

Generative AI Surveys

Overview

Barriers, Benefits, Use Cases

Open-ended Insights

Peer Data & Insights

Additional Insights

RESTRICTED DISTRIBUTION

1 © 2023 Gartner, Inc. and/or its affiliates. All rights reserved.

Gartner.
Peer Community™

BY THE NUMBERS

In a few weeks' time, we completed **7 business function specific** surveys with a total response of **833 leaders**, across **3 continents**, representing **21 industries** about their impressions of generative AI programs, and the associated opportunities, risks, and use cases.

While it remains early days for many respondents, their feedback gives significant insight into the potential future attitudes of about and applications of these tools.

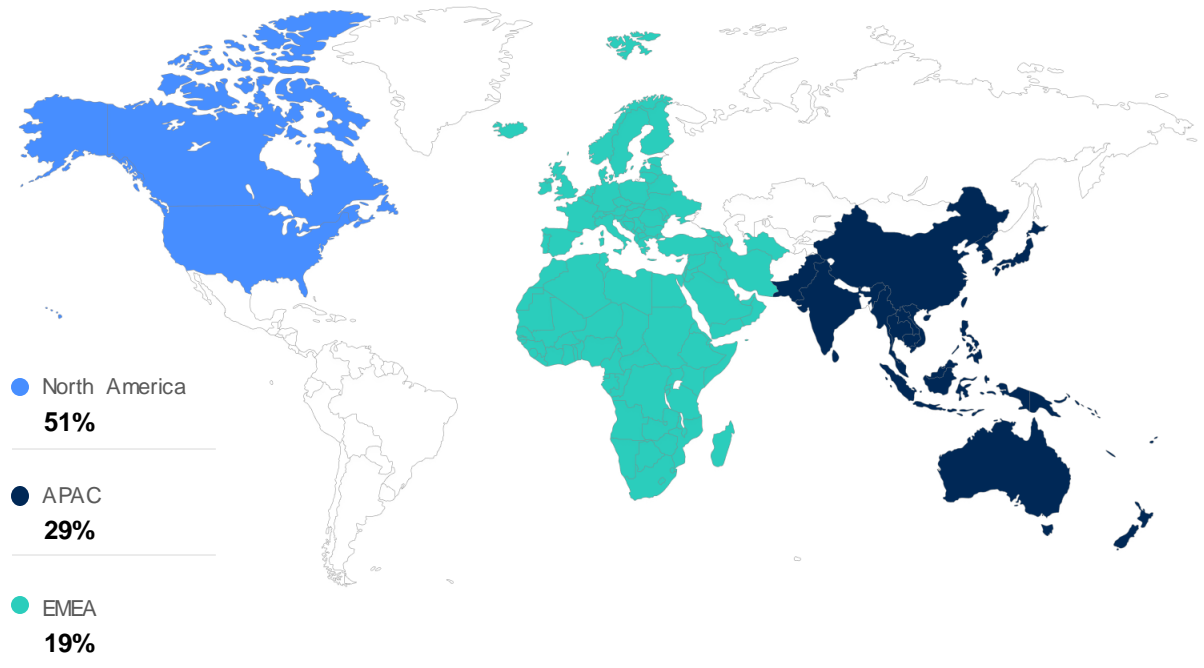
7
BUSINESS FUNCTION
SPECIFIC SURVEYS

833
LEADERS

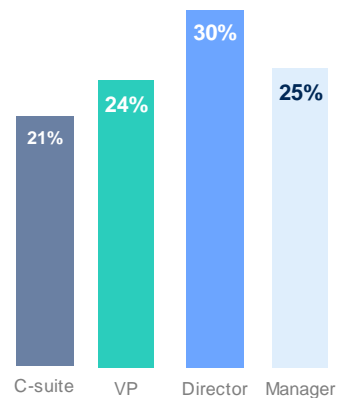
3
CONTINENTS

21
INDUSTRIES

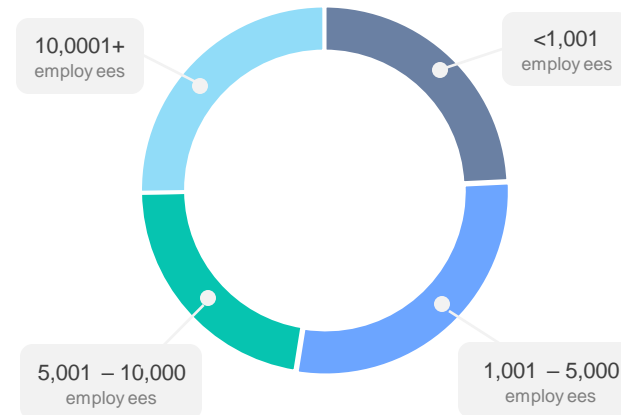
PARTICIPANTS BREAKDOWN



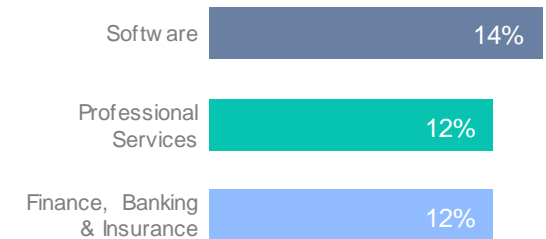
JOB LEVEL



COMPANY SIZE



INDUSTRY



Generative AI Surveys

Overview

Barriers, Benefits, Use Cases

Open-ended Insights

Peer Data & Insights

Additional Insights

RESTRICTED DISTRIBUTION

3 © 2023 Gartner, Inc. and/or its affiliates. All rights reserved.

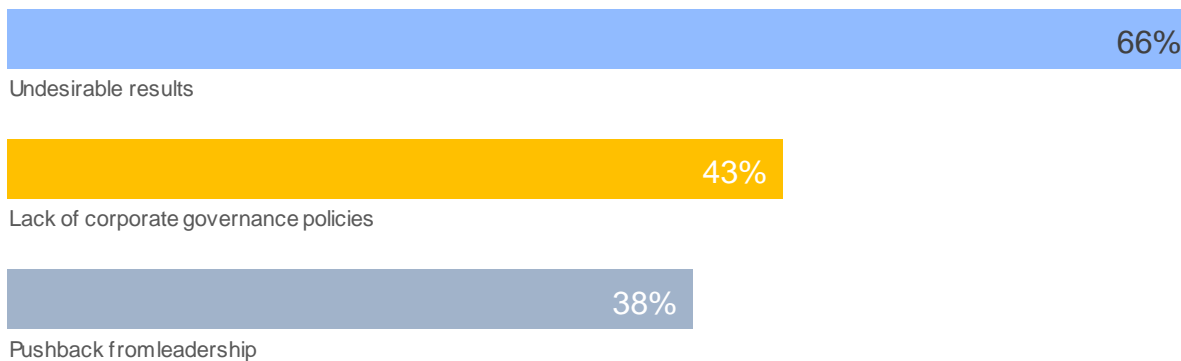
Gartner.
Peer Community™

Barriers to Generative AI Adoption

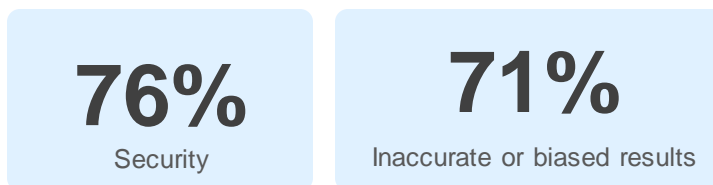
Top of mind risks for IT & INFOSEC LEADERS



