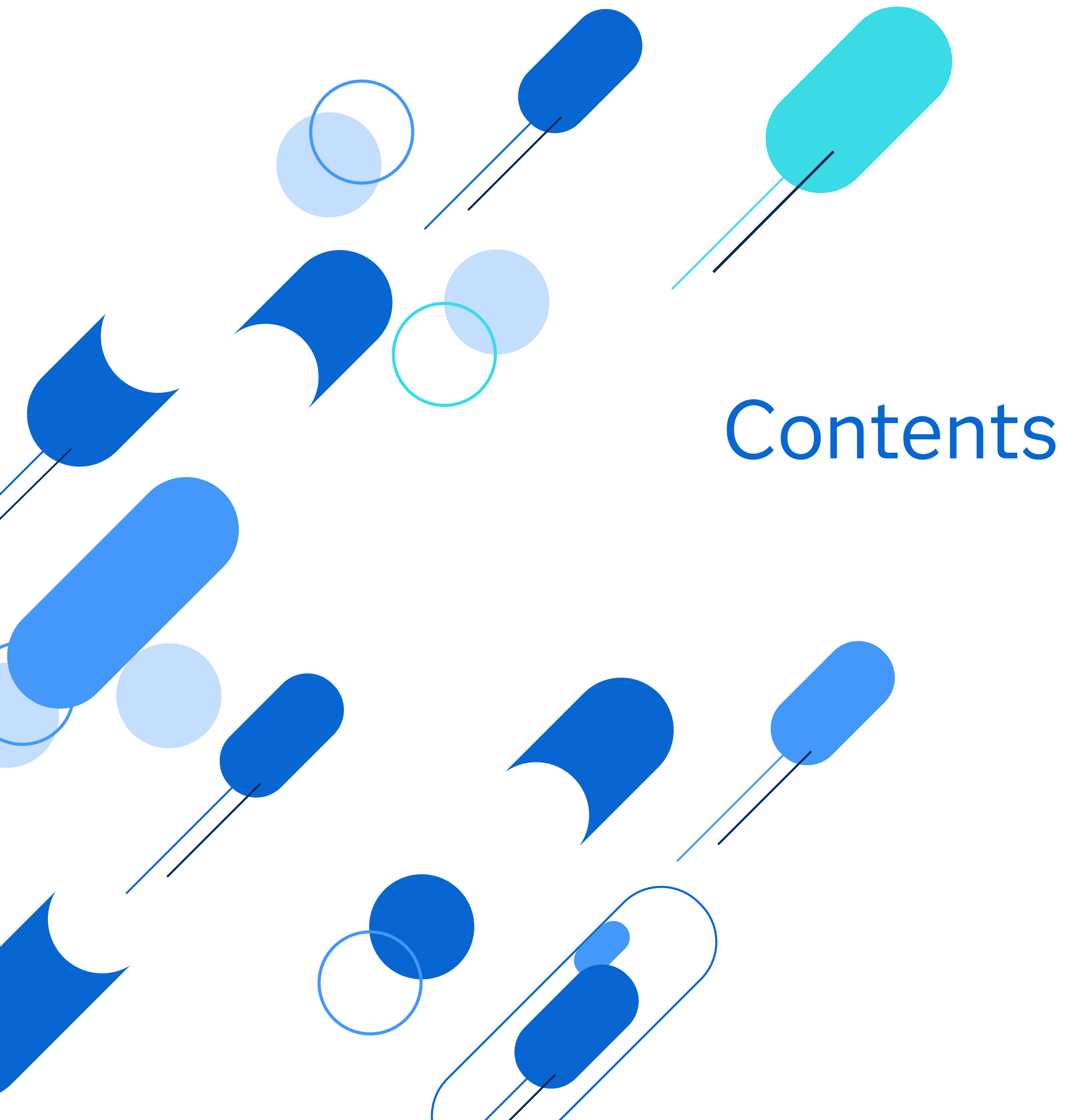




Generative AI Global Research Report: Strategies for a Competitive Advantage





Contents

01

Foreword: Your journey to a GenAI future

By Marinela Profi, Strategic AI Advisor at SAS

The advent of generative AI (GenAI) promises to revolutionize the landscape of human and business productivity. As you embark on this transformative journey, it is imperative to acknowledge the boundless potential of this new technology, as well as the challenges that accompany such innovation.

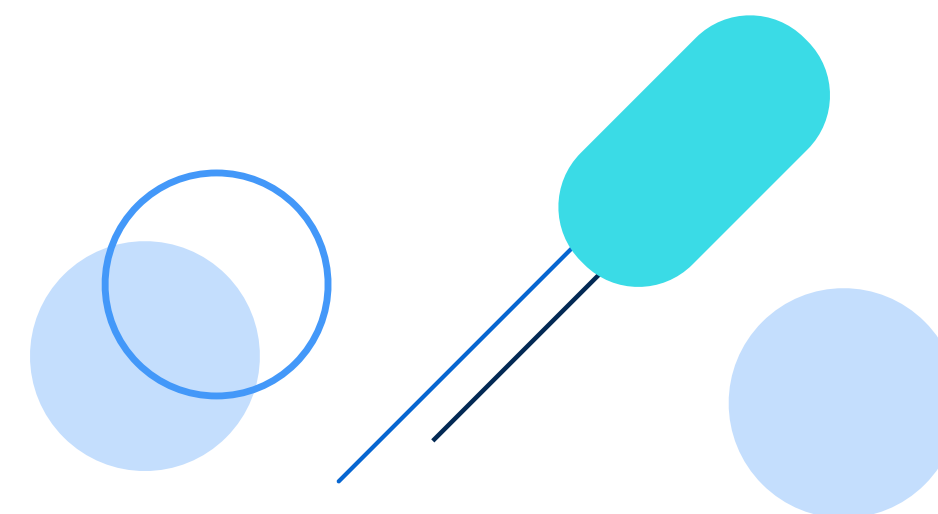
This report is based on a new survey of 1,600 organizations across the globe. The respondents are decision makers in GenAI strategy or data analytics in organizations across key sectors. The research assesses their current plans to deploy GenAI, reveals how the technology is integrated into their strategic planning, and explores the specific issues they have encountered along the way. Through meticulous analysis, we examine the pulse of the market, offering insights into the prevailing sentiments around GenAI and the hurdles that organizations face as they integrate the technology into their operations.

From discussions on orchestration, governance and data privacy to consideration of hallucinations (incorrect or misleading results sometimes generated by large language models (LLMs)) and cost implications, we examine the challenges that companies must overcome and the opportunities GenAI offers for increased productivity and competitive advantage.

This report presents best practices and strategic insights aimed at empowering organizations to harness GenAI's full potential.

In this report, you will learn:

- The strategic investments companies are making to harness the unparalleled potential of GenAI.
- How to identify leading GenAI use cases to deliver speedy return on investment.
- Which data and AI tools can help identify potential biases in the raw data used to feed LLMs.
- How you can facilitate measurable outcomes with GenAI and decisioning workflow systems.
- How to proactively prepare your organization in an era of exciting change.
- Which regions and industries are thriving, and which are moving more slowly compared to the rest of the market.

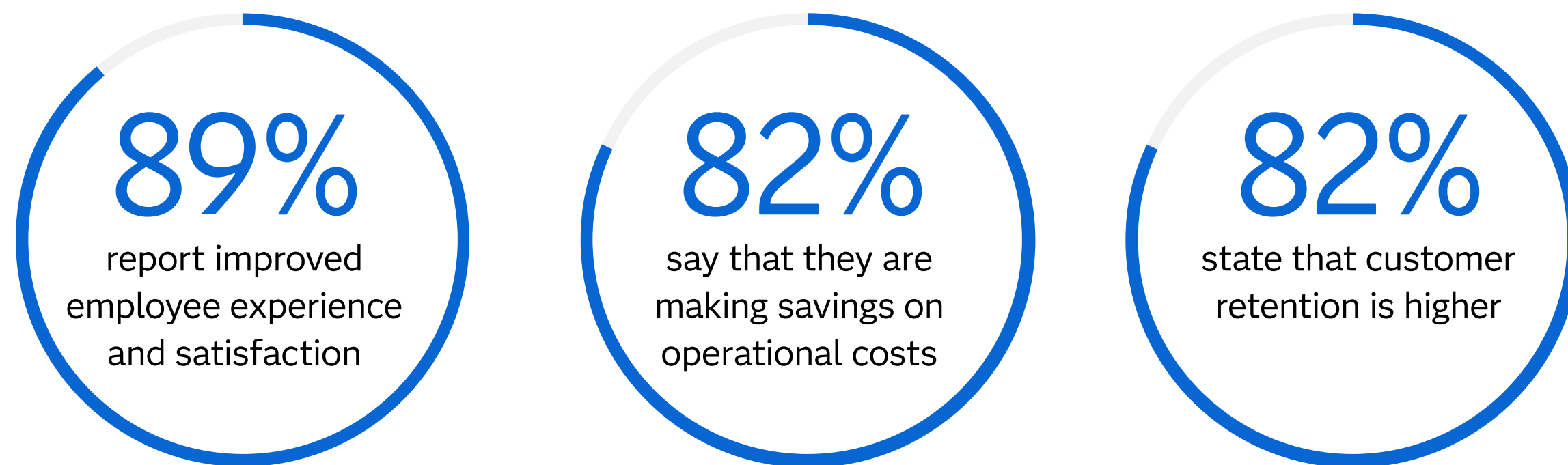


02

Organizations are reporting early successes

Since the widespread launch of ChatGPT in November 2022, GenAI has emerged as a technology with extraordinary potential. Decision makers recognize that GenAI can drive innovation, new conversational experiences and operational efficiency.

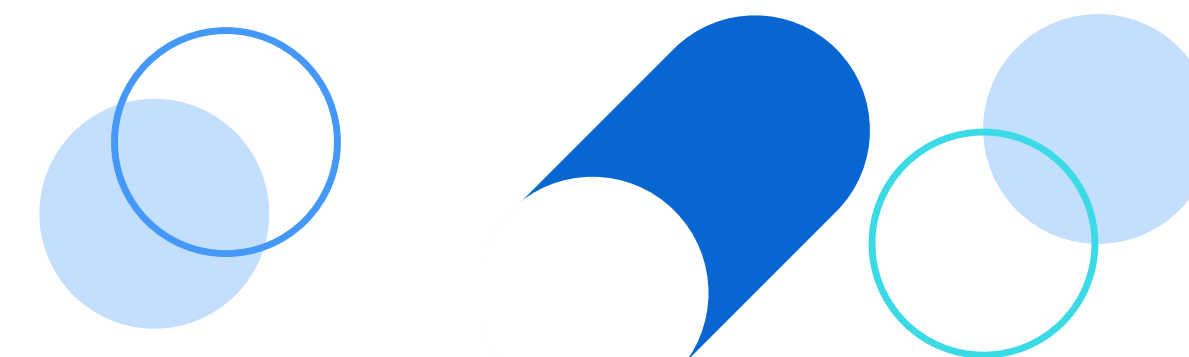
Our research shows that organizations that embrace generative AI are seeing significant benefits.



However, with increased focus on and investment in GenAI, many organizations are encountering difficulties with implementation. These issues threaten to waste resources, dissuade customers and even render organizations legally noncompliant. In organizations that have fully implemented GenAI projects, 39% are finding it a challenge to integrate GenAI technology into existing systems, while 34% are struggling with prohibitive costs. These issues are best resolved at an early stage, ideally before GenAI is deployed and significant resources are invested.

Our research shows that while organizations expect to have GenAI successes, they hit stumbling blocks in four areas of implementation:

- **Increasing trust in data usage and achieving compliance.** Embedding trust in your business outcomes.
- **Unlocking value.** Translating adoption into measurable benefits.
- **Orchestrating GenAI into existing systems and processes.** Ensuring that systems and tools do not limit GenAI's potential.
- **Finding talent and skills.** Identifying the talent who can support your GenAI strategy.



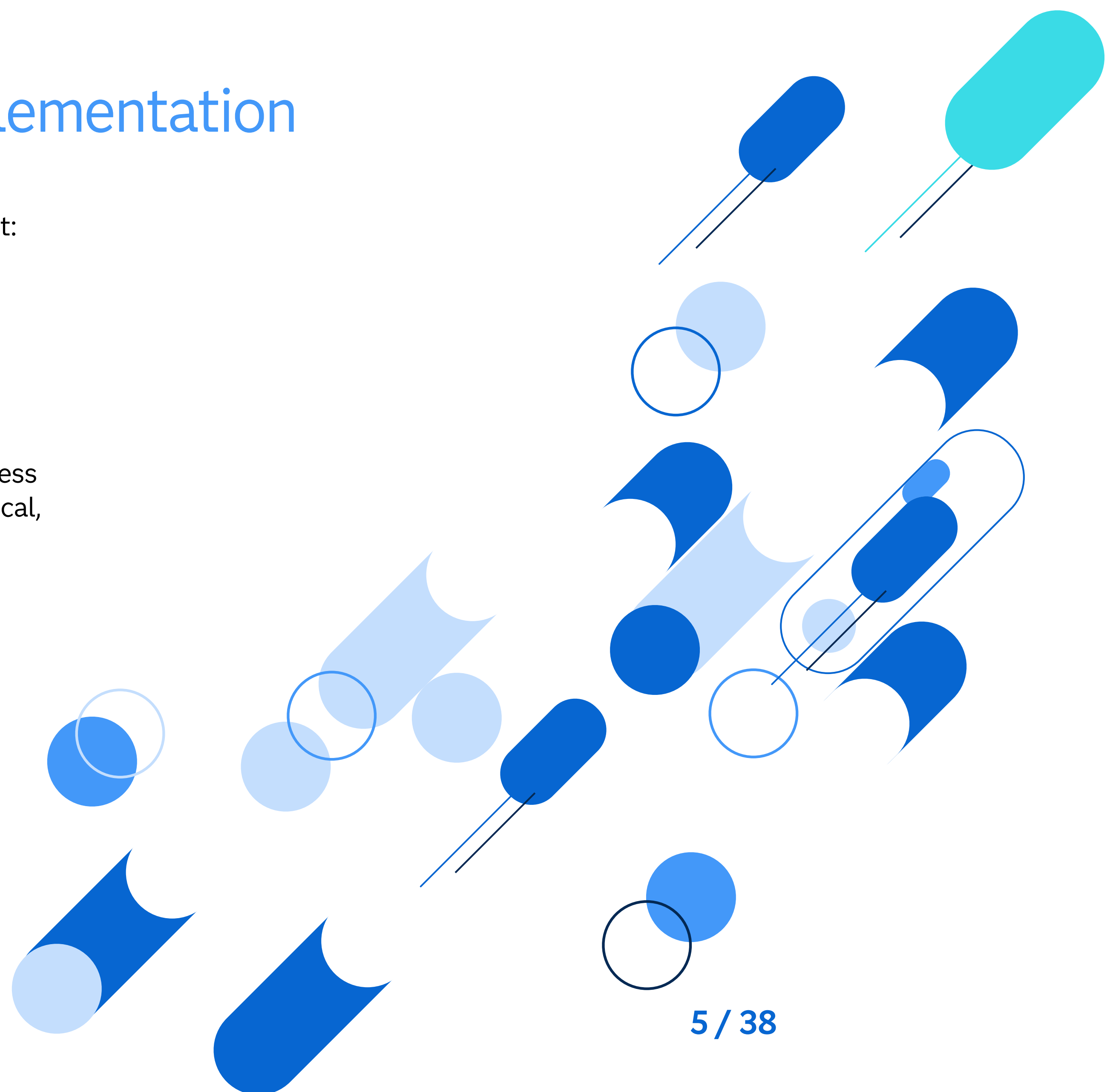
03

Strategies for successful GenAI implementation

There are four key elements to achieving success with your GenAI investment:

1. Comprehensive governance
2. Strategic deployment
3. Technological integration
4. Expert guidance

To maximize productivity, GenAI must be seamlessly embedded within business processes and systems. Performance should be reliable, transparent and ethical, accelerating productivity and improving customer experience, while adding measurable value to stakeholders.



a. Comprehensive governance: Increasing trust in data usage and achieving regulatory compliance

When a GenAI investment performs reliably, transparently and ethically, organizations see the benefits. However, many lack full oversight of the technology, and the majority are at risk of noncompliance when it comes to quickly evolving regulations.

Our research finds that:

- Only one in 10 organizations has undergone the preparation needed to comply with GenAI regulations.
- **95%** of businesses lack a comprehensive governance framework for GenAI.
- Fewer than one in 10 organizations (**7%**) is providing a high level of training on GenAI governance and monitoring.
- Three-quarters of respondents are concerned about data privacy (**76%**) and security (**75%**) when GenAI is used in their organization.
- Only one in 20 organizations (**5%**) has a reliable system in place to measure bias and privacy risk in LLMs.
- Seven in 10 organizations are not able to continuously monitor their GenAI systems.

Respondents who say they are best prepared for GenAI regulations are found in China (where almost a fifth of respondents, **19%**, report that they are fully prepared) followed by Australia (**15%**) and the US (**14%**). The least prepared respondents are in Ireland, where **60%** report they are prepared or only slightly prepared, and in Benelux (**56%**) and Poland (**55%**).

