launch events and townhalls

Top **performers ~1.2-1.4x more likely to invest** in fundamental behavioral changes - redesigning ways of working, resetting expectations, providing learning opportunities & ongoing enablement

# What we will be watching in 2026

## Top performers emerge across all tech stacks, industries, and company sizes

### Modern architecture can accelerate, but legacy tech not a blocker

~15% of organizations working on service-oriented and cloud-native codebases see top decile productivity gains, vs. 8% on more monolithic architectures — signaling that **success depends more on execution & enablement than underlying tech**

### Leaders emerge in every industry

Leaders achieving top decile productivity gains of >30% are seen in every industry. In addition, all industries see ~70%+ respondents with >10% productivity gains. As expected, some industry contrasts are also emerging. **TMT leads** (~17% report top decile productivity gains); followed by **Consumer** (~12% report top decile productivity gains) and **Financial Institutions** (~11% report top decile productivity gains)

### Smaller firms move more quickly – but impact seen across all size bands

Though smaller firms see more productivity gains (15% of \$25-100M firms achieved top decile) than large enterprises (8% of \$10B+ firms in top decile), **uplift is seen across all company size bands**

## The next frontier – measurement, legacy modernization, and testing & QA

### Measurement gap continues

Interest in productivity measurement is growing as teams scale their GenAI investments. It is the **4th-largest tool category** and **76% of orgs** are adjusting developer allocation. Yet firms **continue to struggle with measuring developer capacity allocation** and only <50% can quantify impact from GenAI confidently. Most rely on self-built PowerBI dashboards (~25%), while <10% use telemetry tools such as DX (Developer Intelligence Platform), Jellyfish, Faros

### Legacy modernization lagging expectations

Despite extensive discussion around GenAI's potential for legacy code modernization, **investments remain surprisingly low**, with only <10% of orgs deploying a GenAI tool – a gap we'll track as AI-native refactoring and migration capabilities mature

### Testing & QA may be the next breakout

A year ago, CIOs called out **testing & debugging** as the number one area GenAI could support – but testing & QA remains underpenetrated, with only <5% of orgs deploying a GenAI tool

## Characteristics that will define winning tools as experimentation winds down

### From experimentation to consolidation

Today, firms **average 2.8 coding tools** – indicating an experimental phase. Yet firms are beginning to worry about **switching costs** (70% ranked as a top challenge when selecting a coding tool). As switching costs rise, will **experimentation slow and usage consolidate?**

### Competitive dynamics: Enterprise vendors vs. AI-native challengers

Buyers tend to first deploy established vendors (e.g., GitHub Copilot, Atlassian Rovo, Figma Make) but are also starting to experiment (~60% of GitHub Copilot users add 2+ GenAI coding tools). Some users of tools from AI-natives / frontier labs report higher impact. Will enterprise incumbents close the **impact gap**, or will AI-native challengers continue to **expand share?**

### Rising prominence of DevEx

Buyers cite **performance** as the top factor when evaluating coding tools, followed by **security** and **DevEx**. But in separate benchmarking of coding tools, **performance varied little** when held constant for model and task. Instead, DevEx, usability, & workflow fit drove differences. Given survey data showed higher impact when using some coding tools over others, we'll be tracking whether **DevEx – vs. inherent tool performance – emerges as a key driver of adoption.**

# Key contacts and topic experts for GenAI in SDLC

## Key contacts for this work



**Ben Feldman**  
Partner



**Vikram Sivakumar**  
Managing Director  
& Partner



**Clark O'Niell**  
Managing Director  
& Partner



**Juli Cho**  
Project Leader



**Swaraj Dharia**  
Consultant



**Gavin Pola**  
Associate



**Dash Advincula**  
Associate

## Topic experts on GenAI in SDLC



**Akash Bhatia**  
Managing Director  
& Sr. Partner



**Greg Emerson**  
Managing Director  
& Sr. Partner



**Matthew Kropp**  
Managing Director  
& Sr. Partner



**Amit Kumar**  
Managing Director  
& Sr. Partner



**Vladimir Lukic**  
Managing Director  
& Sr. Partner



**Djon Kleine**  
Managing Director &  
Partner



**Nipun Misra**  
Managing Director  
& Partner



**Kamila Rakhimova**  
Managing Director  
& Partner



**Stephen Robnett**  
Managing Director  
& Partner



**Julie Bedard**  
Managing Director  
& Partner



**Joppe Bijlsma**  
Managing Director  
& Partner



**Julien Marx**  
Managing Director  
& Partner



**Michael Engels**  
Managing Director  
& Partner



**Jan Ittner**  
Partner & Vice  
President



**Lucas Christenson**  
Partner



**Matthew Rall**  
Partner

A faint, stylized graphic of a microchip with the letters 'AI' in the center, surrounded by circuit lines, is positioned in the upper right quadrant of the slide.