Biggest challenges cited by SOFTWARE ENGINEERING LEADERS using Generative AI

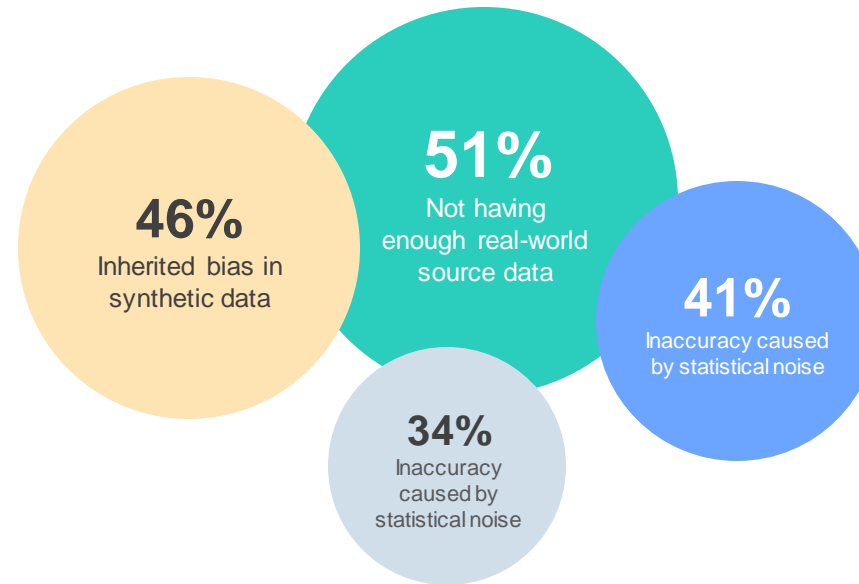


Reasons shared by SOFTWARE ENGINEERING respondents whose departments have not adopted Generative AI

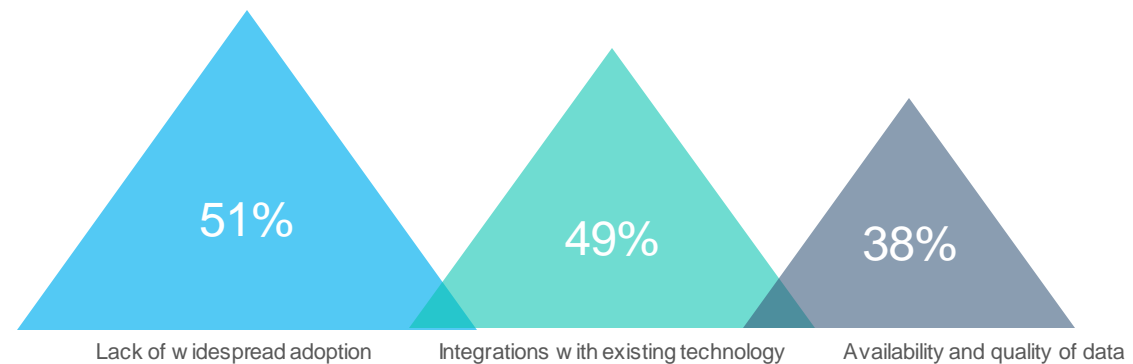


Barriers to Generative AI Adoption

Challenges of D&A LEADERS who have AI-generated synthetic data



The top selected adoption barriers among SALES LEADERS



Barriers to Generative AI Adoption

Generative AI adoption barriers for MARKETING LEADERS



Top adoption barriers submitted by SUPPLY CHAIN LEADERS



Identifying Generative AI's Benefits

IT & INFOSEC LEADERS expect the following for Generative AI

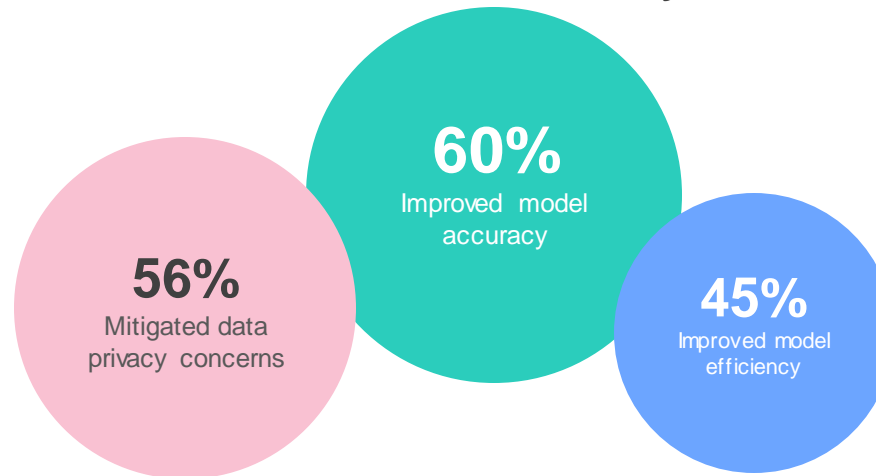


Tech leaders predict **positive bottom-line impacts** from large language models (LLMs) and generative AI apps; slightly fewer expect top-line impacts.