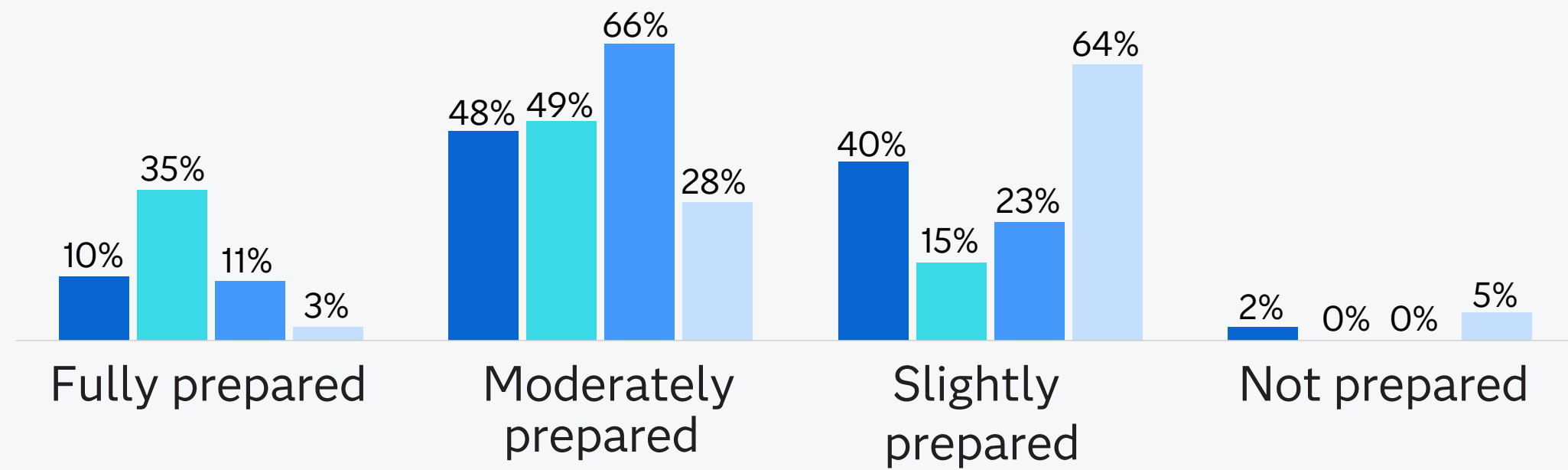
Some sectors are ahead of the rest when it comes to developing a comprehensive governance framework for GenAI. Leading the way, telco organizations report that almost one in 10 (**9%**) have developed such a framework, followed by manufacturing organizations and retail, each at **8%**.



Only one in 10 businesses has undergone the preparation needed to comply with current and upcoming regulations concerning GenAI.

The majority of organizations lack a comprehensive governance framework for both AI and GenAI (seven in 10 adopters admit to this).

How prepared is your organization to comply with current and upcoming regulations concerning GenAI?



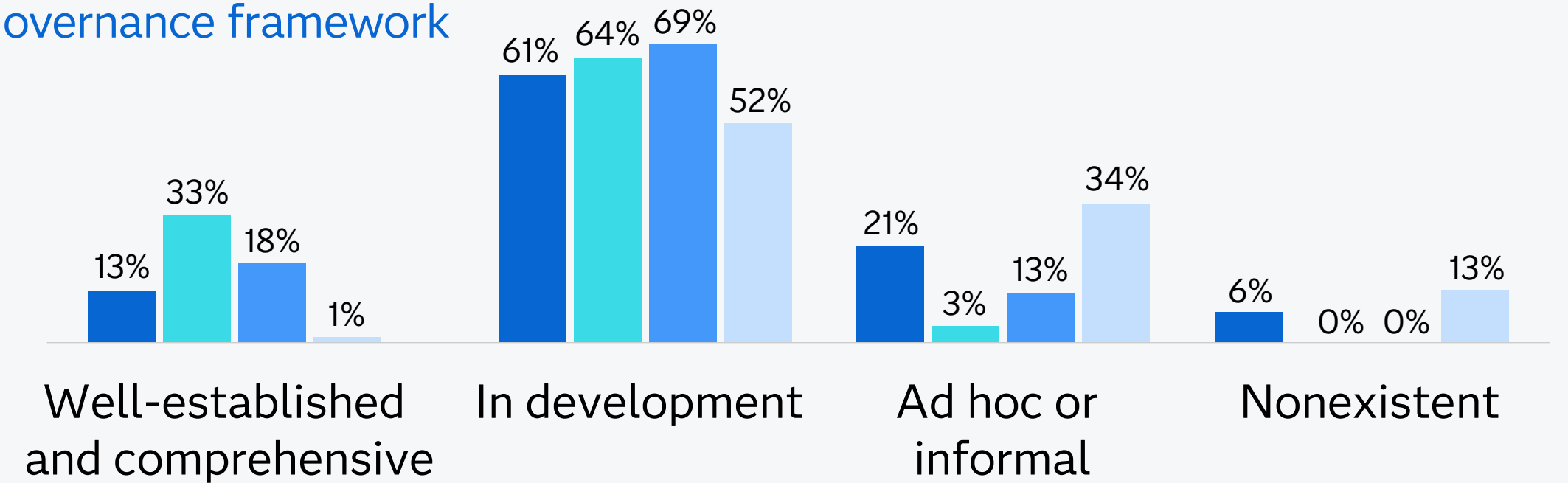
Please note that percentages on charts may not add to 100% due to rounding

- All respondents using/planning to use GenAI
- Using GenAI and have fully implemented it
- Using GenAI but haven't yet fully implemented it
- Not yet using GenAI but intend to within the next two years

How would you describe your current GenAI/AI governance framework?

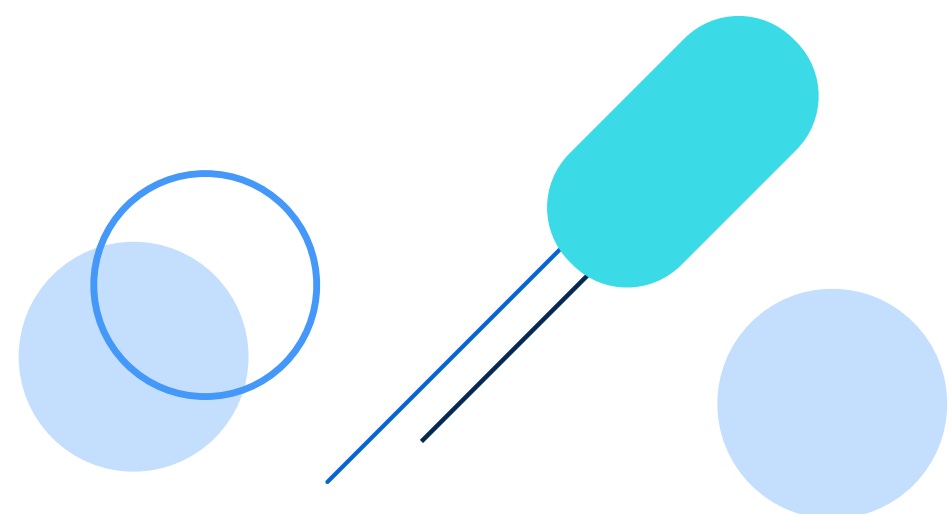
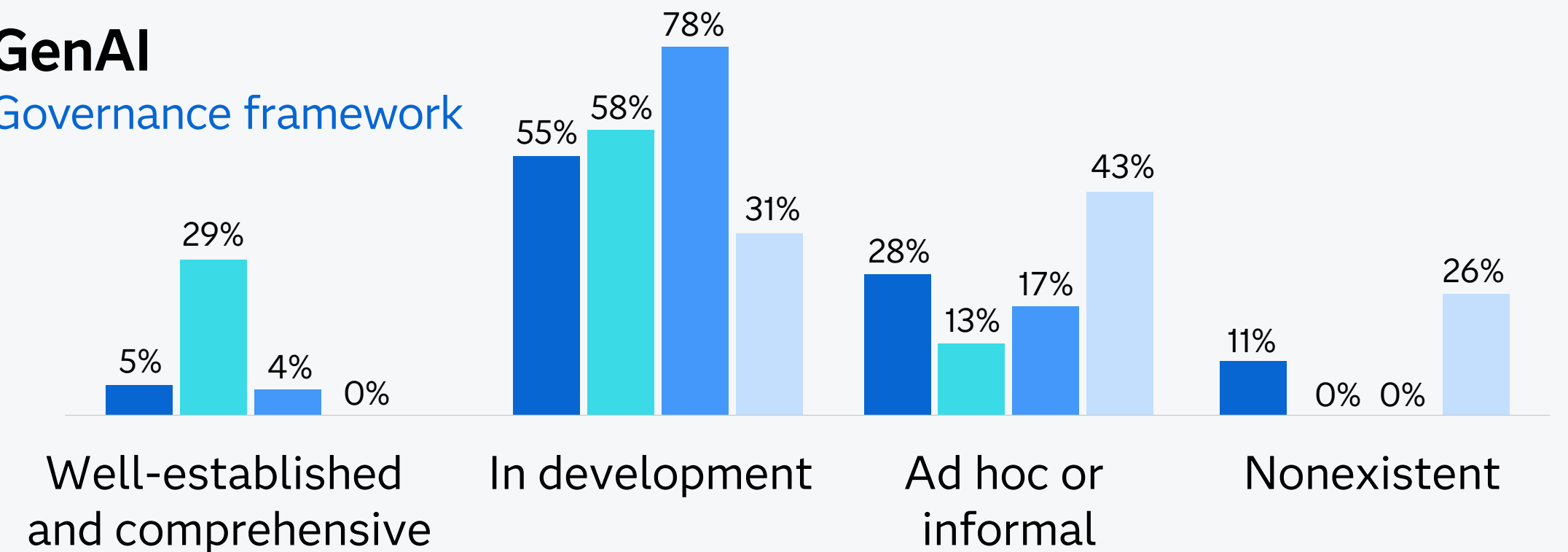
Artificial Intelligence (AI)

Governance framework



GenAI

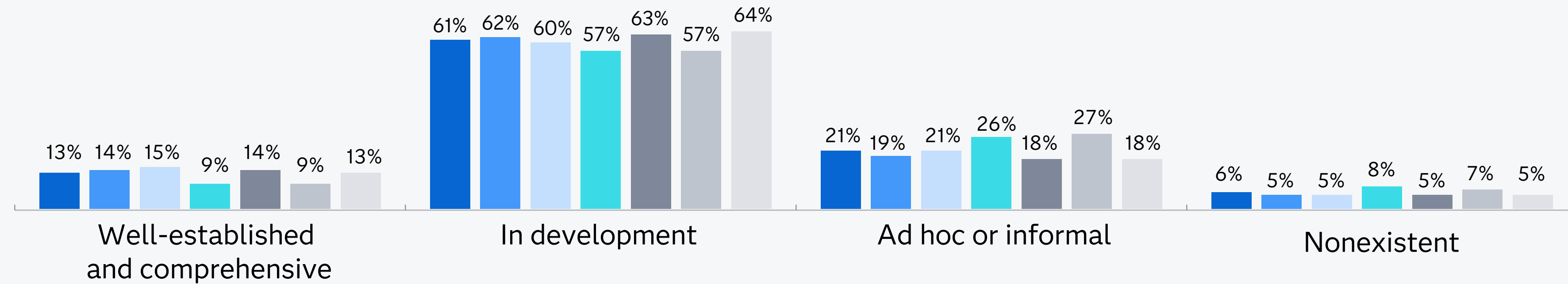
Governance framework



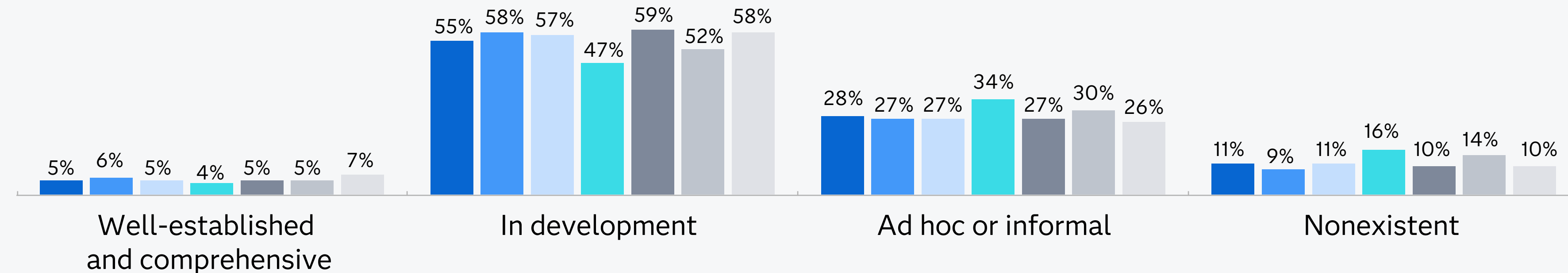
Most organizations across all industries are still developing governance frameworks for GenAI.

How would you describe your current GenAI/AI governance framework?

Artificial Intelligence (AI) | Governance framework



GenAI | Governance framework



■ All repondents using/planning to use GenAI
 ■ Banking
 ■ Insurance
■ Public sector
 ■ Life sciences
 ■ Health care
 ■ Other

Insight 1:

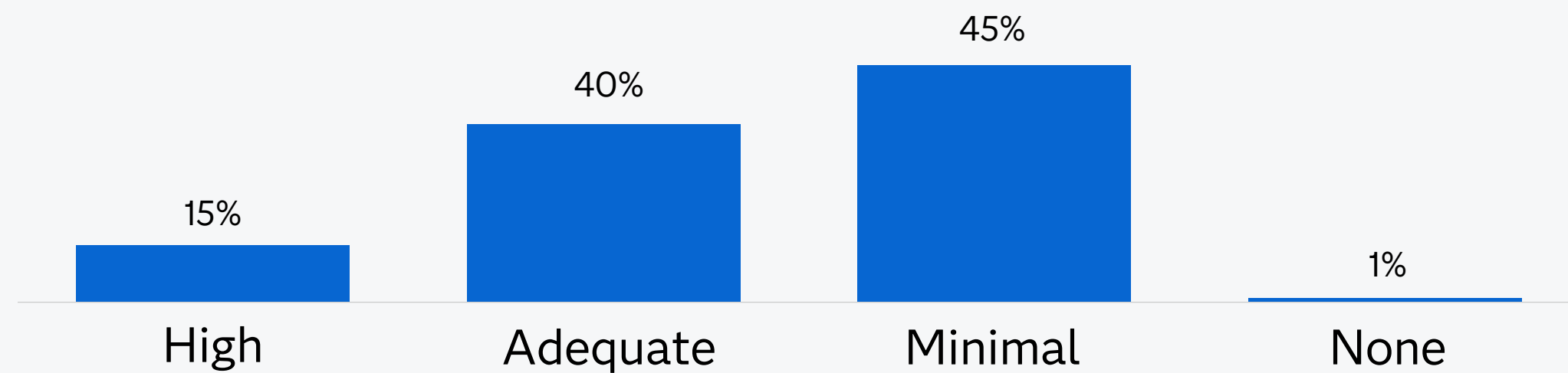
Data management and analytics tools can detect outliers and sources of bias in the raw data used to feed LLMs. Human experts can also help minimize potential bias.

Fewer than one in 10 organizations provide a high level of training on GenAI governance and monitoring.

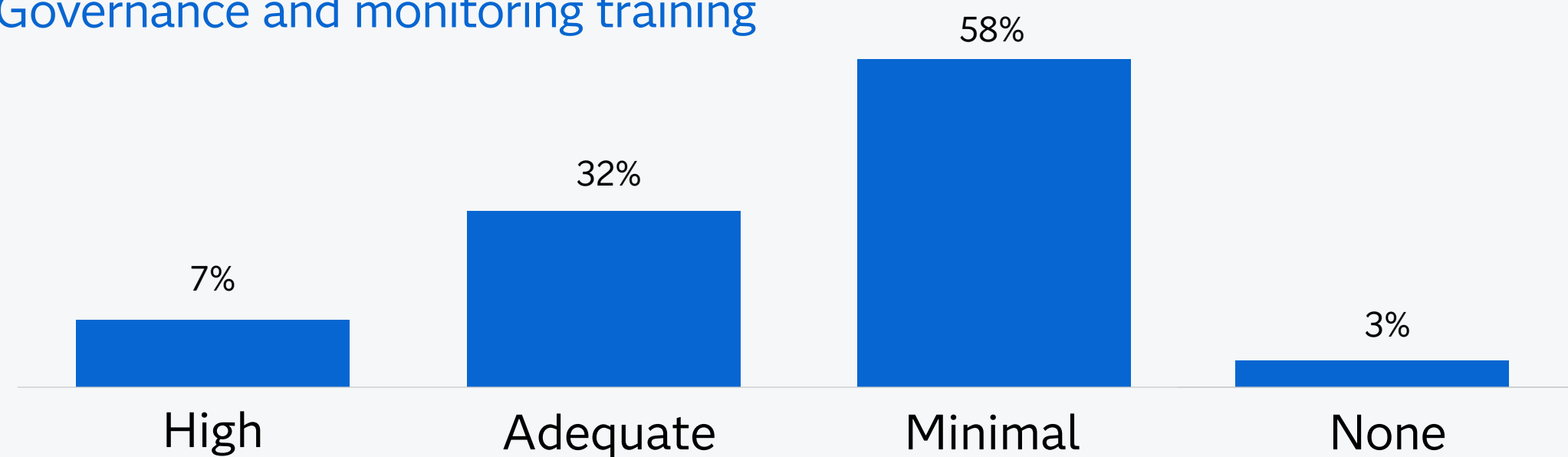
Three-quarters of respondents are concerned about data privacy (76%) and security (75%) when GenAI is used in their organization.

What level of training does your organization currently have regarding GenAI/AI governance and monitoring?