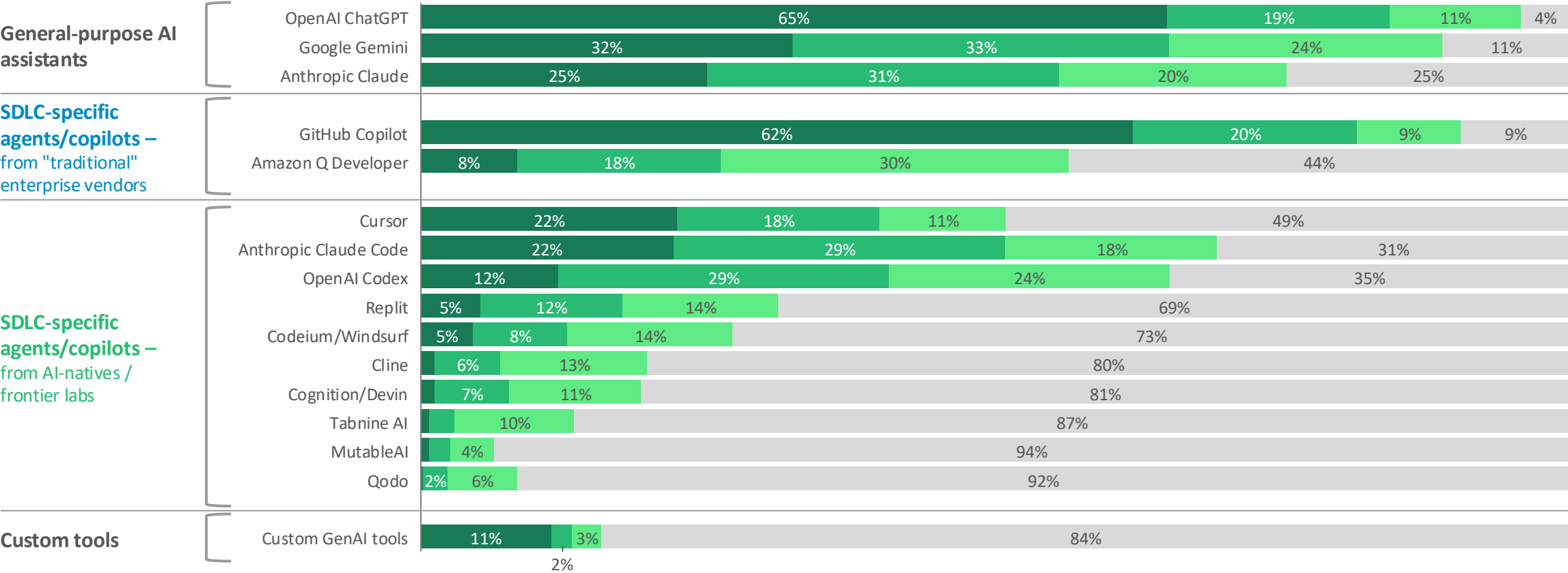
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# Appendix

# Within development & coding, opportunity for greater impact by leveraging more SDLC-specific agents/copilots from AI-natives / frontier labs

## Breakdown of tool type and evaluation in development & coding stage

Question: Which paid / enterprise version of the following GenAI Development & Coding tools have you evaluated?