66% Positive impact on the bottom-line financial performance

59% Improve top-line financial performance

D&A LEADERS realized benefits of synthetic data



Identifying Generative AI's Benefits

SOFTWARE ENGINEERING LEADERS believe that

70%

Generative AI will have a somewhat positive impact on software engineering

23%

It will have a very positive impact

SUPPLY CHAIN LEADERS identify as expected benefits



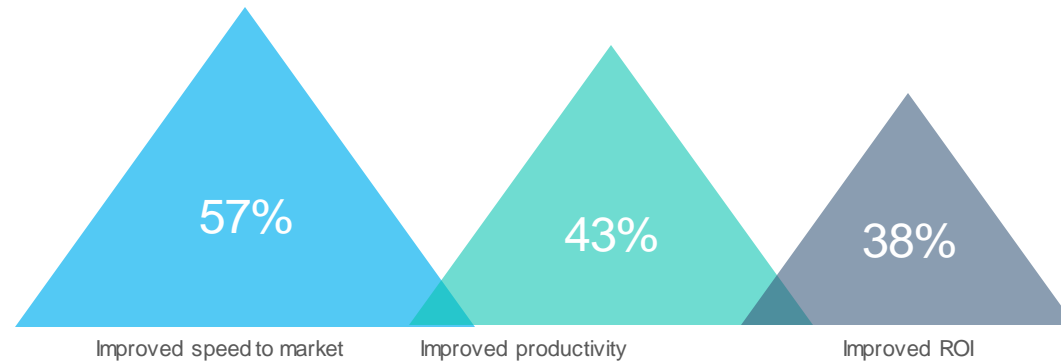
Identifying Generative AI's Benefits

SALES LEADERS believe that Generative AI would

Allow them to completely
replace a person

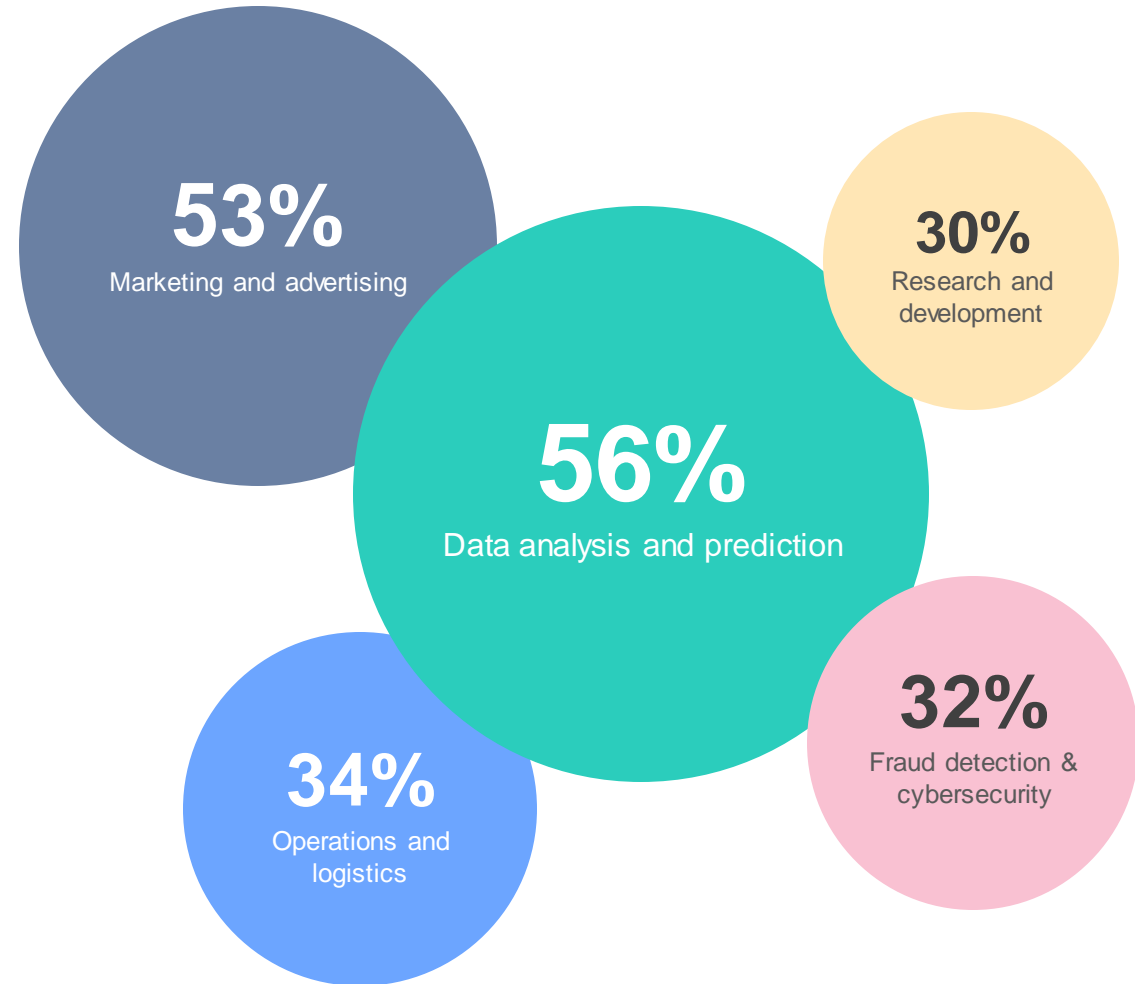
37%

MARKETING LEADERS top selected benefits



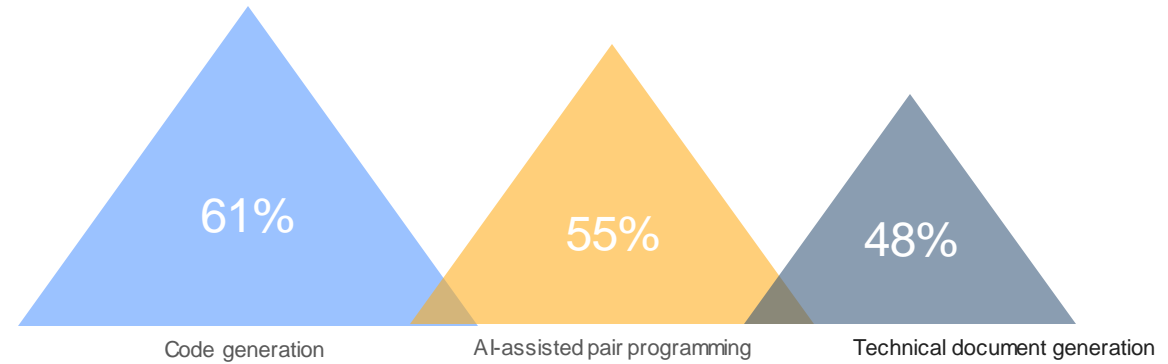
Pinpointing Use Cases

IT & INFOSEC LEADERS cite the following top use cases

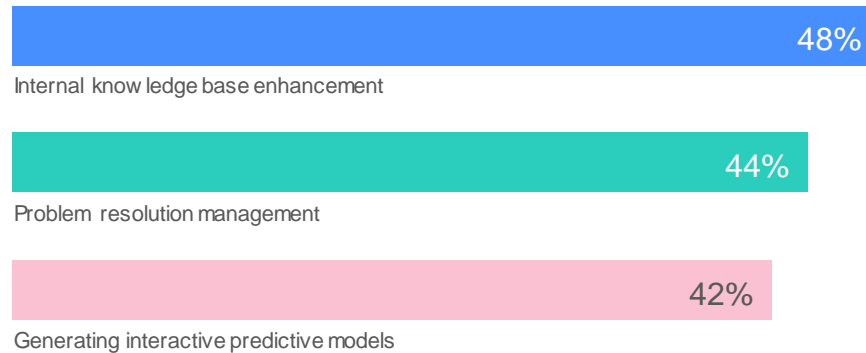


Pinpointing Use Cases

SOFTWARE ENGINEERING LEADERS are excited about using Generative AI in

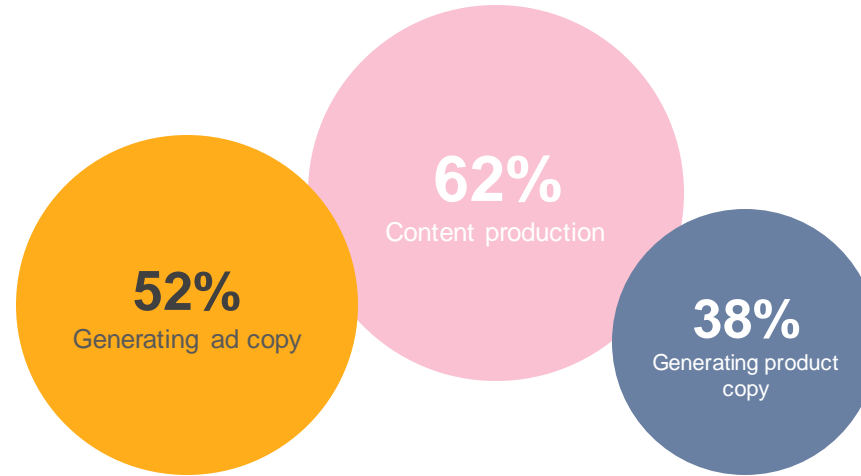


SUPPLY CHAIN LEADERS are planning to put Generative AI to use for

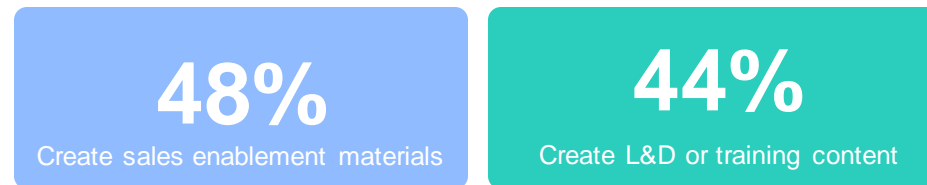


Pinpointing Use Cases

MARKETING LEADERS selected



SALES LEADERS most common use cases for Generative AI



Generative AI Surveys

Overview

Barriers, Benefits, Use Cases

Open-ended Insights

Peer Data & Insights

Additional Insights

RESTRICTED DISTRIBUTION

13 © 2023 Gartner, Inc. and/or its affiliates. All rights reserved.

Gartner.
Peer Community™

IT Leaders are saying...

“

“We are behind on embracing generative AI for security purposes, which is regrettable, because, predictably, malicious actors are not as behind.”

DIRECTOR

Arts and Entertainment Industry | 10,000+ Employees

“

“We see the huge benefits of generative AI but are taking baby steps with Chat GPT.”

DIRECTOR

Professional Services Industry | 5,000 – 10,000 Employees

“

“I think there is a general nervousness about jumping in too soon here. I think in the next 6-12 months we will all get a better understanding of what and how we can leverage this to our advantage as businesses and as society.”