Artificial Intelligence (AI)
Governance and monitoring training

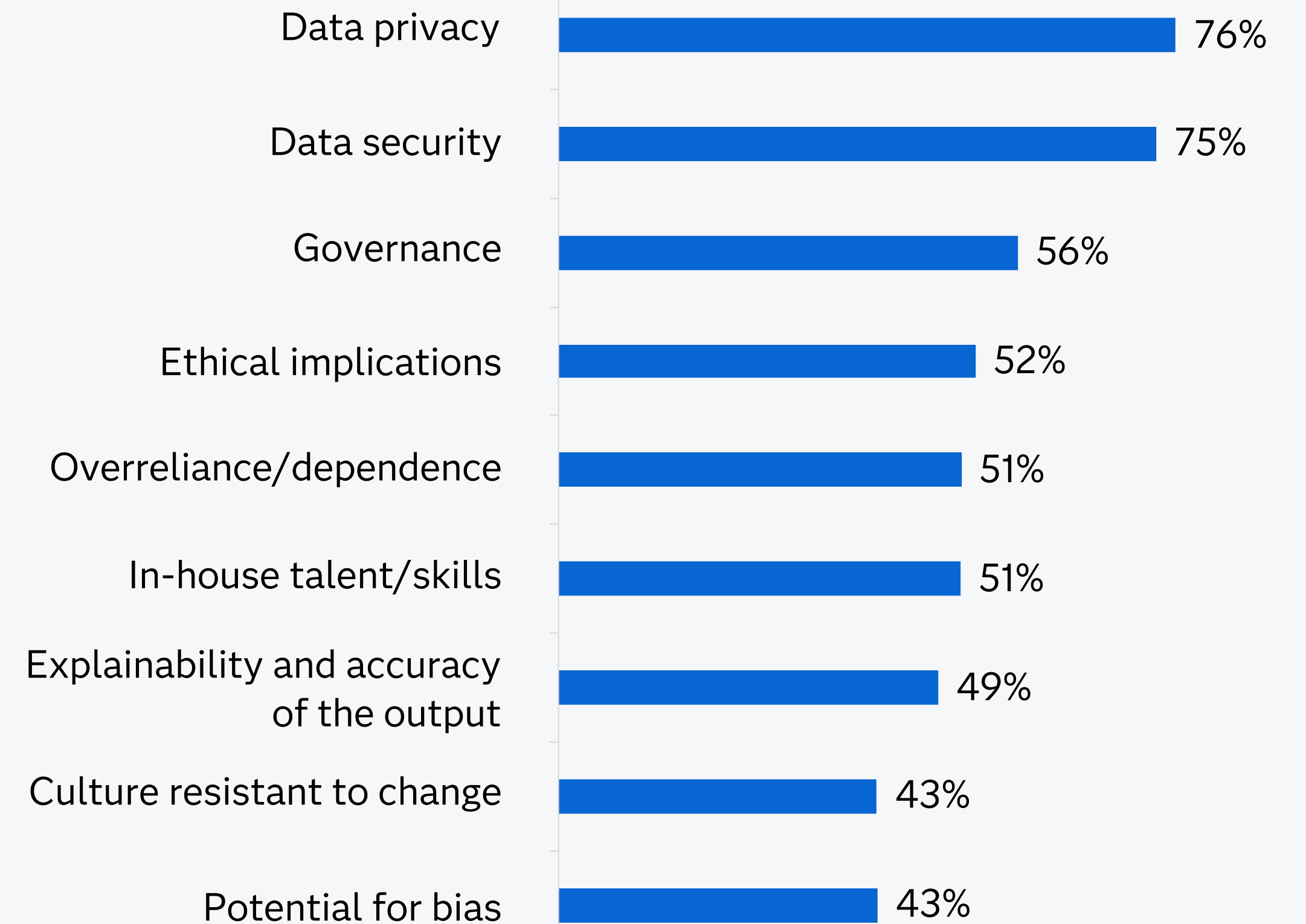


GenAI
Governance and monitoring training



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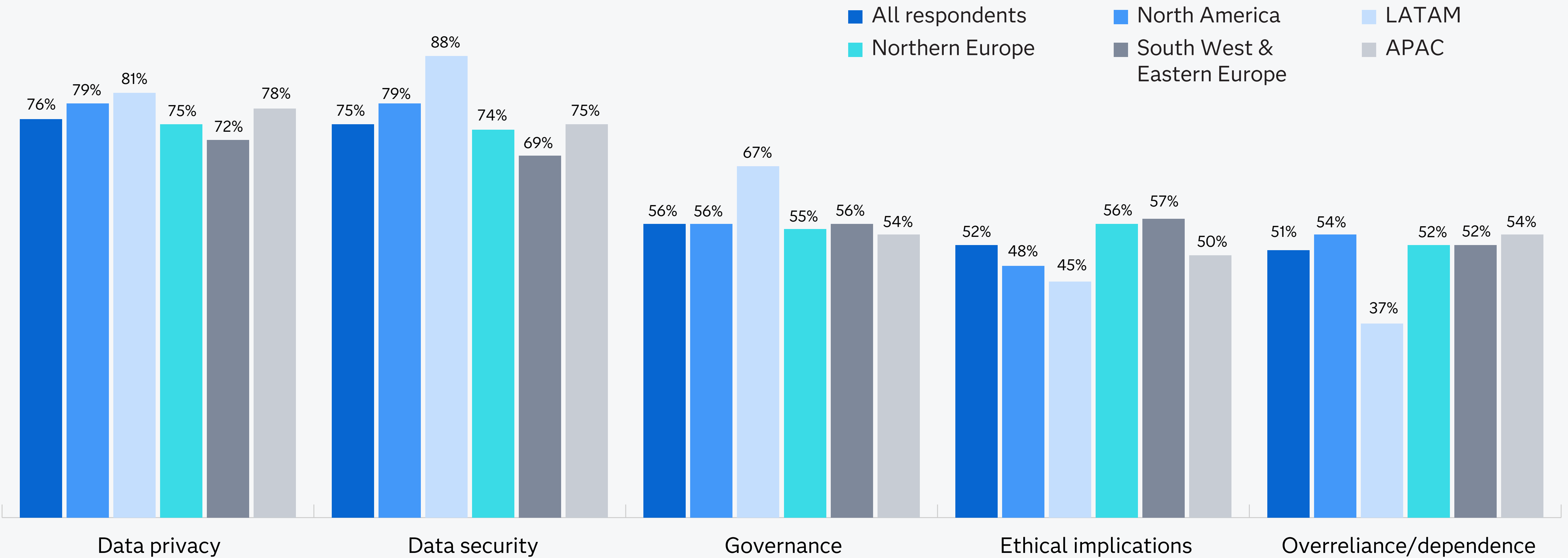
What are your concerns regarding the usage of GenAI in your organization?



Based on % ranking as a key concern

Data privacy and security are key concerns across all regions.

What are your concerns about the usage of GenAI in your organization? (top concerns)

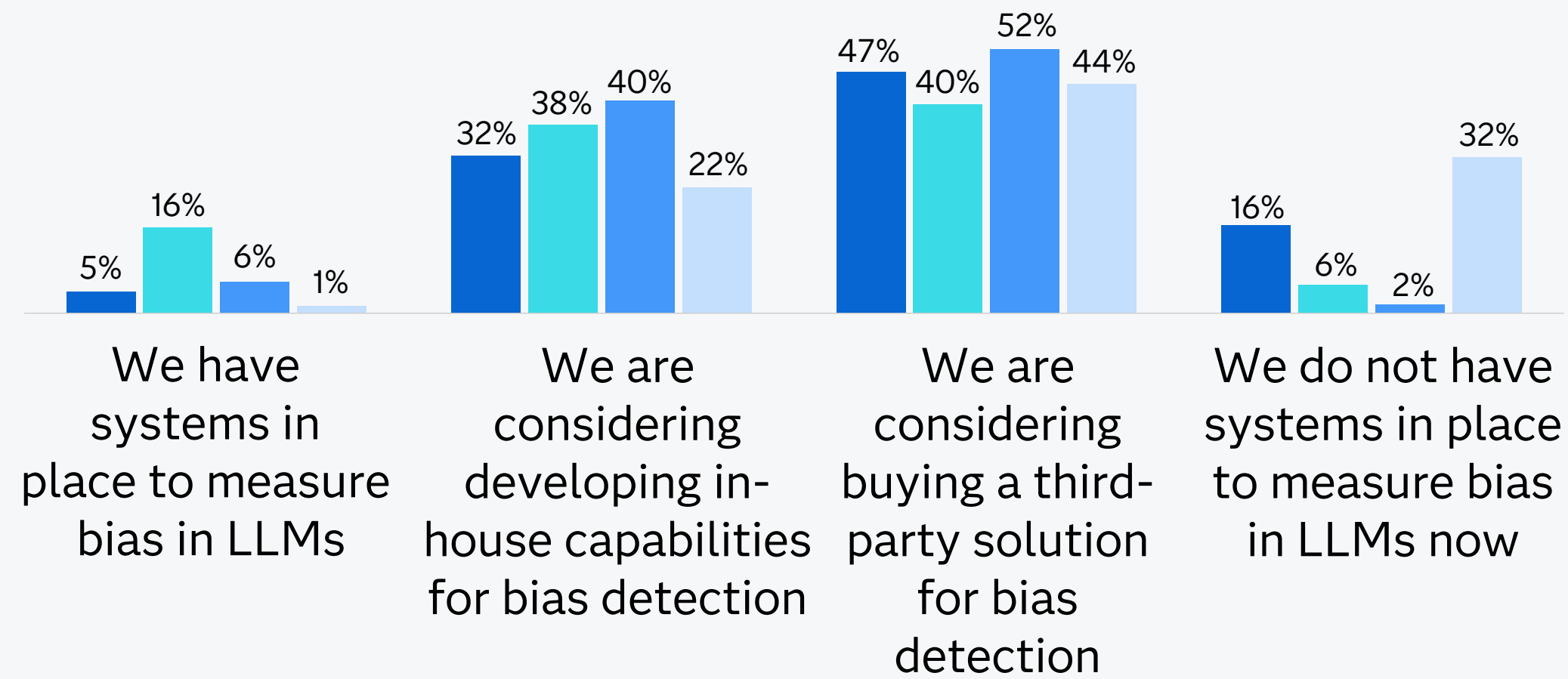


Only one in 20 organizations has a reliable system in place to measure bias and privacy risk in large language models (LLMs).

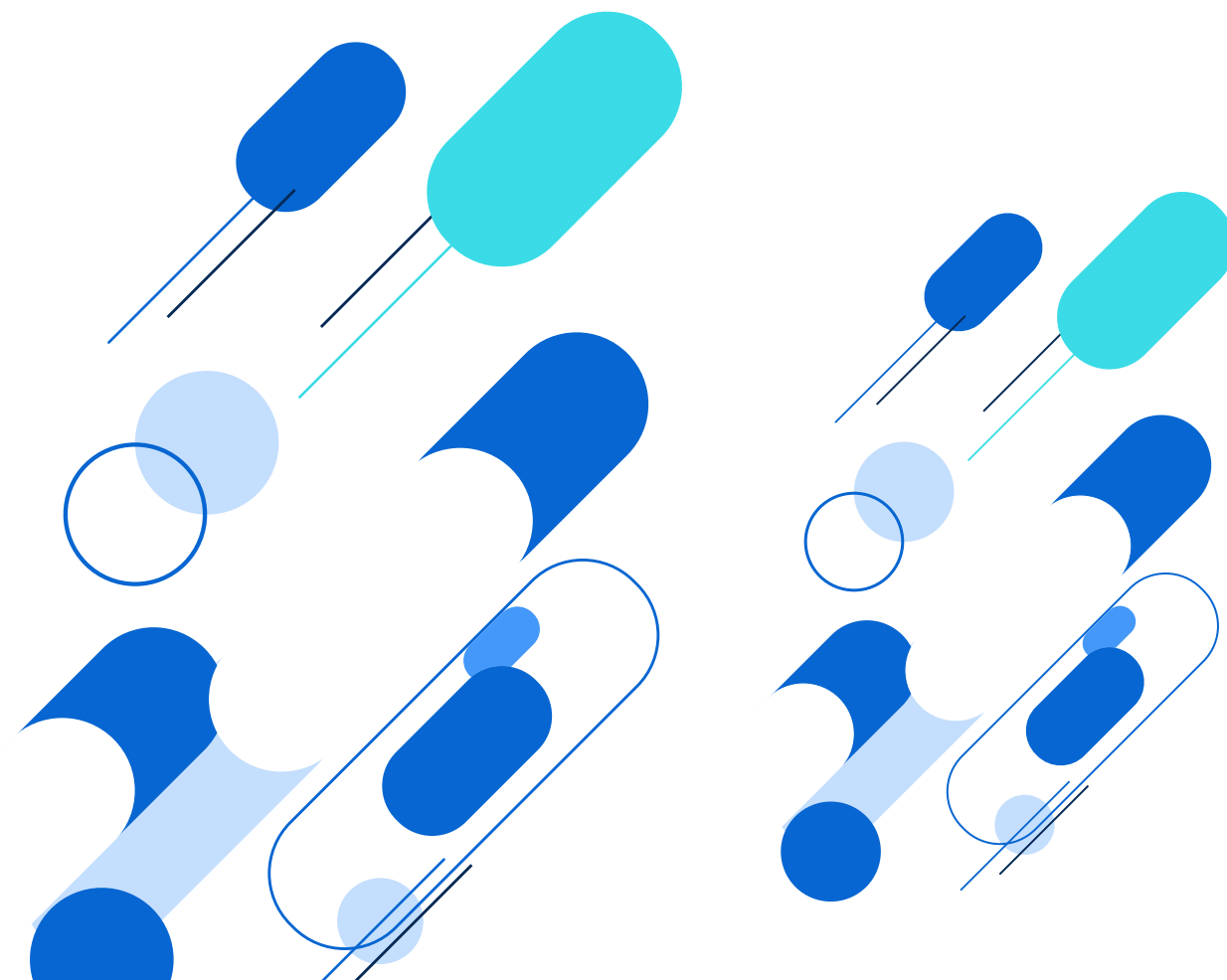
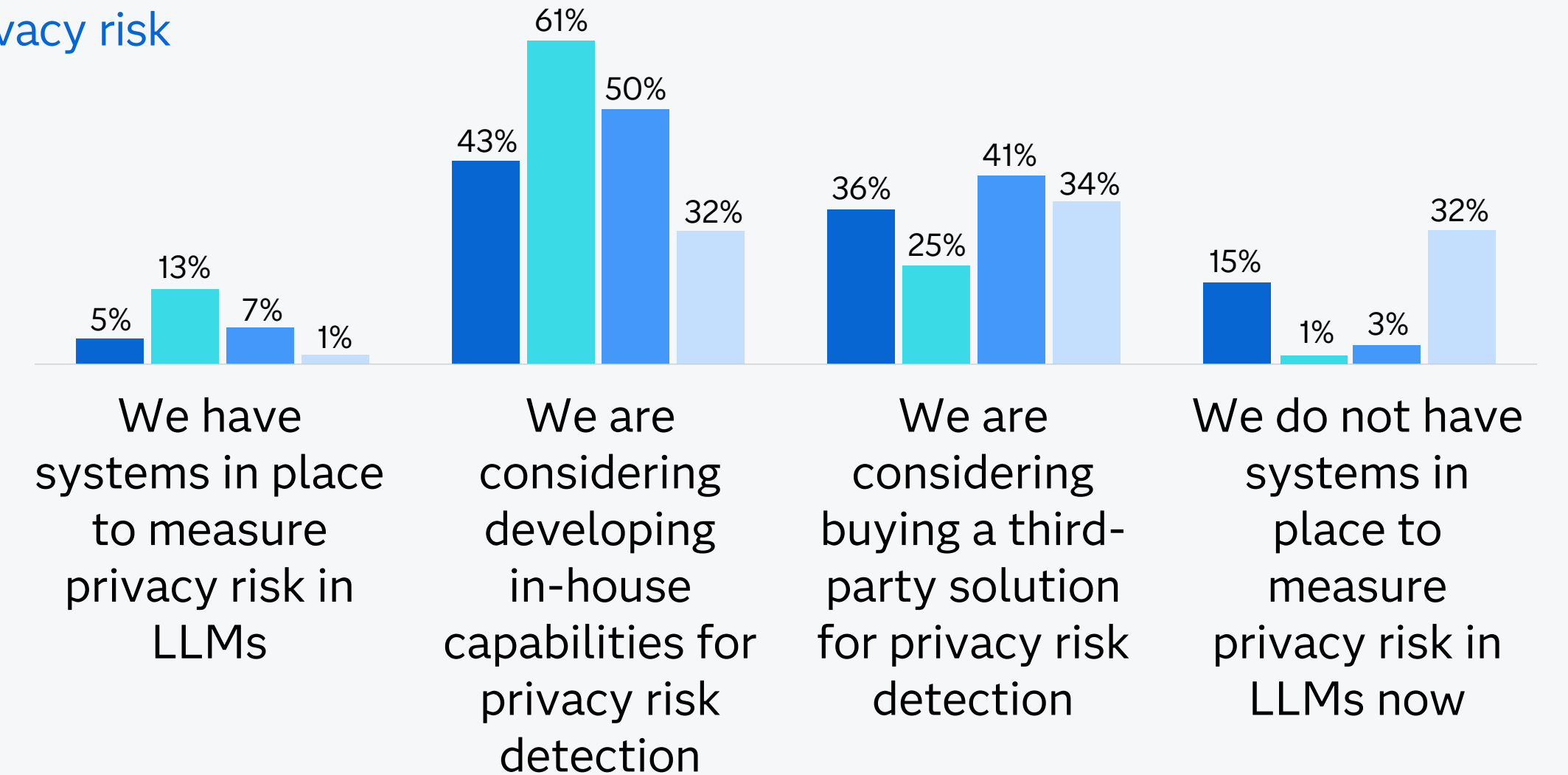
How would you assess your ability to measure LLM bias/privacy risk in your organization?