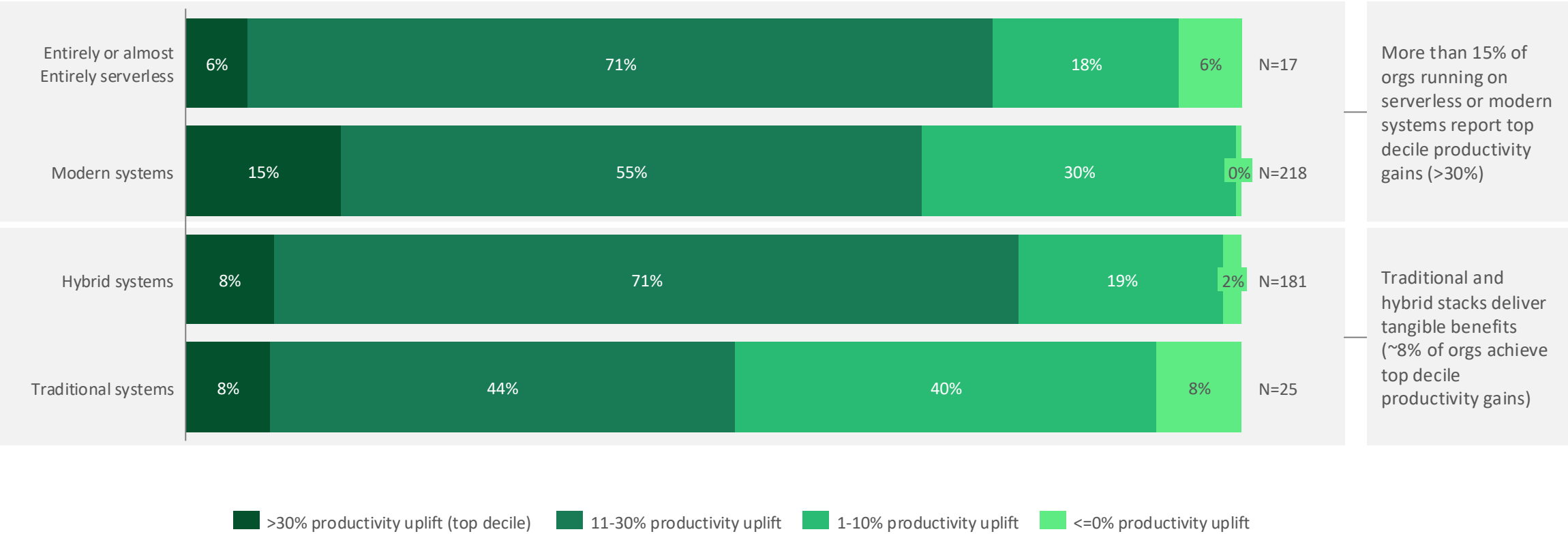
■ Purchased & deployed ■ Evaluated & may purchase ■ Evaluated & would not purchase ■ Not evaluated

Note: Not shown are "other" category, which include Snyk DeepCode AI, Sourcegraph Cody, and other tools with 1 response  
Source: BCG GenAI in SDLC Survey (November 2025), N=500, conducted in collaboration with GLG

# Modern architecture can be leveraged to unlock value but is not a prerequisite for achieving productivity gains

## Breakdown of productivity uplift leveraging GenAI across technology stacks

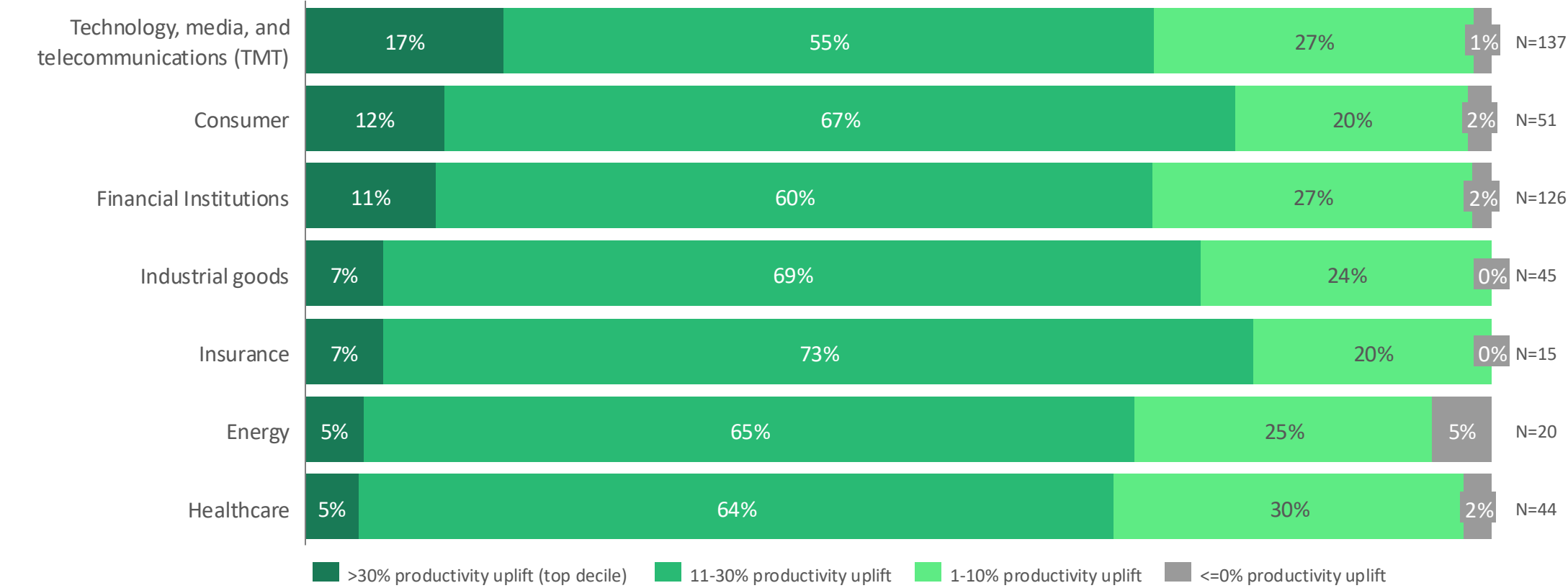
Question: For active user of GenAI what percentage improvement have you seen in software development productivity due to GenAI adoption to date? Please estimate to the best of your knowledge