C-SUITE

Consumer Goods Industry | 1,000 – 5,000 Employees

IT Leaders are saying...

“

“Definitely using but cautiously and primarily for data analysis and business planning and forecasting at this point. Not using clinically.”

C-SUITE
Healthcare Industry | 1,000 – 5,000 Employees

“

“Generative AI has to be seriously considered despite its limitations and regulatory challenges, especially for people in high-regulated industries.”

C-SUITE
Finance Industry | 1,000 – 5,000 Employees

InfoSec Leaders are saying...

“

“This is a new area and all our decisions are being questioned constantly.”

C-SUITE

Professional Services Industry | 1,000 – 5,000 Employees

“

“It's not 100% fool-proof and still benefits from human intervention.”

DIRECTOR

Healthcare Industry | < 1,000 Employees

“

“Loss of internal IP is rising to the top of our list as the number 1 risk for ChatGPT use within our organization with the potential for developers to feed it source code to help improve quality.”

VICE PRESIDENT

Natural Resource Extraction Industry | 10,000+ Employees

InfoSec Leaders are saying...

“

“There is still no transparency about data models are training on, so the risk associated with bias, and privacy is very difficult to understand and estimate.”

C-SUITE
Finance Industry | <1,000 Employees

“

“We are currently assessing compliance aspects [and] static analysis tool capabilities to continuously scan AI generated code, and also forming guidelines for aware and ethical use of generative AI tools by engineers.”

C-SUITE
Finance Industry | <1,000 Employees

Software Engineering Leaders are saying...

“

“Low-level software engineering jobs will be replaced by AI.”

DIRECTOR
Telecommunication Services Industry | 5,000 – 10,000 Employees

“

“It will create more volume of new code than we have resources to keep in check.”

DIRECTOR
Manufacturing Industry | 1,000 – 5,000 Employees

“

“[Generative AI will] increase productivity to a large extent, [and] create a lot of jobs for software engineers. The department will take a more strategic tack. More jobs will be created to develop a new set of human work tasks — many of them of higher value.”

DIRECTOR
Telecommunication Services Industry | 10,000+ Employees

Software Engineering Leaders are saying...

“

“[Generative AI] is going to change the overall TAT [turnaround time] for producing quality code. [It] may eradicate a lot of jobs especially at the junior software developer level.”

VICE PRESIDENT
Software Industry | 1,000 – 5,000 Employees

“

“[Generative AI] will help speed up coding — with human intervention after the main work is done by the AI.”

DIRECTOR
Natural Resource Extraction Industry | 10,000+ Employees

D&A Leaders are saying...

“

“AI generated synthetic data is quite sensitive and needs to be handled securely.”

MANAGER
Finance Industry | 5,000 – 10,000 Employees

“

“AI generated [techniques have] a high level of myopic bias, selecting the right vendor for data remains a challenge.”

MANAGER
Finance Industry | 1,000 – 5,000 Employees

“

“It is in [an] early stage and will be tough to adopt across [the] entire organization and also ROI cannot be [easily] calculated. Regulatory issues are a major concern.”

C-SUITE
Finance Industry | 10,000+ Employees

D&A Leaders are saying...

“

“There has to be [an] integration of Human Resource insights along with AI generated synthetic data to improve the utmost effectiveness.”

MANAGER

Professional Services Industry | 5,000 – 10,000 Employees

“

“It's difficult to reduce bias while also improving accuracy for healthcare data. So far the only way is to tokenize real-world data to reduce risk while preserving data accuracy and quality.”

DIRECTOR

Finance Industry | 10,000+ Employees

Supply Chain Leaders are saying...

“

“Ethical implications are humongous while working with AI/ML in supply chain industry. The AI disruptions leading to elimination of supply chain manpower from various critical stages of business is posing issue for businesses and professionals globally.”

DIRECTOR
Education Services | APAC | 501 – 1,000 Employees

“

“Generative AI can be employed to design and manage warehouse operations more effectively, optimizing space utilization, labor allocation, and material handling processes. By automating these tasks, logistics companies can significantly reduce their operational costs and improve overall efficiency.”

MANAGER
Manufacturing | APAC | 10,001+ Employees

“

“[Generative AI] will be a part of the supply chain technology ecosystem, and will be used to predict outcomes, prevent issues from occurring, and prescribe actions.”

DIRECTOR
Consumer Goods | North America | 10,001+ Employees

“

“[Generative AI has] very bright future for accurate modelling of tasks and find fastest route possible and inventory replenishment.”

VICE PRESIDENT
Consumer Goods | APAC | 51 - 200 Employees

Marketing Leaders are saying...

“

"Once generative AI is integrated with most marketing technology systems, I foresee prompt based images, videos and copy being widespread. Imagine creating multivariate tests using multiple assets in multiple languages with multiple landing pages."

MARKETING VP
Hospitality | APAC | <1,000 Employees

“

"[Marketing teams] should be using generative AI in all aspects of marketing. Content, digital ad copies, SEO suggestions, brand video and infographics."

MARKETING DIRECTOR
Finance & Banking | APAC | 1,001 – 5,000 Employees

“

"By utilizing the power of generative AI, marketing teams can enhance customer experience and boost sales by creating tailored content, evaluating customer feedback, implementing precise pricing strategies, launching focused marketing campaigns, and automating customer service processes."

C-SUITE
Finance Industry | 10,000+ Employees

Sales Leaders are saying...

“

"Don't rely on it completely so that your customers will easily find out that you have used generative AI tool."

SALES MANAGER

Professional Services Industry | APAC | 1,001 – 5,000 Employees

“

"It can serve as a useful outline, however it lacks innovative thinking. It reports from past data."

SALES DIRECTOR

Telecommunication Services | North America | 1,001 - 5,000 Employees

Generative AI Surveys

Overview

Barriers, Benefits, Use Cases

Open-ended Insights

Peer Data & Insights

Additional Insights

RESTRICTED DISTRIBUTION

25 © 2023 Gartner, Inc. and/or its affiliates. All rights reserved.

Gartner.
Peer Community™

IT – ChatGPT policies under development, risk convos make it to the boardroom

79% Currently don't have an acceptable use policy in place for ChatGPT

32% In the process of developing one

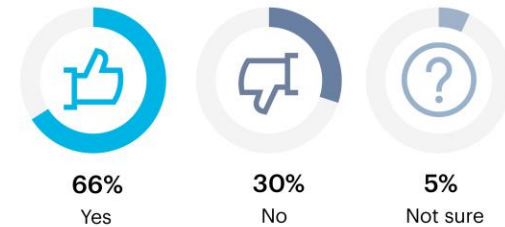
69% Use ChatGPT for business purposes

21% Use paid subscription

The potential risks of generative AI have become a board-level conversation at some organizations

66% of respondents say their executive leadership team has discussed the **potential risks of generative AI**.

Have the potential risks of generative AI been discussed by your executive leadership team?

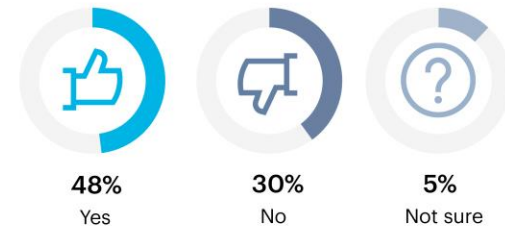


n = 200

Note: May not add up to 100% due to rounding

Among respondents who reported that their organizations have a **board of directors** (n = 168), **40%** say the board has addressed **generative AI risk**

Have the potential risks of generative AI been discussed by your board of directors?*



n = 168

*Question omits those who responded "Not applicable; we don't have a board of directors"

Additional Results: IT

Generative AI adoption levels vary; the top use case among adopters is data analysis and prediction

While most respondents (60%) report that their organizations use **generative AI solutions beyond ChatGPT** for specific applications, only 12% say they use the technology extensively, while 48% use it to a limited extent.