Ability to measure LLMs

Bias

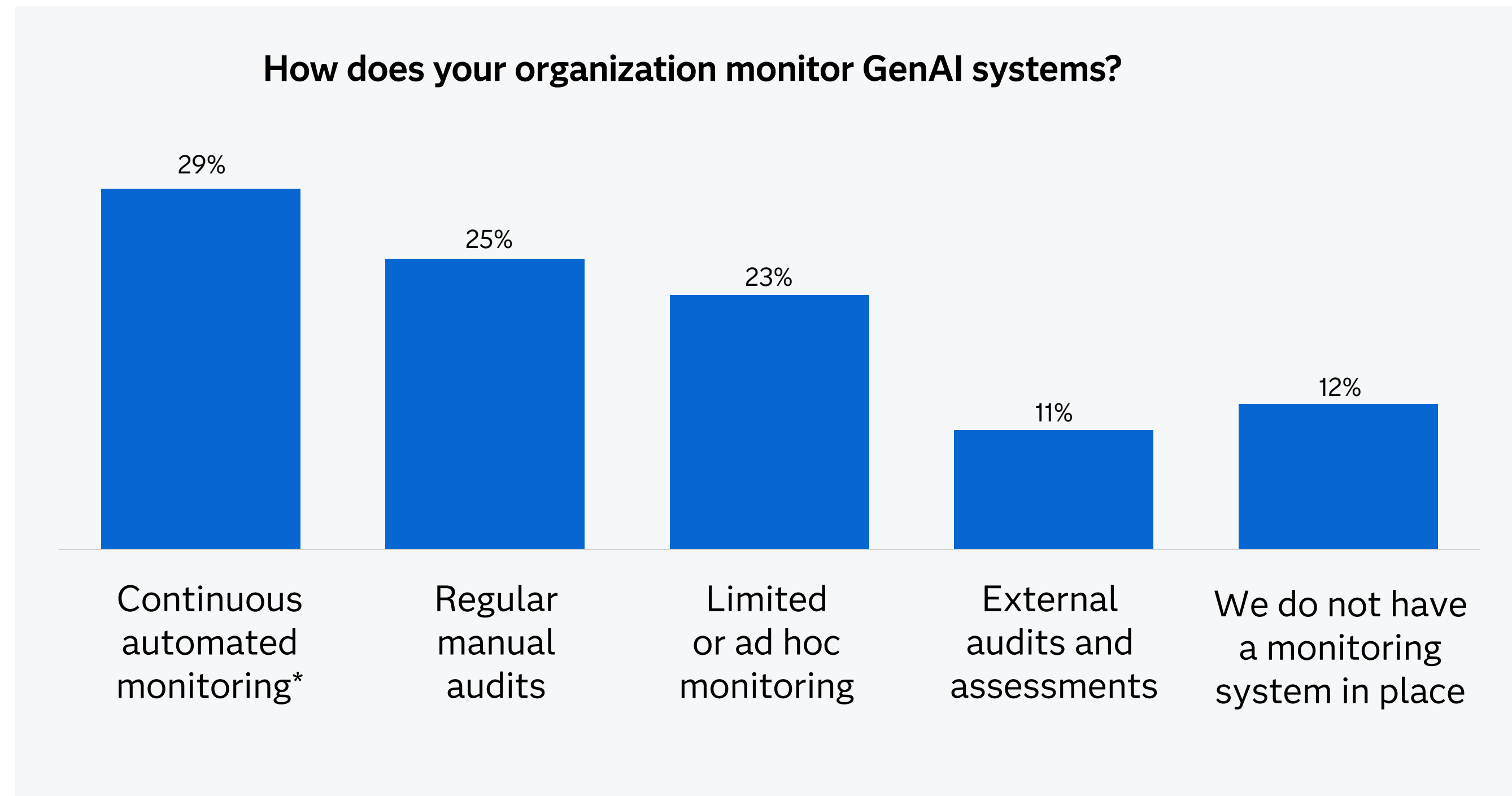


Privacy risk



- All respondents using/planning to use GenAI
- Using GenAI and have fully implemented it
- Using GenAI but haven't yet fully implemented it
- Not yet using GenAI but intend to within the next 2 years

Seven in 10 organizations (71%) are not able to continuously monitor their GenAI systems.



**Monitoring of IT systems and networks to detect security threats, performance issues, or non-compliance problems in an automated manner to identify and address potential problems and threats in real time.*

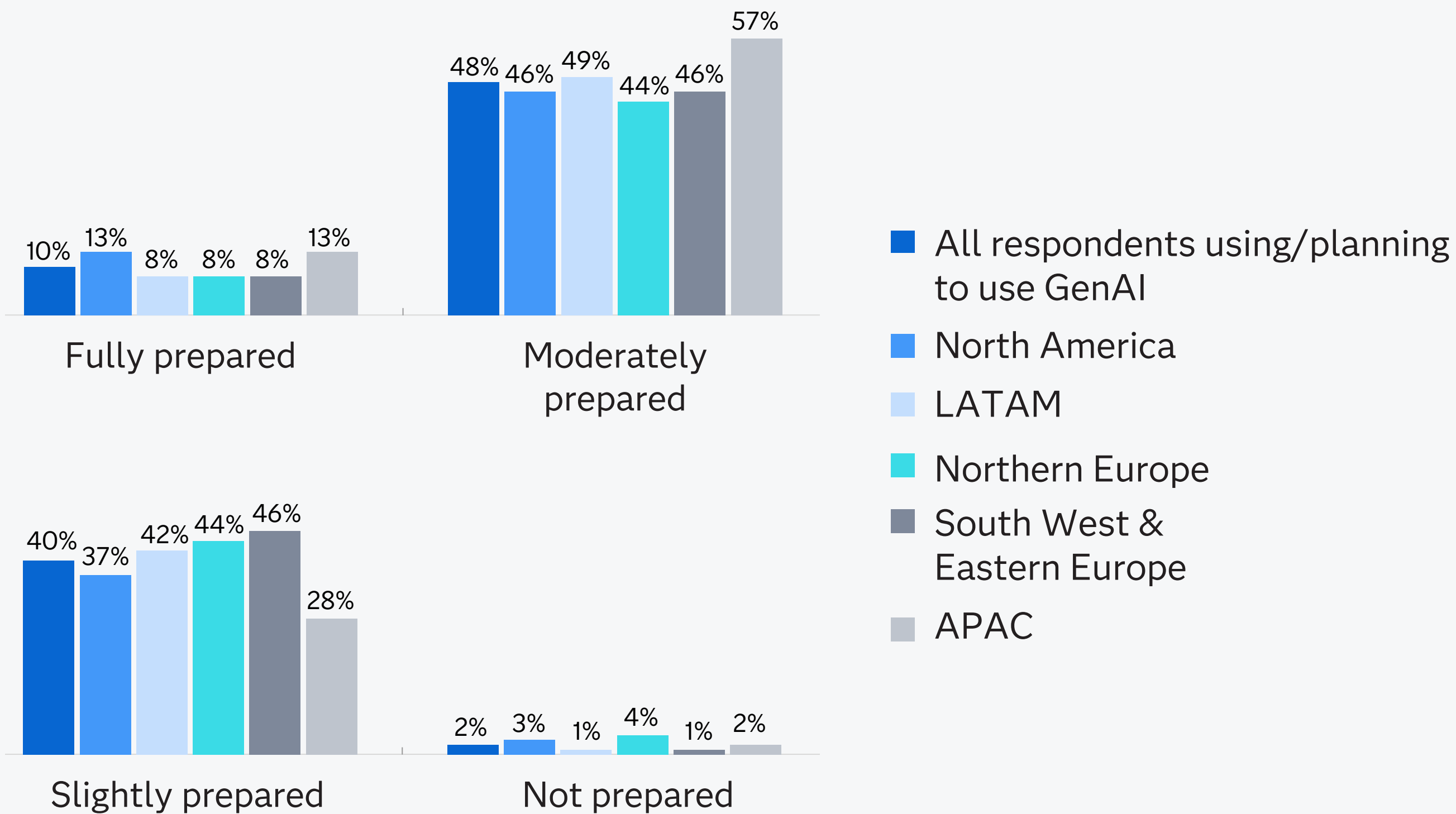
Across all organizations, GenAI use can create anxieties about data privacy, security, lack of governance, dependence on the technology and its potential for amplifying bias.

Many of these organizations have not fully prepared themselves to comply with regulations and do not have GenAI governance in place or ways to monitor the technology.

Our research shows that businesses are rushing into GenAI before establishing adequate systems of governance, which could result in serious issues with quality and compliance later.

Asia Pacific countries (mainly China) are ahead in their preparation to comply with GenAI regulations.

How prepared is your organization to comply with current and upcoming regulations concerning GenAI?



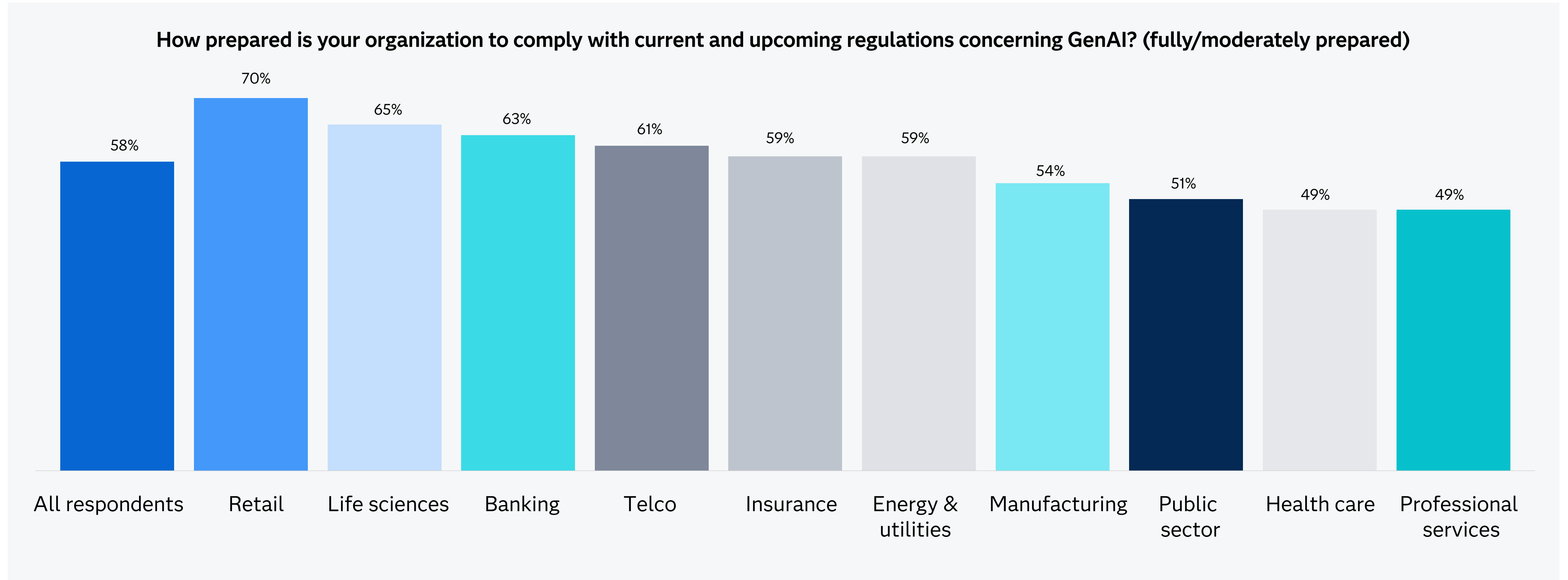
Insight 2:

Data management tools are essential to ensure that LLMs are fed the highest quality data and prompts – data that is both auditable and traceable.

These tools can provide user privacy and security, with robust data protection measures, including data minimization, anonymization, and encryption, ensuring that sensitive information remains safeguarded. Furthermore, workflows can be automated for the shortest, most direct route to building or tuning an LLM.

Organizations should refer to governance and compliance policies for an essential framework within which data management tools can be applied.

Health care, professional services and the public sector believe they are least prepared to meet regulatory requirements.



b. Strategic deployment: Translating implementation into measurable benefits

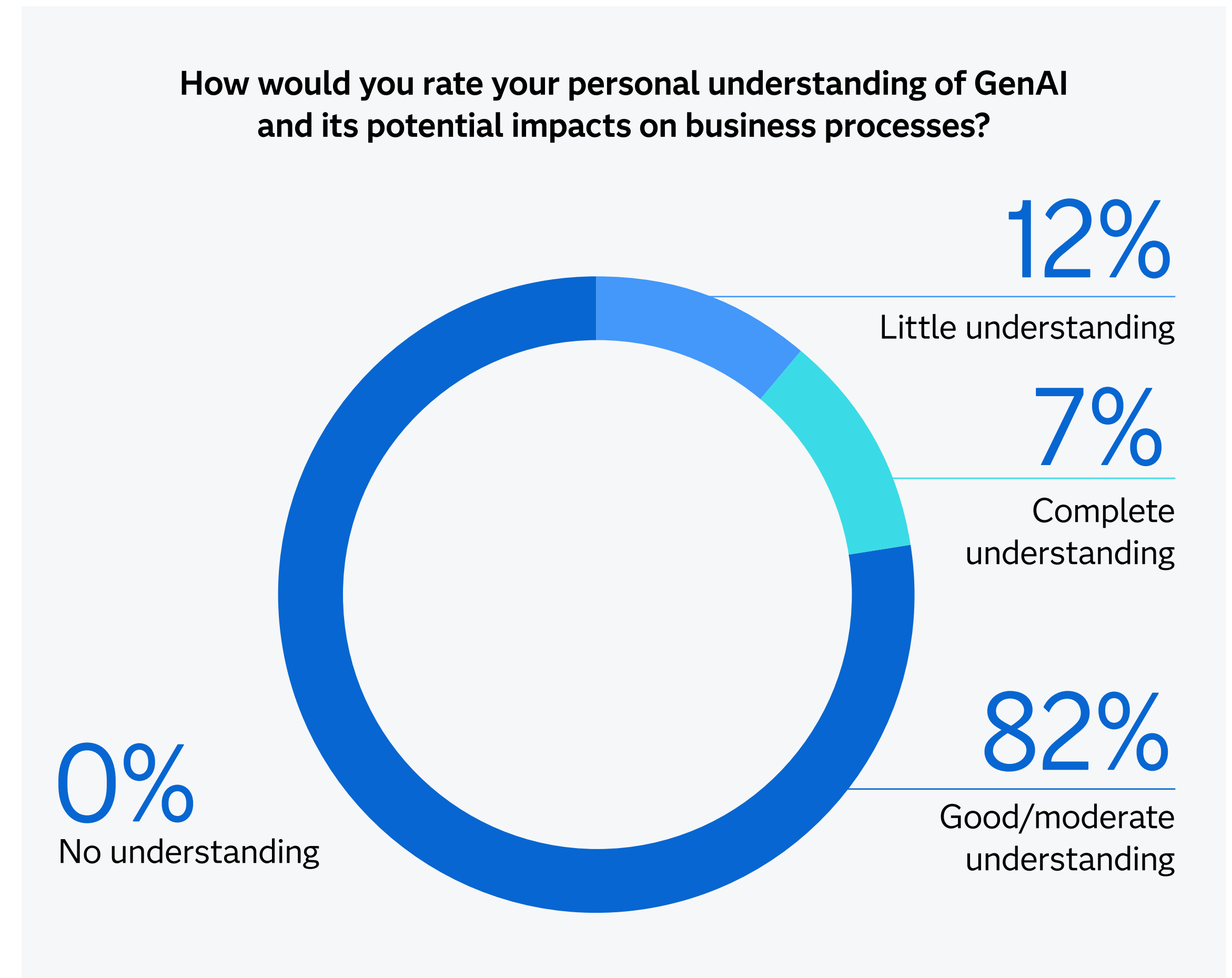
The ideal GenAI investment offers clear opportunities for efficiency and a better customer experience, but many organizations report gaps in strategic thinking that are affecting successful rollout:

- Nine in 10 senior tech decision makers (**93%**) admit that they do not fully understand GenAI or its potential impact on business processes.
- Almost half (**47%**) are encountering challenges in transitioning from concept to practical use of GenAI.
- More than a third (**37%**) foresee difficulty proving that GenAI offers a strong ROI or have found this hard to prove.
- Fewer than half (**45%**) of CIOs and around a third (**36%**) of CTOs consider themselves extremely familiar with GenAI adoption in their organizations.
- Four in 10 organizations (**39%**) do not have a GenAI usage policy in place for their staff.

The countries that we surveyed show a wide range of responses in terms of their GenAI strategy. Those who report that they face the most challenges transitioning the technology from concept to practical use include Spain (where 67% of respondents say this is a challenge) and Poland (64%), while the countries who are most confident doing so include Canada (39%), Mexico (40%) and France (40%). Looking at regional trends, 71% of APAC companies are managing their GenAI usage with an internal policy, in contrast to 52% of LATAM respondents.

Respondents in manufacturing (where 61% have a good or complete understanding), life sciences (55%) and telco (55%) report the highest levels of personal understanding where GenAI is concerned. Respondents in the public sector are much less confident in their understanding of GenAI (only 38% say they understand it well or completely).

Nine in 10 (93%) senior tech decision makers admit not fully understanding GenAI and its potential impacts on business processes.