# Leaders in productivity gains emerge across all industries, though TMT, Consumer, and Financial Institutions receive the largest productivity gains

## Breakdown of productivity gains by industry (% of survey responders per industry)

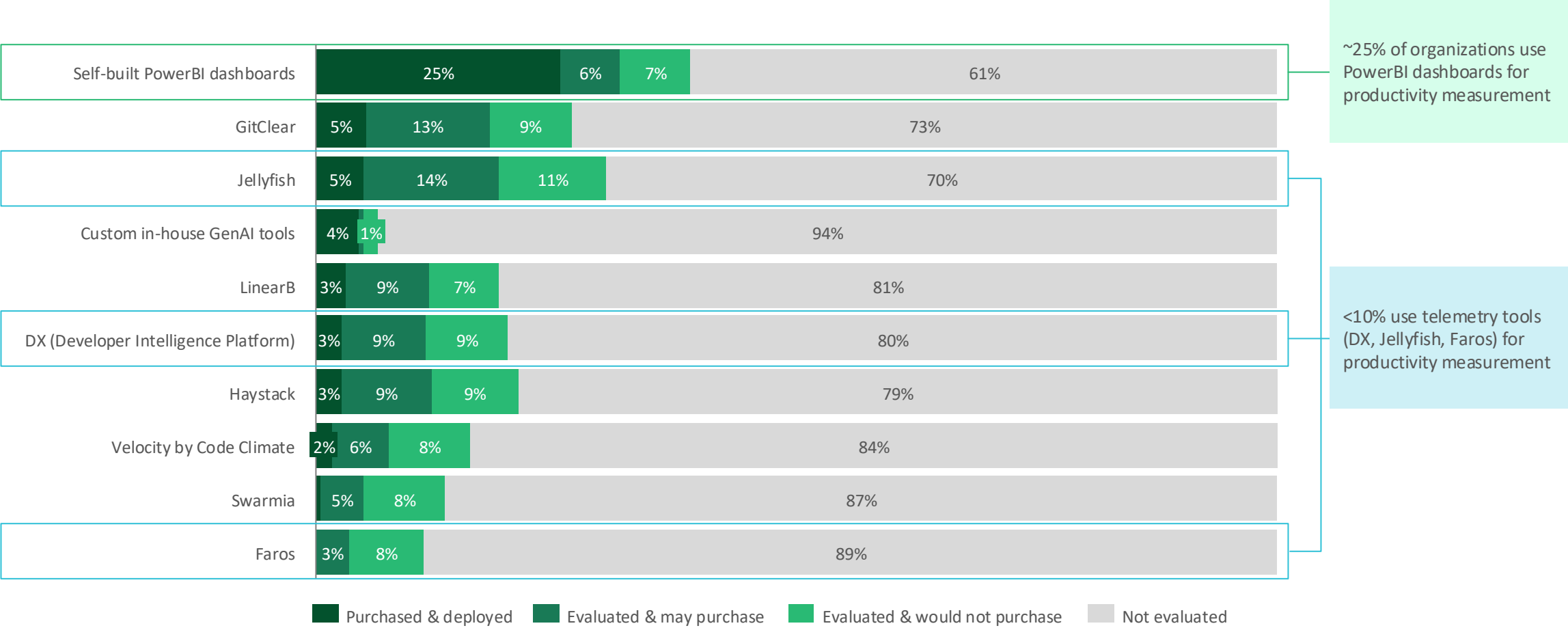
Question: For active users of GenAI tools (defined as 20+ interactions with GenAI tool per day), what percentage improvement have you seen in software development productivity due to GenAI adoption to date? Please estimate to the best of your knowledge; Question: In which industry does your organization primarily operate?



Source: BCG GenAI in SDLC Survey (November 2025), N=500, conducted in collaboration with GLG

# Organizations are starting to invest in productivity measurement tools, but most commonly rely on self-built dashboards

**Breakdown of productivity measurement tools used (% of total survey responders)**  
Question: Which if any, of the following developer productivity measurement tools have you evaluated and purchased?



Source: BCG GenAI in SDLC Survey (November 2025), N=500, conducted in collaboration with GLG

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