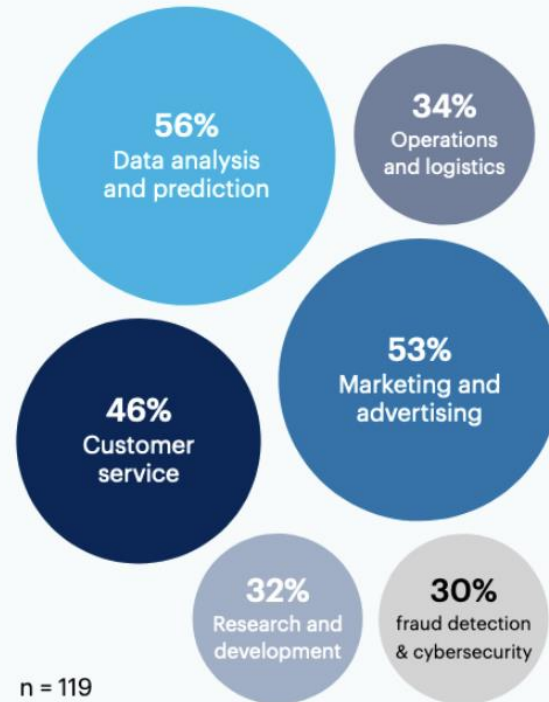
Is your organization currently employing generative AI beyond ChatGPT for any specific applications?*



n = 200

Note: May not add up to 100% due to rounding

*Respondents who answered "Not sure" were eliminated from the survey.



n = 119

Question shown only to leaders who answered "yes, extensively" or "yes, to a limited extent" to the question "Is your organization currently employing generative AI beyond ChatGPT for any specific applications?"

*Other: Development, Testing

Tech leaders who say their organizations currently use **generative AI beyond ChatGPT** (n=119) cited data analysis and prediction (56%) and marketing and advertising (53%) as the top use cases.

About **one-third** say they are using it for operations and logistics (34%), research and development (32%), or fraud detection and cybersecurity (30%).

In what ways is your organization currently using generative AI? Select all that apply.

Fraud detection and cybersecurity 30% | Product development 22% | Human resources 9% | Finance operations 5% | Other* 2%

InfoSec – AI working groups, data guidelines and humans in the loop for risk mitigation

44%

Their organization has or will establish new working groups to manage generative AI security and risks.

61%

use or plan to use data guidelines

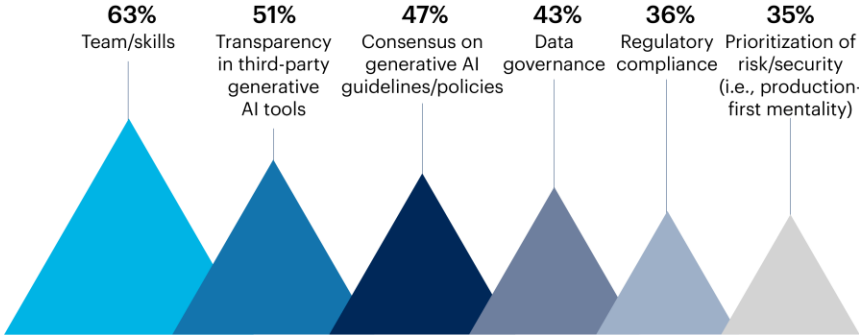
55%

associated with generative AI tools or foundational models

Undesirable outputs and insecure code are among the top-of-mind risks concerning most respondents in terms of generative AI at their organizations

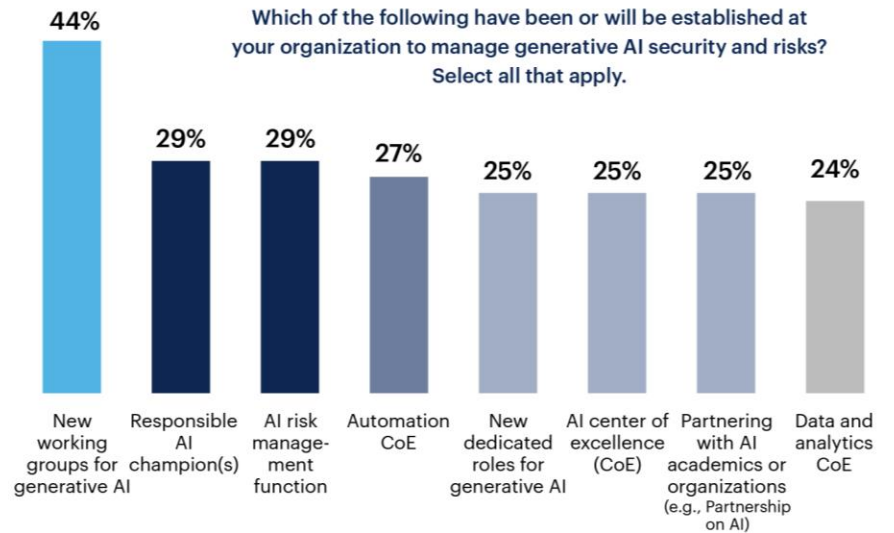
When it comes to deficiencies in security and risk management for generative AI or foundational models, surveyed leaders noted gaps in team/skills (63%), transparency in third-party generative AI tools (51%), and consensus on related guidelines or policies (47%).

Are you experiencing gaps or deficiencies in any of these areas when it comes to security/risk management for generative AI tools or foundational models? Select all that apply.



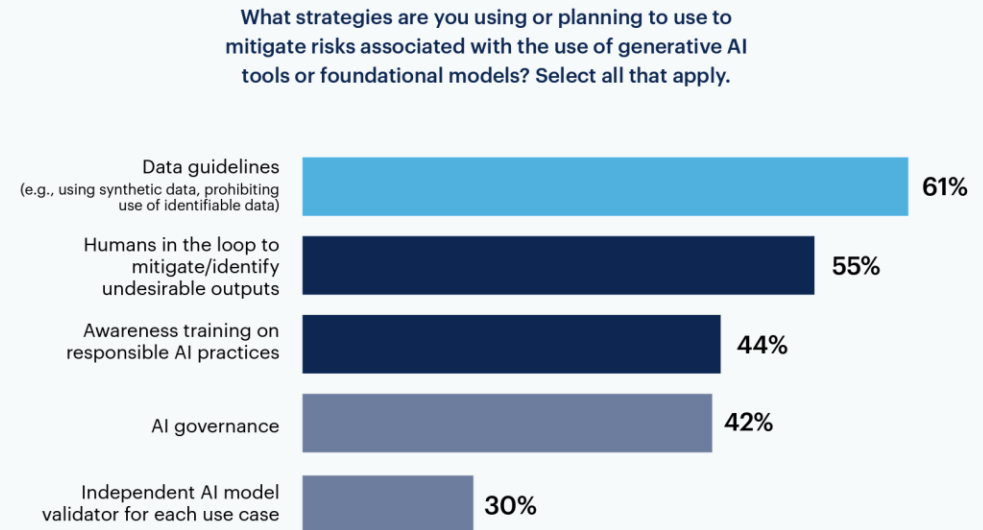
Industry best practices 29% | Transparency in foundational models 21% | Collaboration across stakeholder groups 17% | Not sure 2% | None of these 1% | Other 0% | n = 150

Additional Results: InfoSec



AI ethics board 14% | Partnering with AI startups 12% | Not sure 7% | None of these 4% | Other (Too early to say) 1%