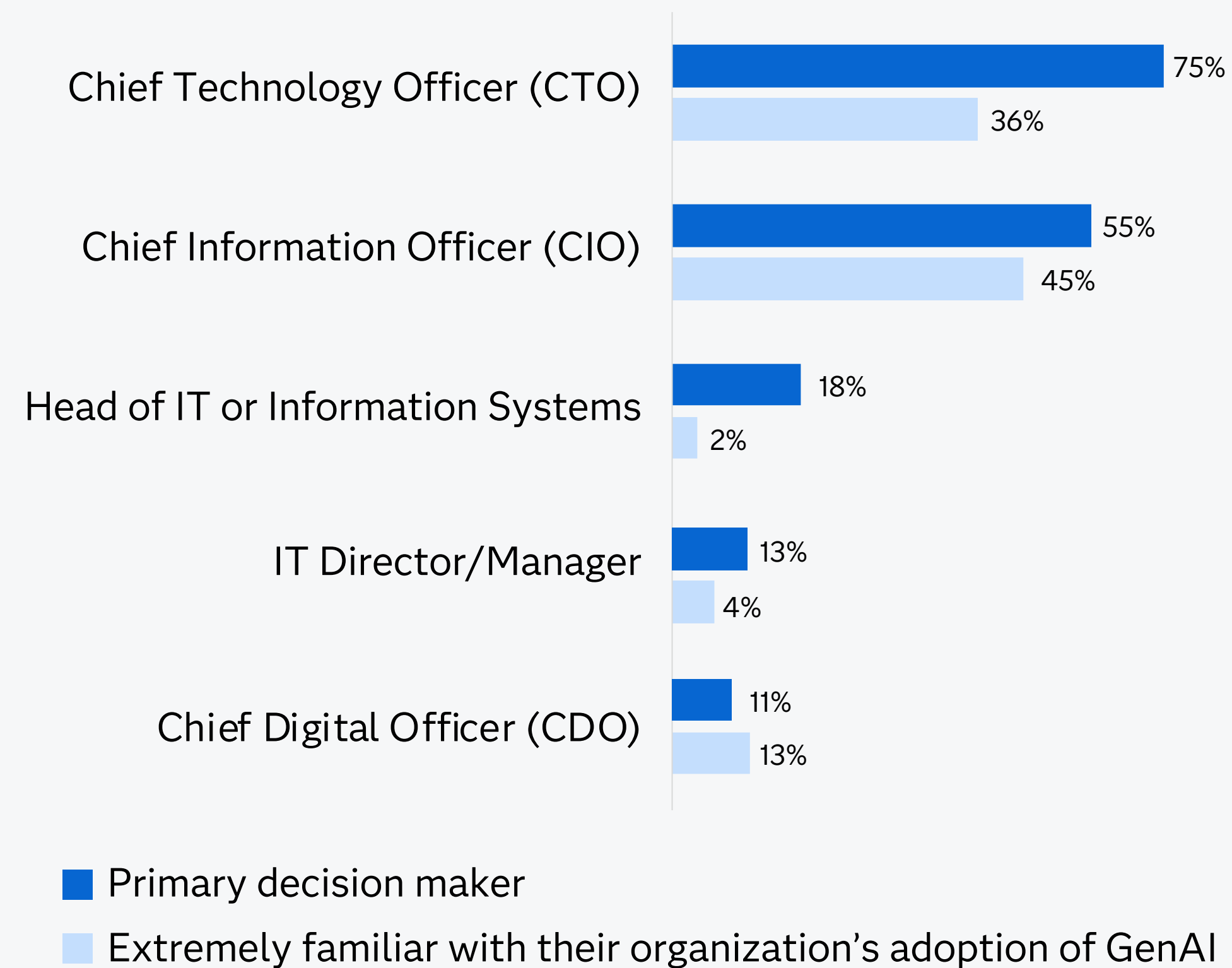
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Senior decision makers are not always completely familiar with GenAI adoption in their organizations.

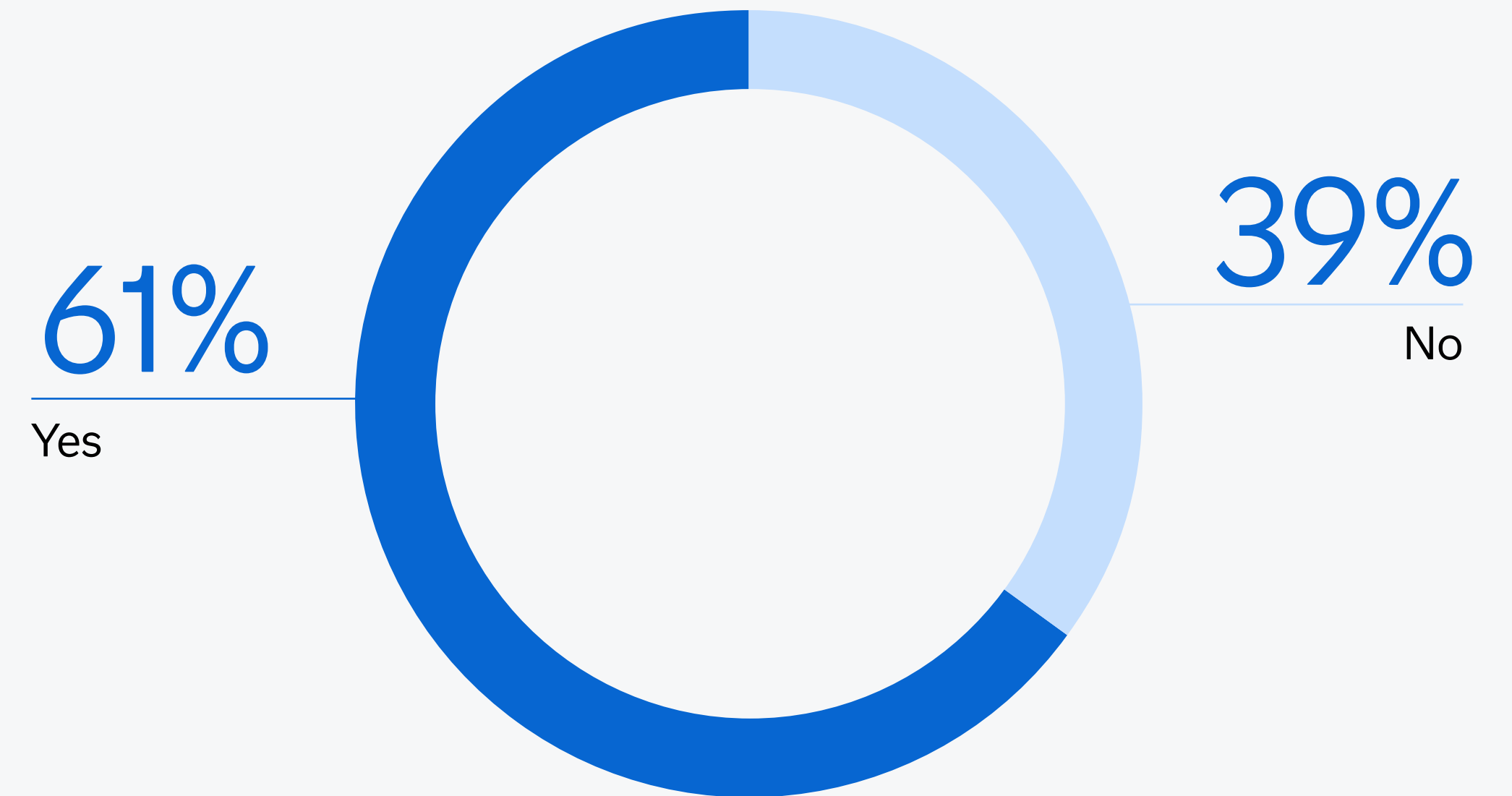
39% do not have a GenAI usage policy in place for their staff to follow.

Who are the primary decision makers for technology adoption in your organization?

How familiar are you with your organization's adoption of GenAI?

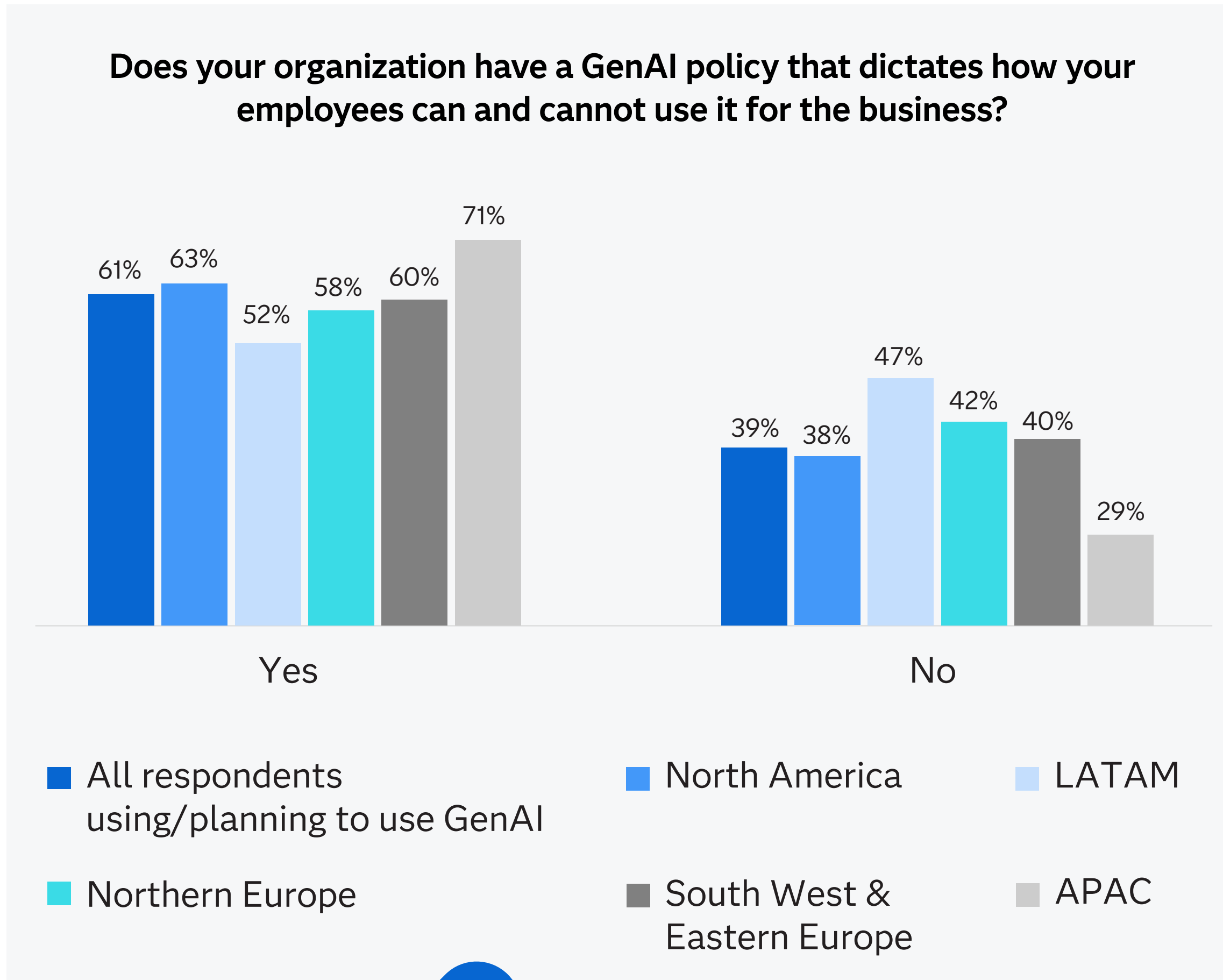


Does your organization have a GenAI policy that dictates how your employees can and cannot use it for the business?

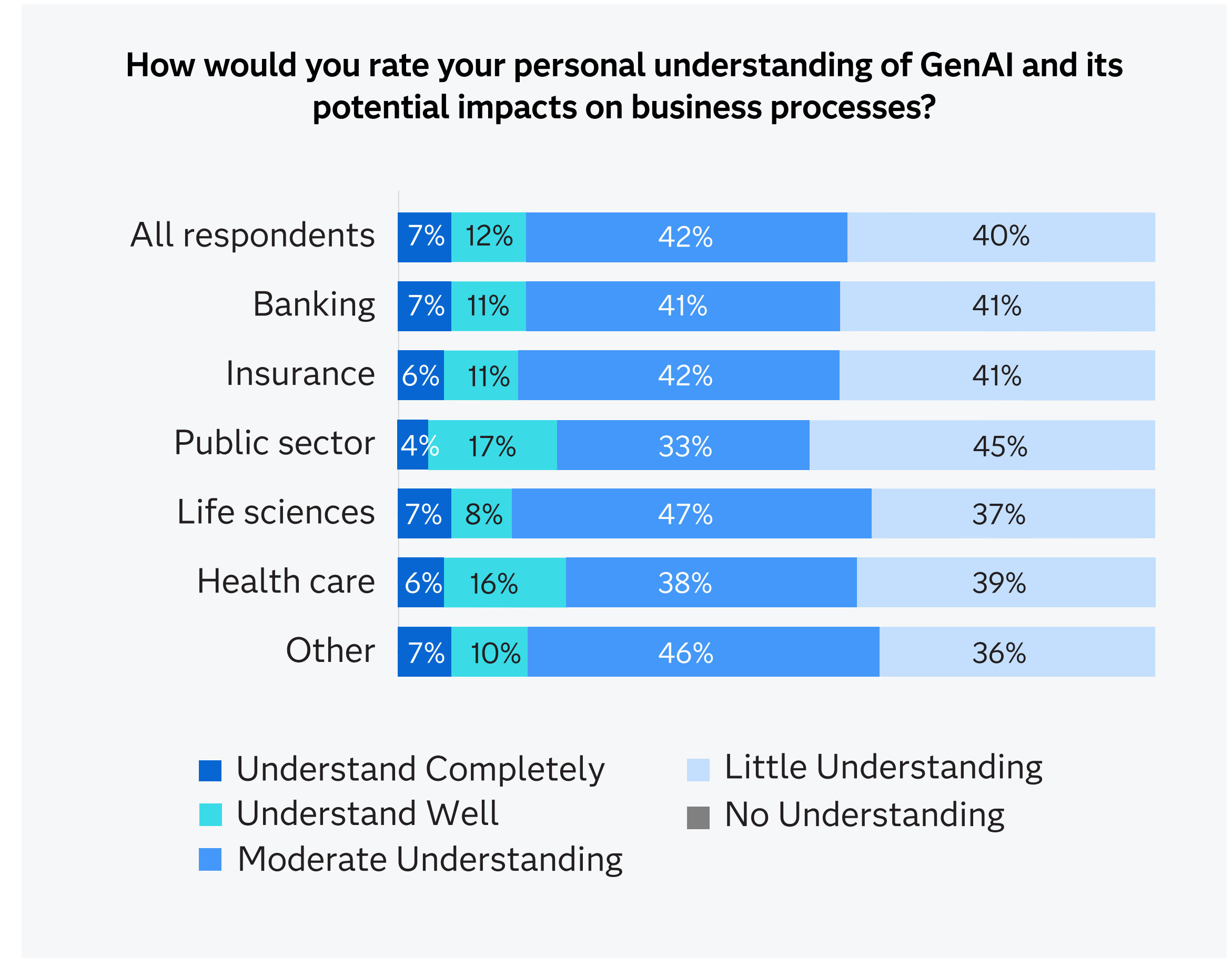


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APAC decision makers are most likely to have a GenAI usage policy, while LATAM respondents are least likely to have such a policy in place.



Decision makers in the public sector are less confident in their understanding of GenAI than those in other industries.



Please note that percentages on charts may not add to 100% due to rounding

Insight 3:

Ensure that key decision makers are AI literate before they develop your comprehensive GenAI strategy. This requires time and will most often involve hiring outside experts to advise your team.

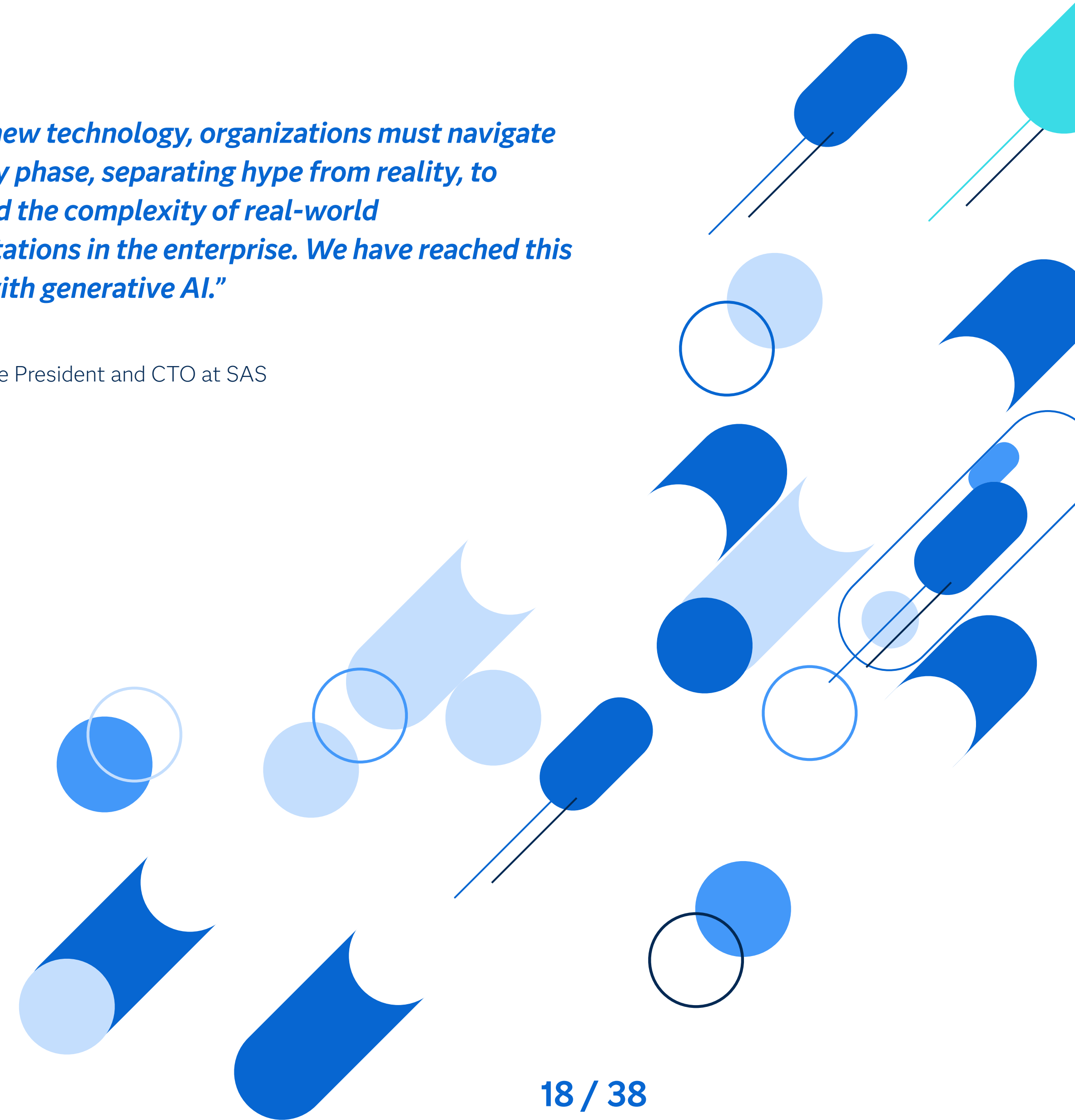
Insight 4:

Identify your best GenAI use case to deliver speedy return on investment.