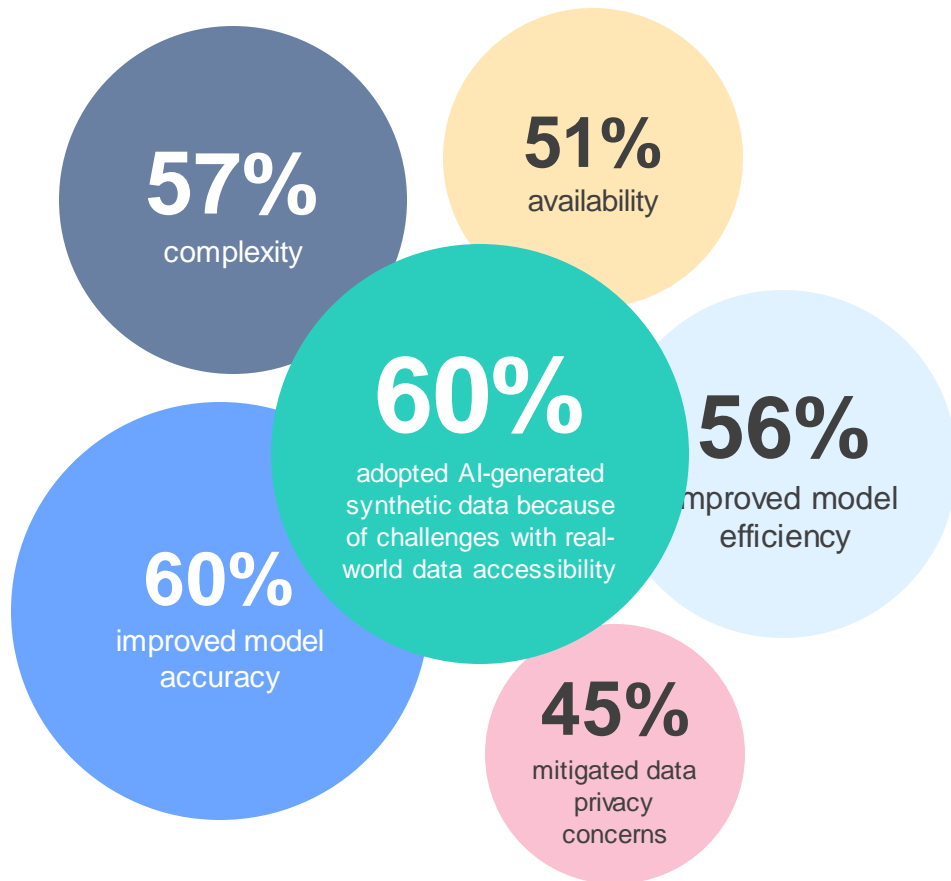
n = 150



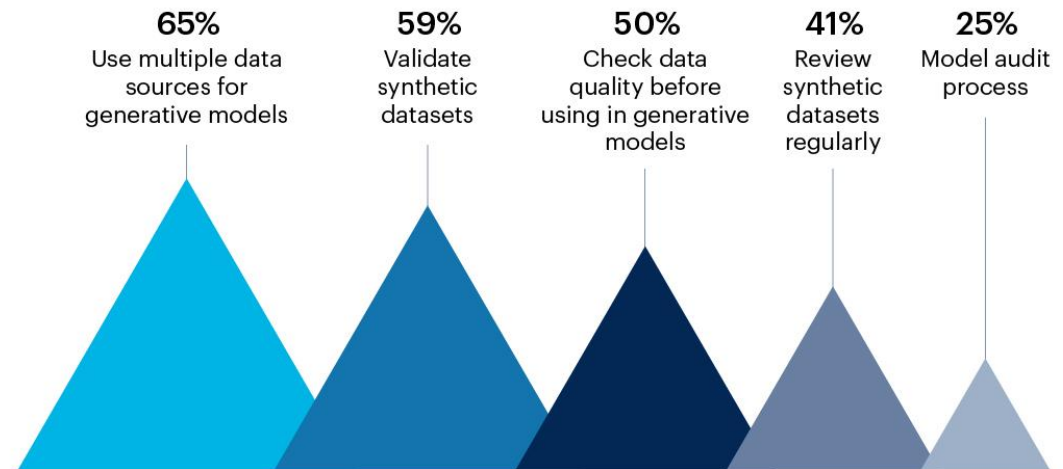
Vendor selection strategies (e.g., requiring explainable AI) 21% | AI application security program 20% | Explainable AI frameworks 19% | Adversarial attack resistance 17% | Not sure 5% | Other <1% | None of these 0%

n = 150

D&A – AI-generated synthetic data can overcome real-world data shortfalls but is not infallible



What best practices have you implemented to ensure the quality of your synthetic data is high? Select all that apply.



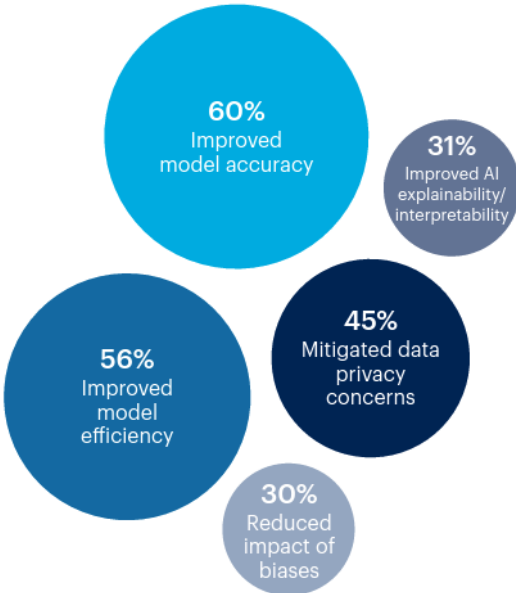
Evaluate synthetic data quality 24% | We haven't implemented any best practices 7% | Other 0%

n = 150

Source: Generative AI for Synthetic Data

Additional Results: D&A

Synthetic data can improve model accuracy and efficiency, but many have faced challenges with lack of or low quality real-world source data



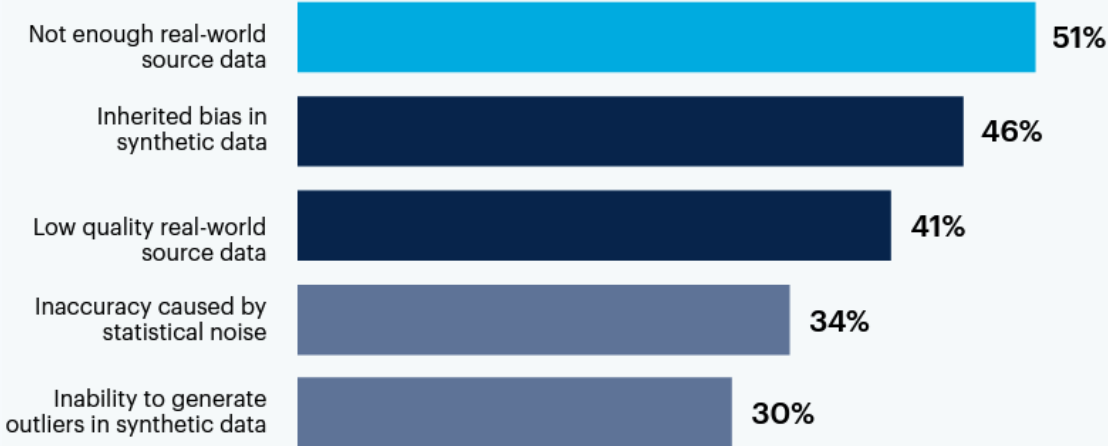
The most often realized **benefits** of synthetic data at respondents' organizations are improved model accuracy (**60%**), improved model efficiency (**56%**) and mitigated data privacy concerns (**45%**).

How has synthetic data benefited your organization? Select all that apply.

Increased efficiency of data teams **25%** | Rebalanced datasets **23%** | Reduced data breach risks **19%** | Reduced overfitting **14%** | None of these **3%** | Other **0%**

n = 150

What challenges have you experienced with synthetic data in your organization? Select all that apply.