The first step in successfully deploying GenAI is to identify high-impact use cases for the technology, which helps deliver a measurable return on investment as quickly as possible.

“ With any new technology, organizations must navigate a discovery phase, separating hype from reality, to understand the complexity of real-world implementations in the enterprise. We have reached this moment with generative AI.”

Bryan Harris,
Executive Vice President and CTO at SAS



c. Technological integration: Ensuring that your systems and tools do not limit GenAI's potential

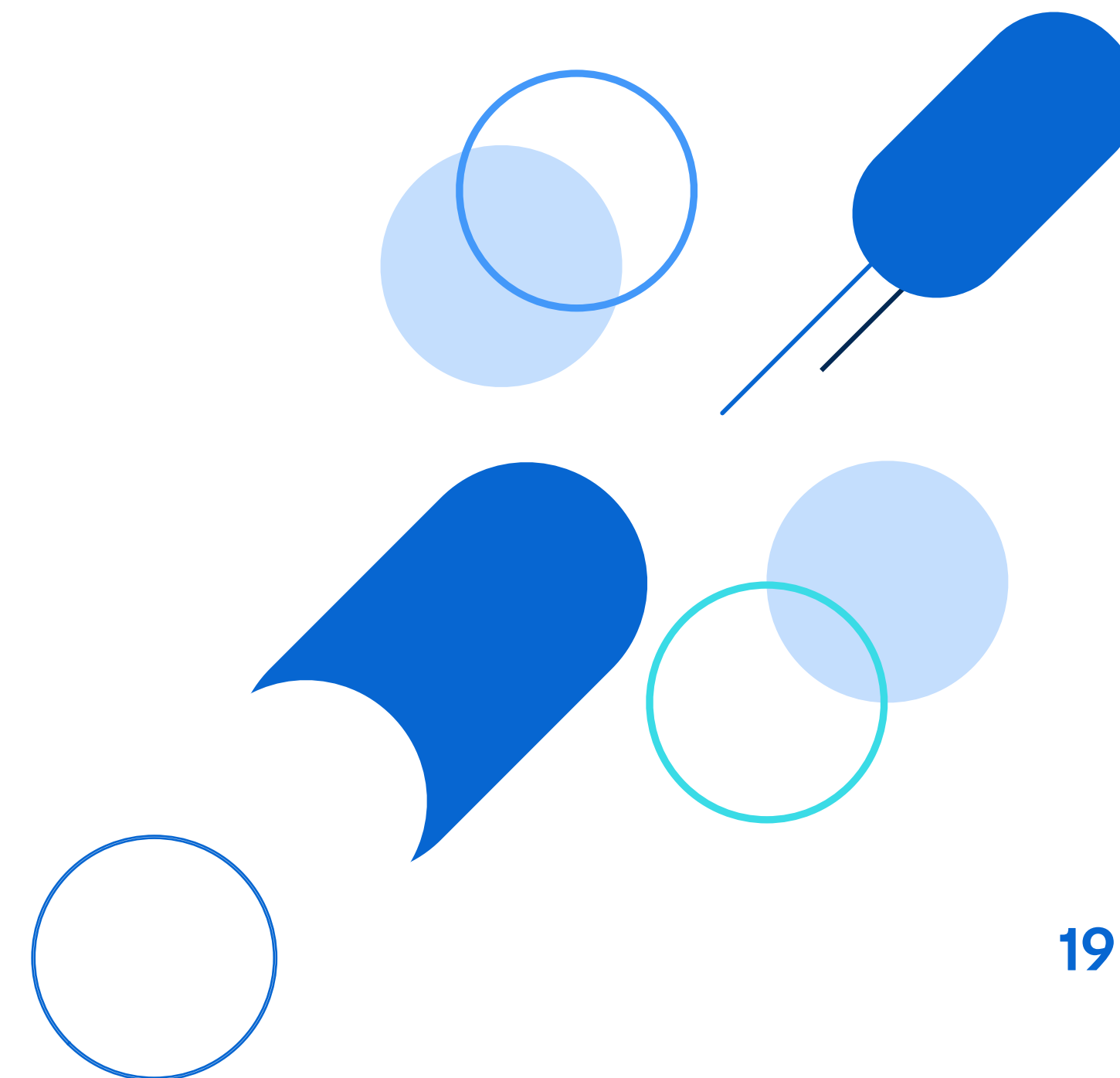
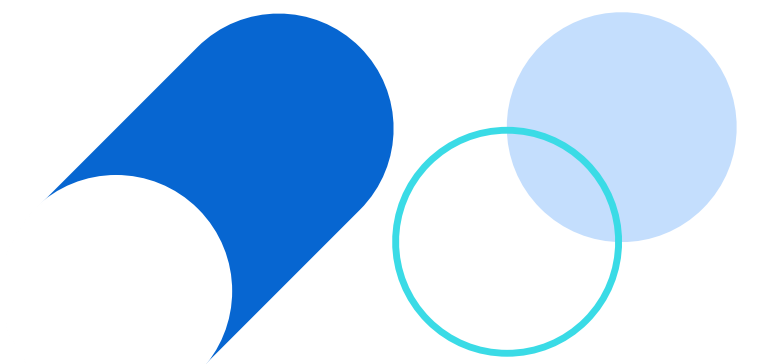
At best, GenAI is seamlessly embedded within a business's processes and systems. But many companies struggle to integrate the technology with their existing tasks and tools.

Our research finds that:

- Almost half (**47%**) of decision makers report that they do not have appropriate tools to implement GenAI.
- Four in 10 (**41%**) are experiencing compatibility issues when they try to combine GenAI with their current systems.
- Half of decision makers (**52%**) are encountering obstacles in using public and proprietary data sets effectively.
- Over a third (**34%**) say that the biggest challenge to monitoring GenAI is technological limitations.
- Countries struggling to find the tools and expertise they need to implement GenAI include those in LATAM (**57%** say they don't have the tools, and **52%** don't have the expertise). In contrast, only about a third (**36%**) of respondents

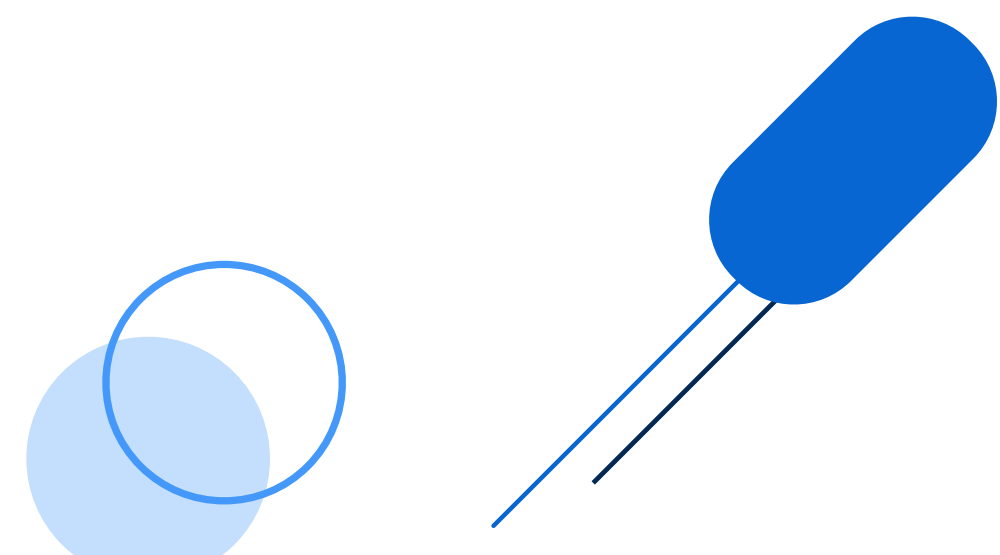
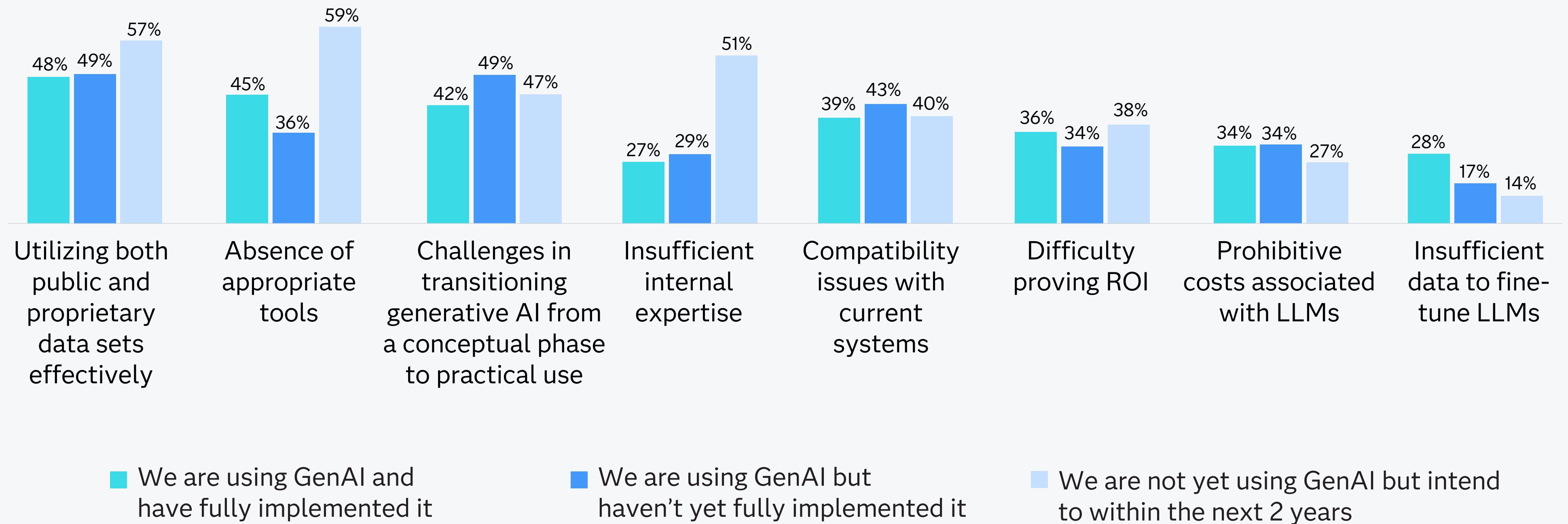
in the APAC region (including only **31%** in China) say they don't have the appropriate tools to implement GenAI. Moreover, only **31%** in this region say they don't have the internal expertise to do so (**21%** in China).

- When it comes to monitoring GenAI, some sectors believe they are limited by their access to technology, particularly manufacturing (**42%**), health care (**40%**) and retail (**40%**). Least likely to agree with this are professional services (**25%**) and telco organizations (**28%**).



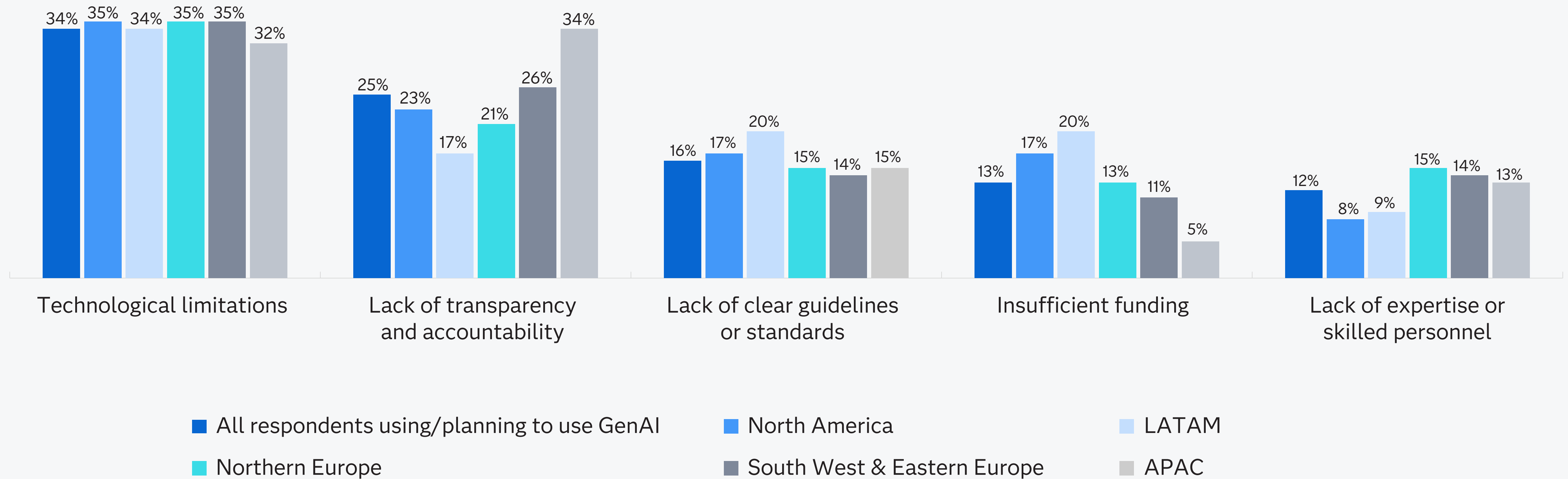
Decision makers report that they do not have appropriate tools, are experiencing compatibility issues, and encounter obstacles in using public and proprietary data sets effectively.

What obstacles do you foresee, or have you encountered, in the implementation of GenAI?

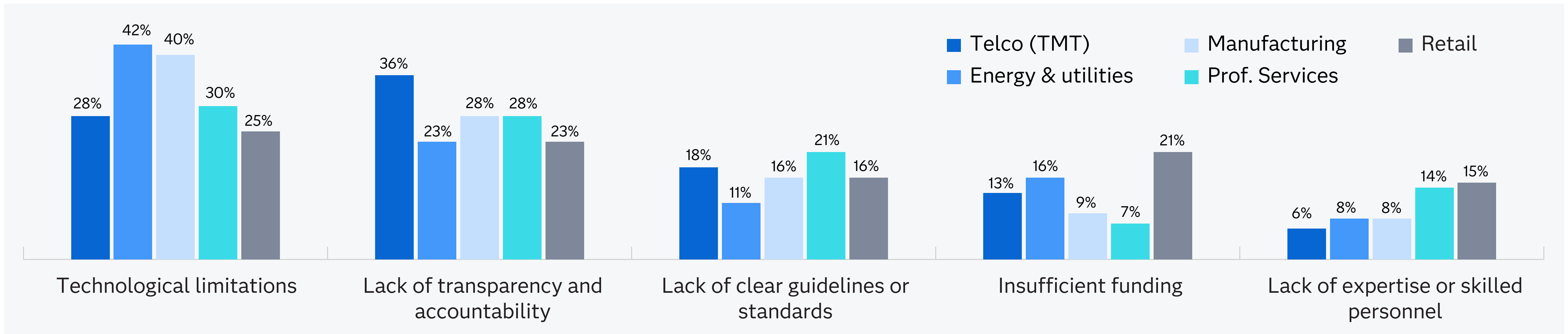
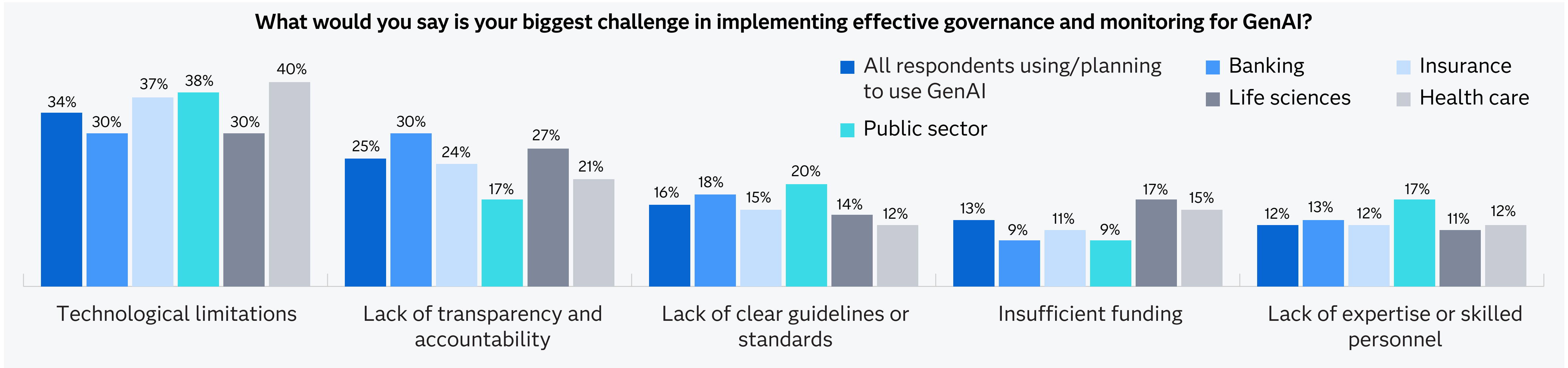


Over a third of businesses face technological challenges when they set out to implement and use GenAI.