Lack of expertise **25%** | Insufficient resources **24%** | Accuracy degradation **23%** | Integration with existing data systems **14%** | Cost of computing power **12%** | Selecting the right vendor **11%** | Determining appropriate utility metrics **11%** | Legal/ethical concerns (e.g., re-identification risk) **10%** | We haven't experienced any challenges with synthetic data **2%** | Other **0%**

n = 150

Software Engineering – using generative AI, but many lack governance

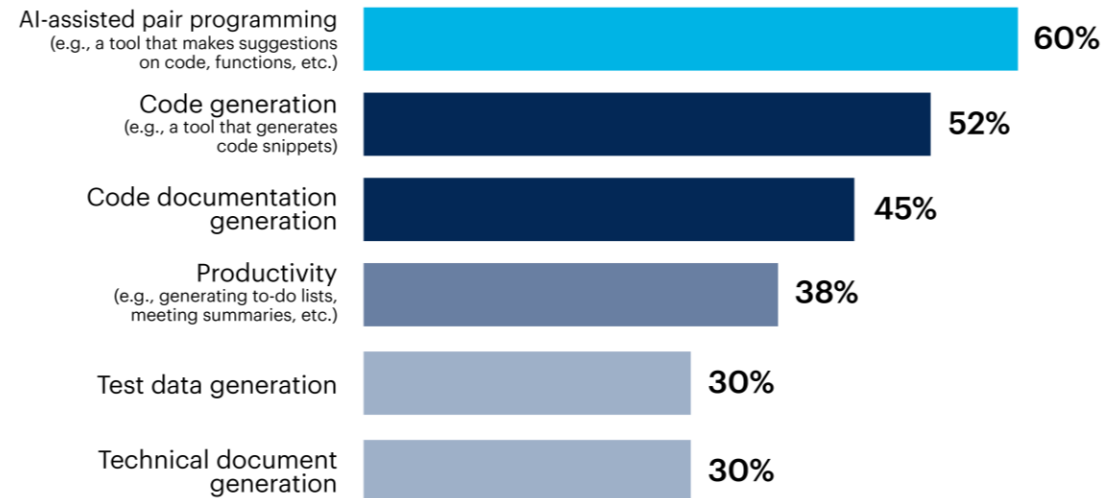
More than half of respondents say generative AI is currently used in their software engineering department.

60% of those use it for AI-assisted pair programming

78% of those respondents use ChatGPT.

55% do not have governance policies in place.

How do you use generative AI in your software engineering department? Select all that apply.



Customer feedback summarization 20% | Governance document generation 12% |
Hyperautomation support 12% | None of these 2% | Not sure 0% | Other 0%

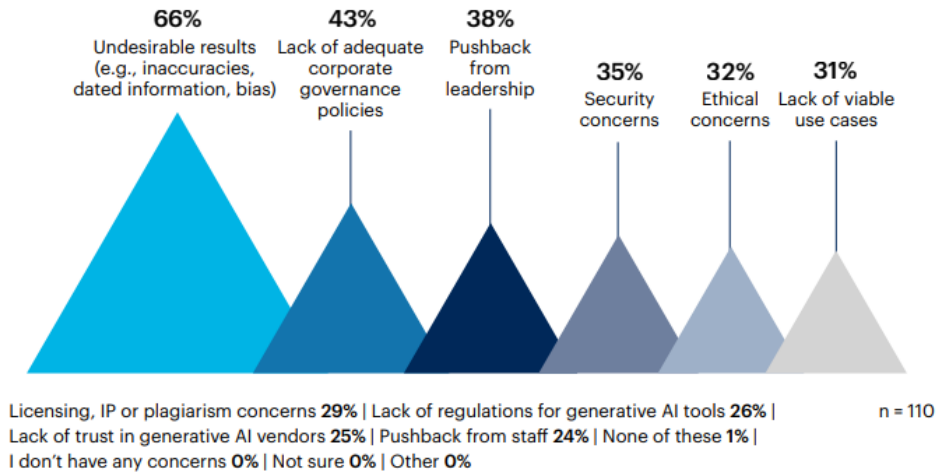
n = 60

Question shown only to respondents who answered "yes" to the question "Is your software engineering department currently using generative AI?"

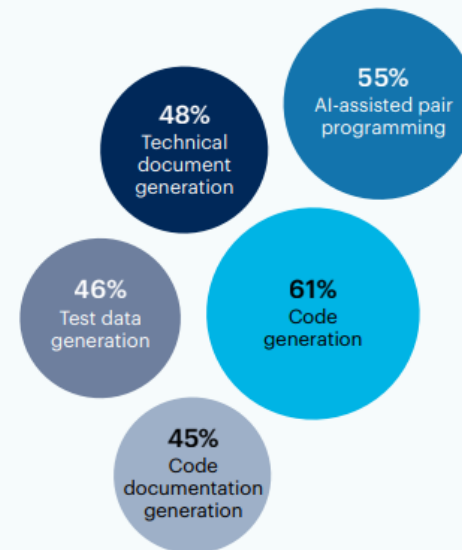
Additional Results: Software Engineering

As for difficulties, respondents identified undesirable results (66%), lack of corporate governance policies (43%) and pushback from leadership (38%) as the biggest challenges associated with using generative AI in software engineering.

Overall, what are the biggest challenges associated with using generative AI in software engineering? Select all that apply.



Software engineering and IT leaders are excited about generative AI's use in code generation, but concerned with undesirable results



Respondents, whether their software engineering department uses or does not use generative AI, are excited about generative AI's use in code generation (61%), AI-assisted pair programming (55%) and technical document generation (48%).

Overall, which use cases for generative AI are you most excited about for software engineering? Select all that apply.

Productivity 35% | Governance document generation 30% | Hyperautomation support 25% | Customer feedback summarization 18% | There are no promising use cases 4% | None of these 1% | Not sure 0% | Other 0%

n = 110

Supply Chain* - leaders are looking to AI to address the corporate brain drain and increasing unpredictability

40%

of respondents are already using Generative AI as a part of their supply chain strategy

45%

plan to deploy it soon

71%

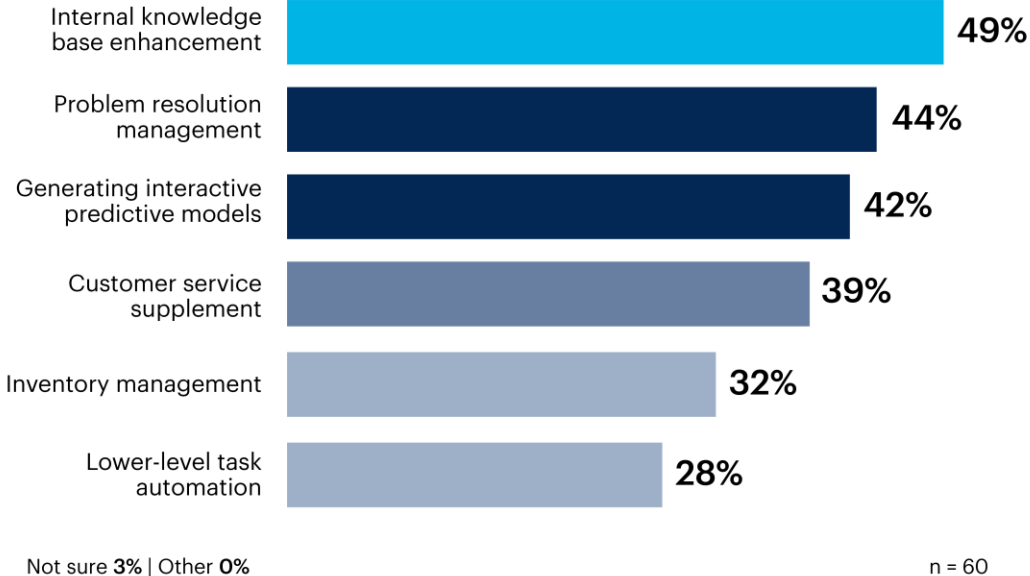
expect that generative AI will become a standard in supply chain within 4 years.