What would you say is your biggest challenge in implementing effective governance and monitoring for GenAI?

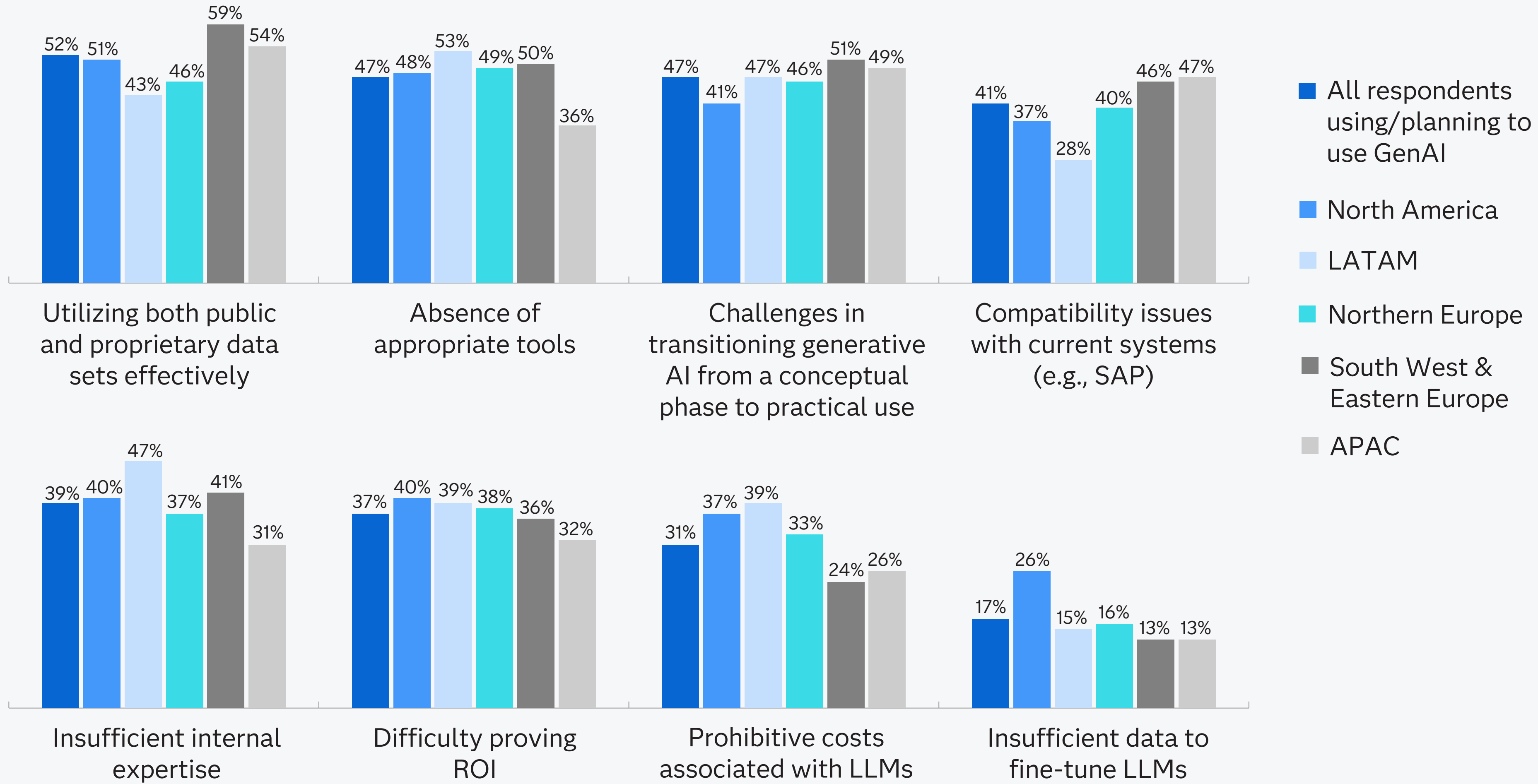


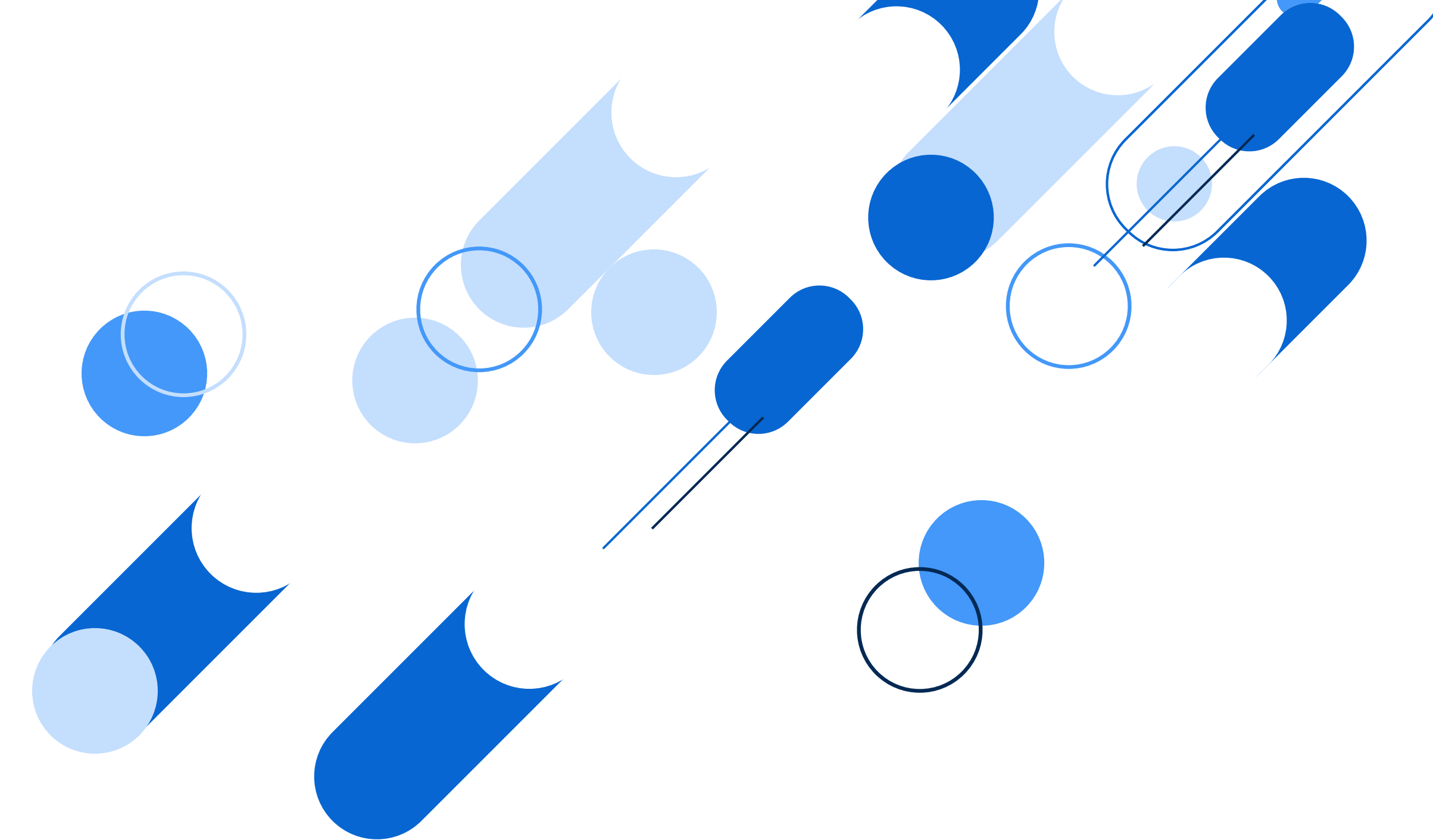
Professional services and telco organizations feel least challenged by technological limitations.



The APAC region (particularly China) is confident that it has the appropriate tools and expertise to implement and use GenAI.

What obstacles do you foresee, or have you encountered, in the implementation of GenAI?





“ LLMs alone do not solve business problems. GenAI is nothing more than a feature that can augment your existing processes, but you need tools that enable their integration, governance and orchestration. And most importantly, you need people that can use tools to ensure the appropriate level of orchestration.”

Marinela Profi,
Strategic AI Advisor at SAS

Insight 5:

Make sure that your GenAI software vendors can integrate with existing workflow and decisioning platforms.

GenAI is an ideal contributor to hyper-automation, which facilitates the automation of all feasible tasks within an organization. It excels in summarizing vast amounts of data to support decisioning workflows, enabling real-time interactions aligned with your preferred business processes.

Insight 6:

Using a decisioning workflow system to infuse GenAI into existing business processes facilitates measurable outcomes.

LLMs can only execute a few tasks of a use case. Organizations still need an end-to-end process that orchestrates the AI life cycle while enhancing the transparency and governance of LLMs.

d. Expert guidance: Resourcing challenges with scarcity of GenAI skill sets

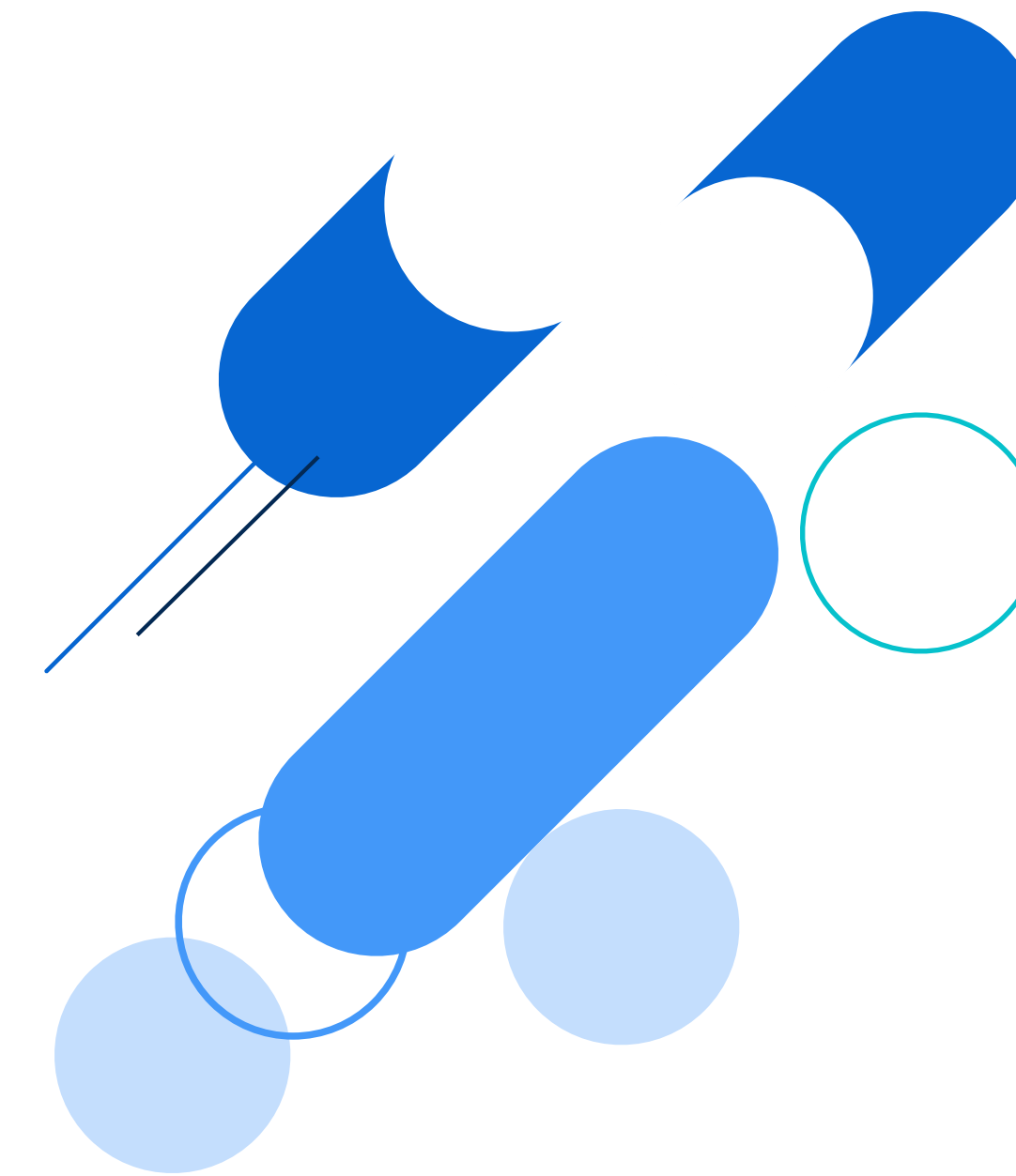
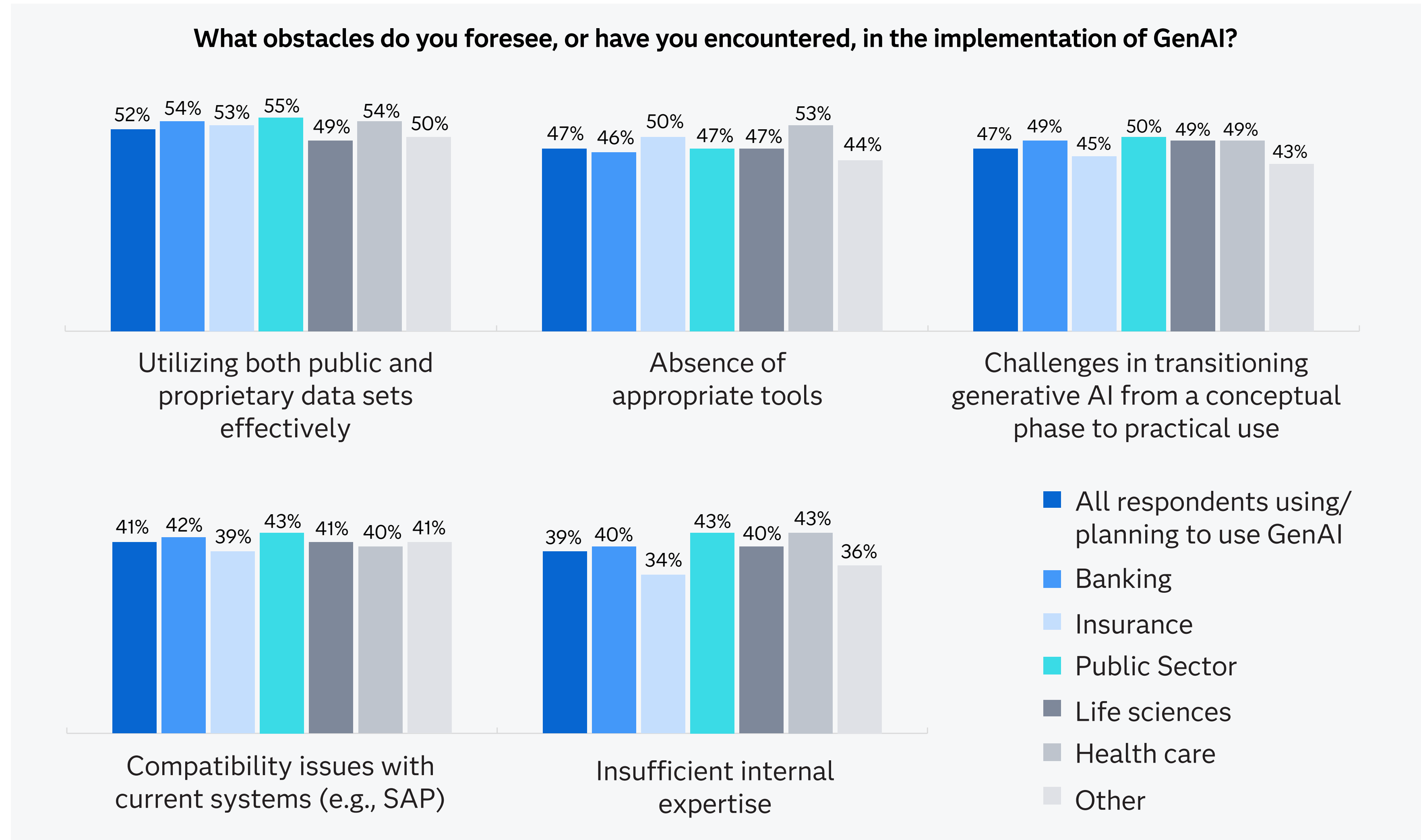
For many organizations, it really comes down to this: In-house GenAI expertise is lacking. As HR departments encounter a scarcity of suitable hires, organizations worry that they do not have access to the necessary skills to make the most of their GenAI investment.