Nearly half of surveyed supply chain leaders are using or plan to use **generative AI to enhance internal knowledge bases**

42%

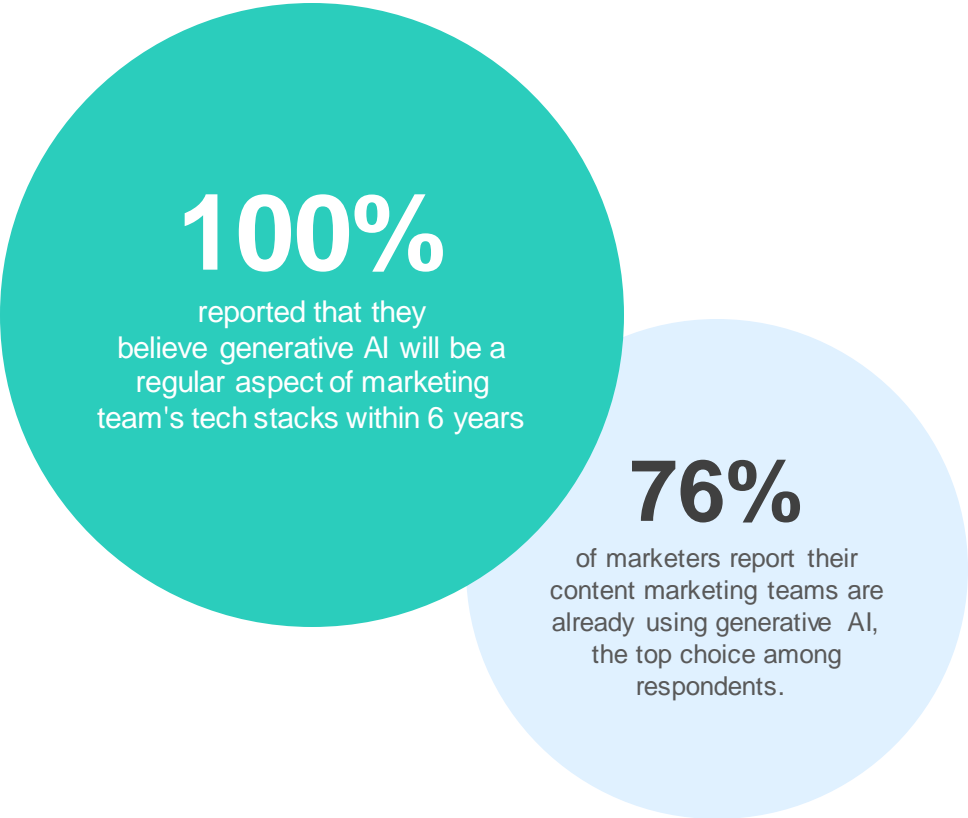
plan to use it to generate predictive models

How are you using, or how do you plan to use, generative AI as a part of your supply chain transformation strategy? Select all that apply.



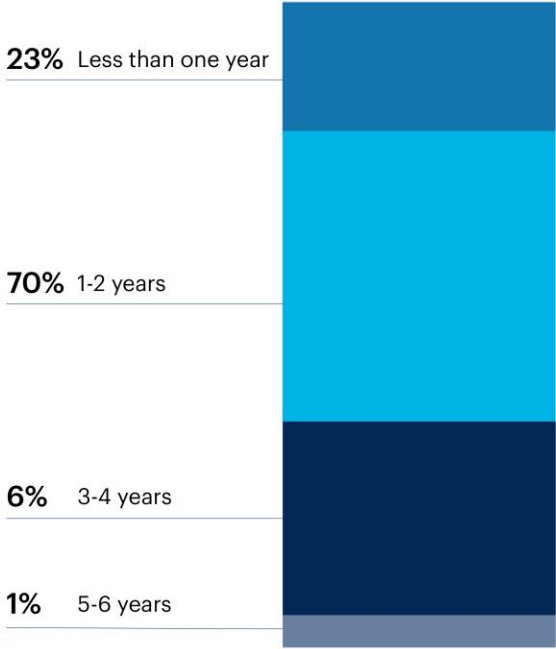
Source: Generative AI for Supply Chain Transformation
*Survey still in collection phase. Results are preliminary

Marketing* — expects generative AI to become a mainstay in the MarTech stack, and many are already using it



How long do you think it will be until generative AI is used regularly as part of marketing teams tech stacks?

7-10 years **0%** |
More than 10 years **0%** |
Generative AI will never become a standard on marketing teams **0%**
n = 110



Source: Generative AI in Marketing
*Survey still in collection phase. Results are preliminary

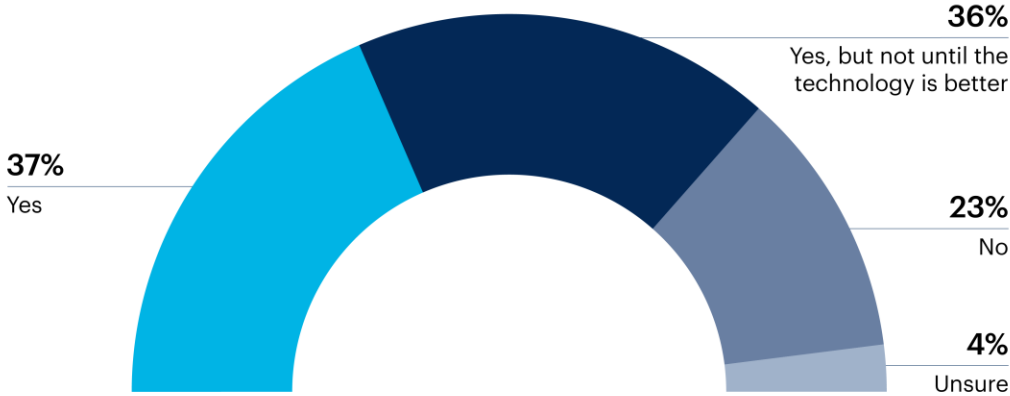
Sales* - Some believe they can completely replace a team member with generative AI, with sales ops being most common

37% believe generative AI tools would allow them to completely replace a person on their team while still producing the same results.

74% believe sales operations roles could be replaced.

55% say they would be extremely or moderately concerned if a customer discovered their content was AI generated.

Do you believe generative AI tools would allow you to completely replace a person on your team (e.g. operations, enablement, or admin) while still producing the same results?



Note: May not add up to 100% due to rounding.

n = 92

Source: Generative AI Sales Tools

*Survey still in collection phase. Results are preliminary

Generative AI Surveys

Overview

Barriers, Benefits, Use Cases

Open-ended Insights

Peer Data & Insights

Additional Insights

RESTRICTED DISTRIBUTION

37 © 2023 Gartner, Inc. and/or its affiliates. All rights reserved.

Gartner.
Peer Community™


One-Minute Insights

Individual Reports for Deeper Dives

1

Gartner.
Peer Community.

Generative AI
for Software
Engineering Teams



BENCHMARK YOUR RESPONSES
GET FULL REPORT

2

Gartner.
Peer Community.

Generative AI
for Synthetic Data



BENCHMARK YOUR RESPONSES
GET FULL REPORT

3

Gartner.
Peer Community.

Generative AI
Security and Risk
Management Strategies




BENCHMARK YOUR RESPONSES
GET FULL REPORT

4

Gartner.
Peer Community.

Generative AI
and ChatGPT:
Adoption and Use



BENCHMARK YOUR RESPONSES
GET FULL REPORT

RESTRICTED DISTRIBUTION

JOIN THE CONVERSATIONS!

Join **Gartner Peer Community** and thousands of members to get real-time data and insights, **ask questions** and **get answers** from peers who have been-there, done-that.