Our research finds that:

- Half of organizations **(51%)** are concerned that they do not have the in-house skills to use the technology effectively.
- Around four in 10 respondents **(39%)** say they have found insufficient internal expertise to be an obstacle to implementing GenAI.
- North America and the APAC region have slightly less difficulty accessing GenAI skills (**44%** and **49%** report this to be an issue), in contrast with Northern Europe **(54%)** and the rest of Europe **(56%)**.
- Industries reporting that a lack of internal expertise is a barrier to implementing GenAI include manufacturing **(48%)**, health care **(43%)** and the public sector **(43%)**. Telco companies **(24%)** are less affected.



Lack of internal expertise is a particular issue for those in health care and the public sector.

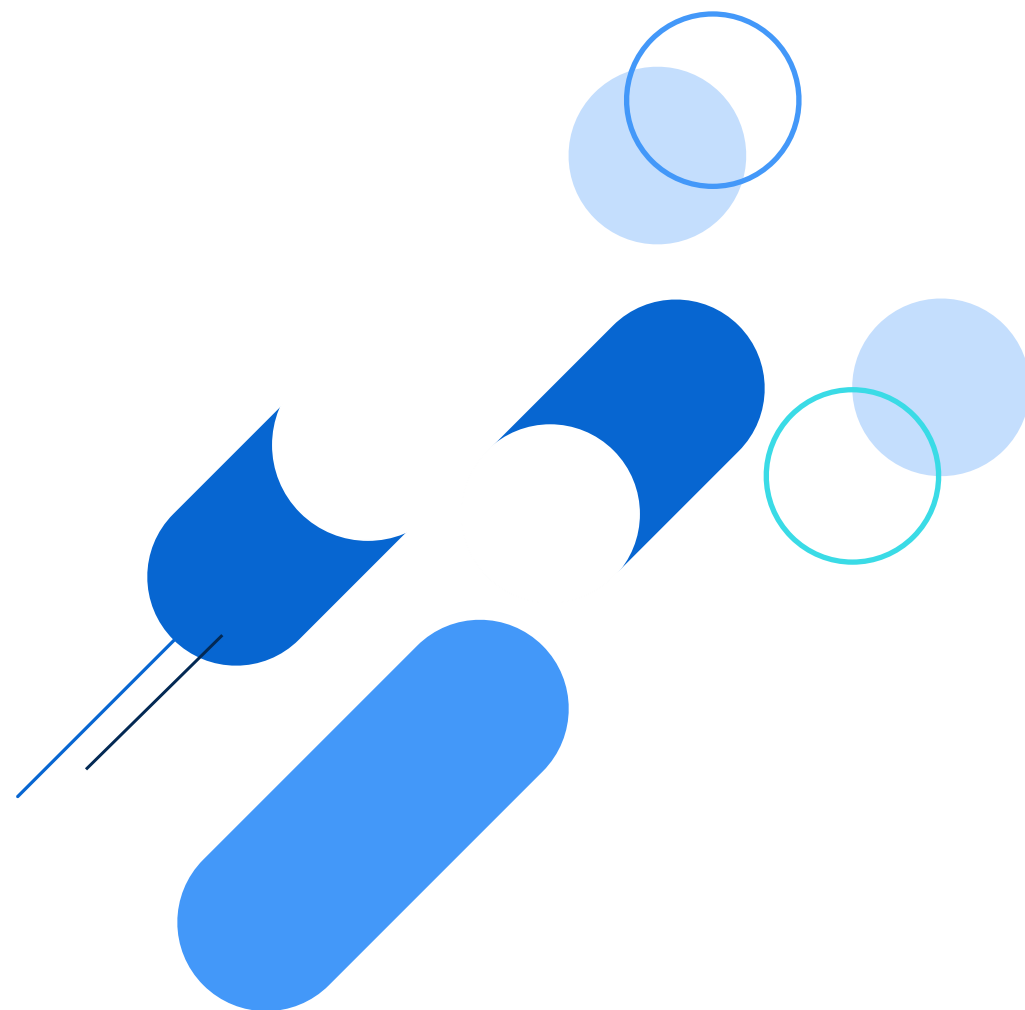


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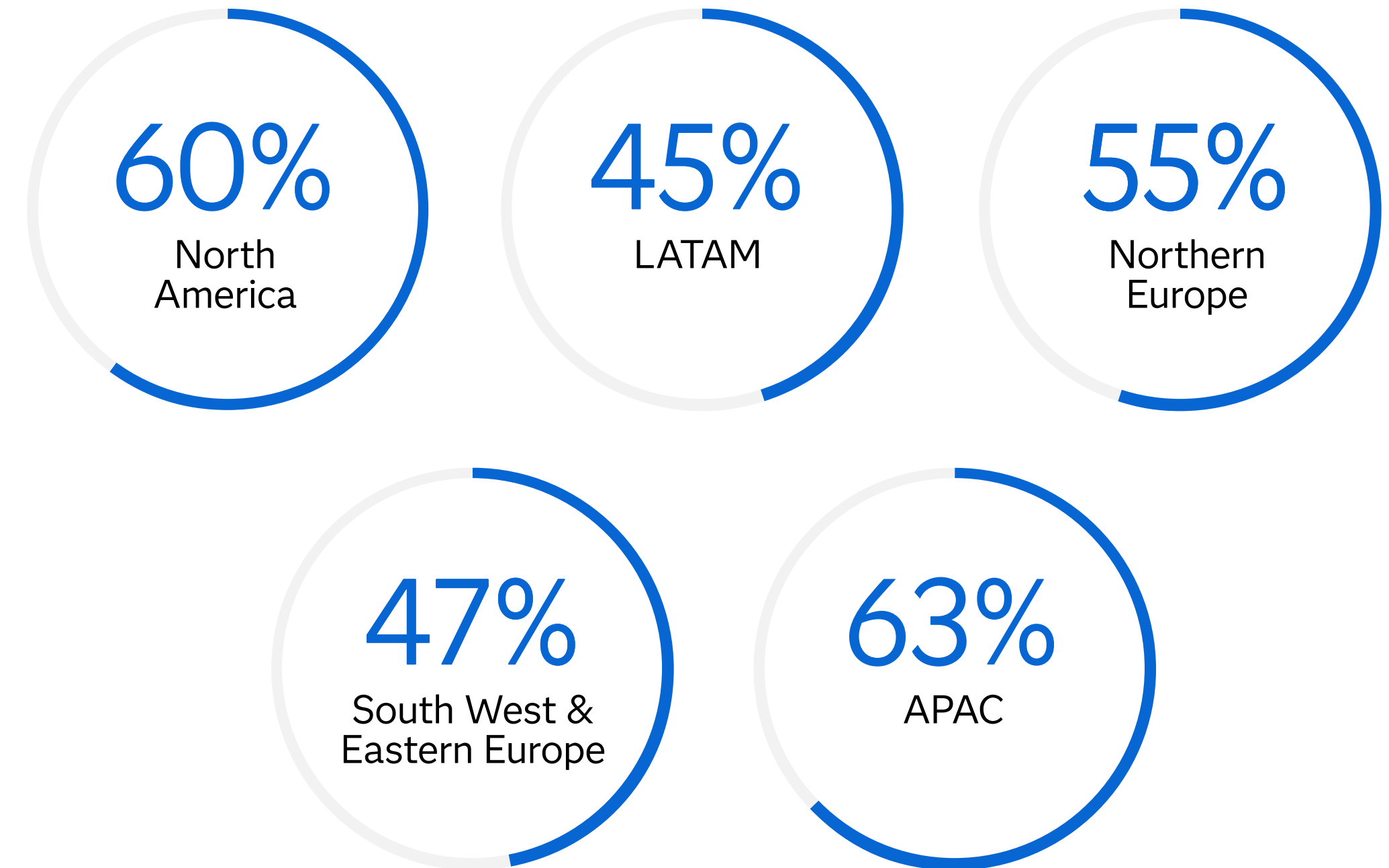
GenAI adoption rates will continue to grow

The research reveals that more than half of businesses (54%) have begun to implement GenAI, including 11% that have fully integrated the technology at an enterprise level. The vast majority (86%) of companies are investing in GenAI this year and next. One in five plan to roll out GenAI at the enterprise level, and 72% are undertaking or planning to embark on projects to build their own LLMs.

As you will see in the charts below, there are regional differences in GenAI implementation: China, the UK, the US, Australia and Germany are ahead of the curve in adoption of the technology. Organizations in the US are further ahead with full implementation. By sector, telco companies have reached a more advanced stage than the rest, followed by retail, insurance, banking and life sciences. Manufacturing, the public sector and health care organizations are behind the curve.

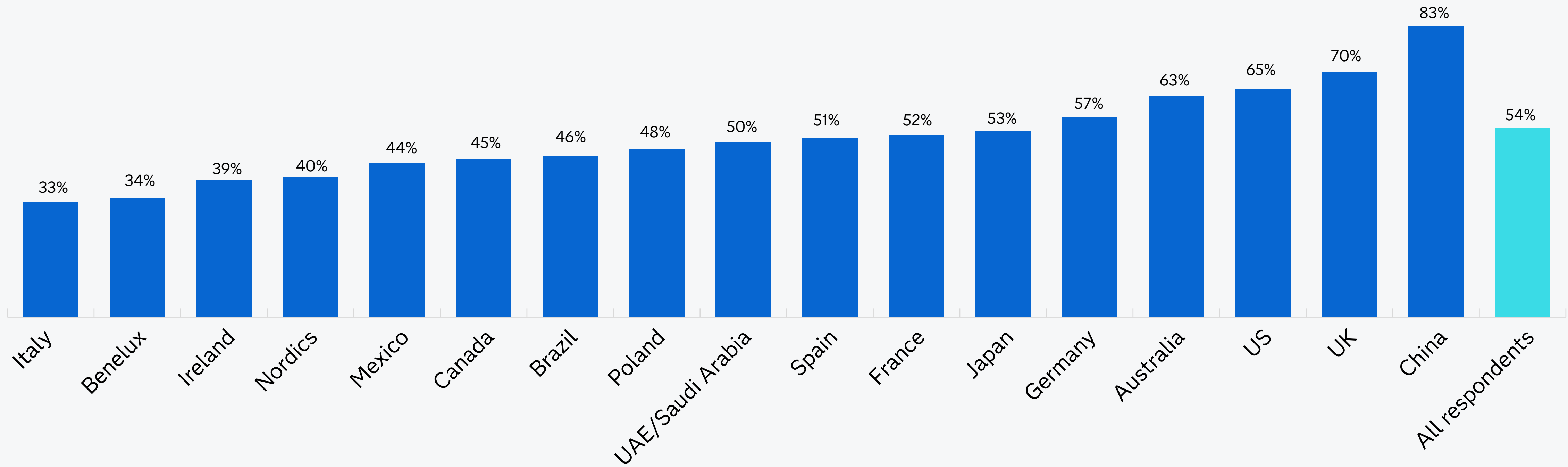


**To what extent is your organization using GenAI?
(% currently using)**



GenAI usage is above the global average in China, the UK, the US, Australia and Germany.

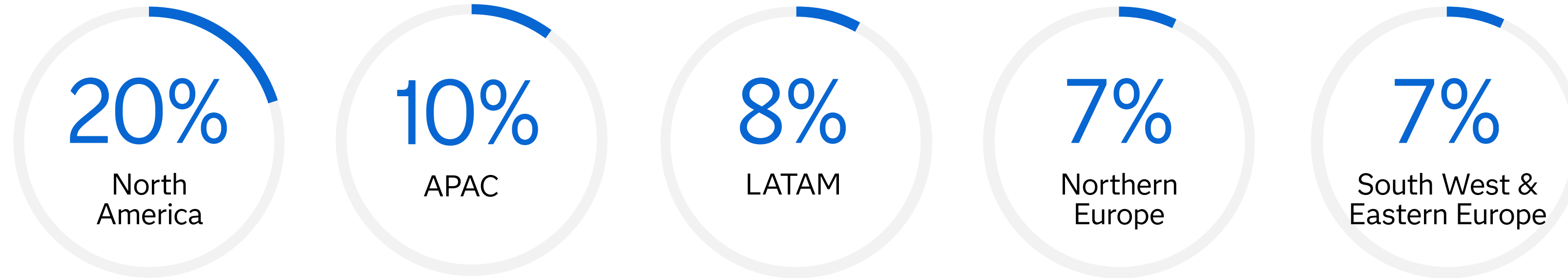
To what extent is your organization using GenAI? (% currently using)



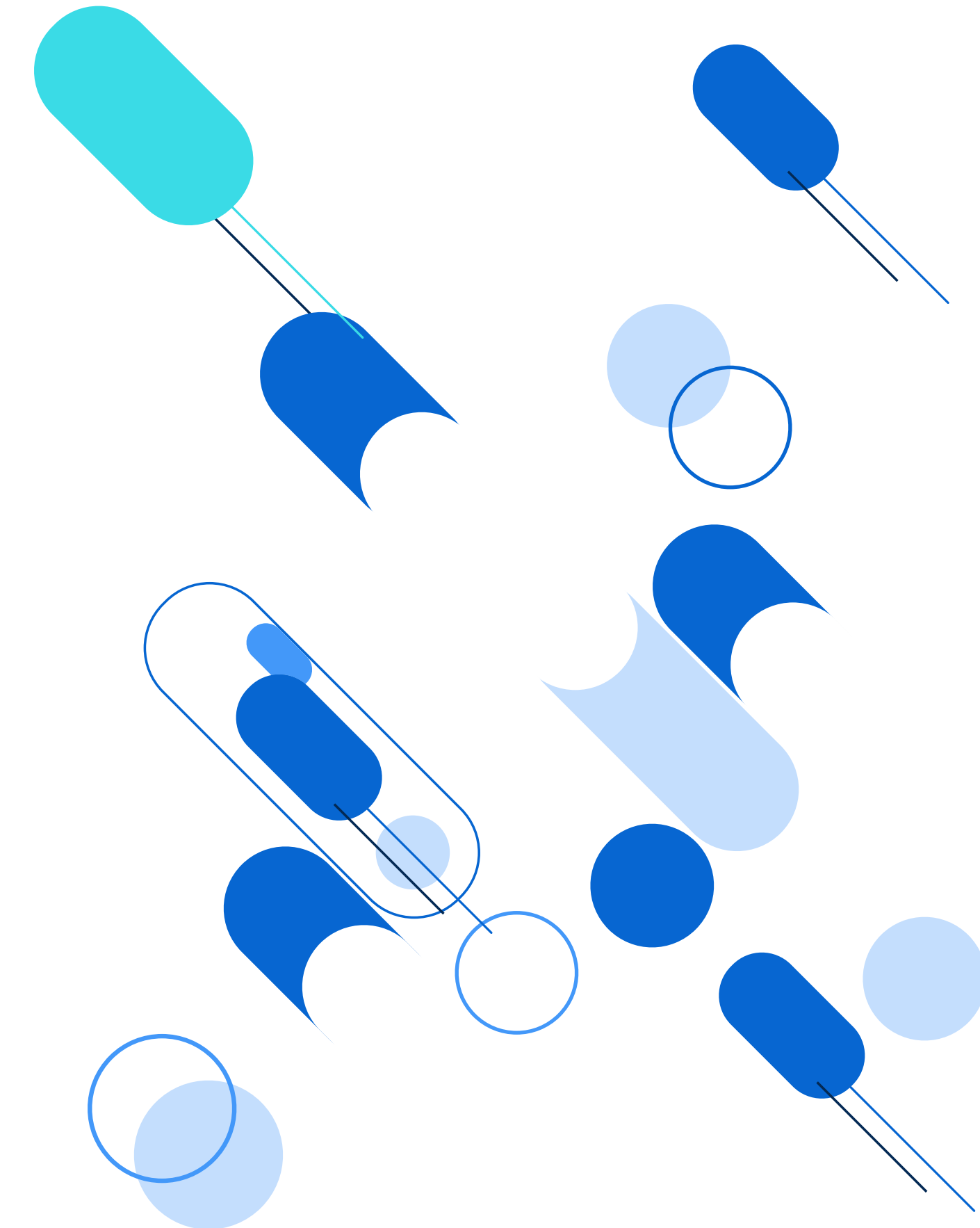
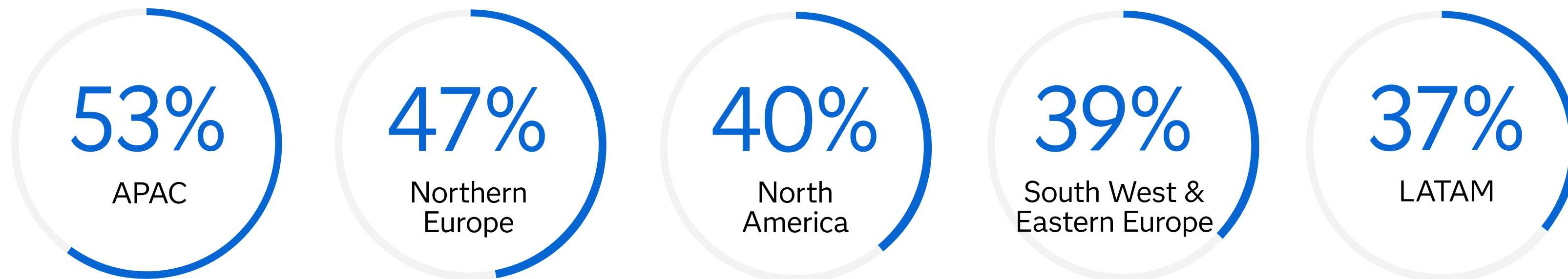
Organizations in North America are further ahead with full implementation.

To what extent is your organization using GenAI?

Using and fully implemented



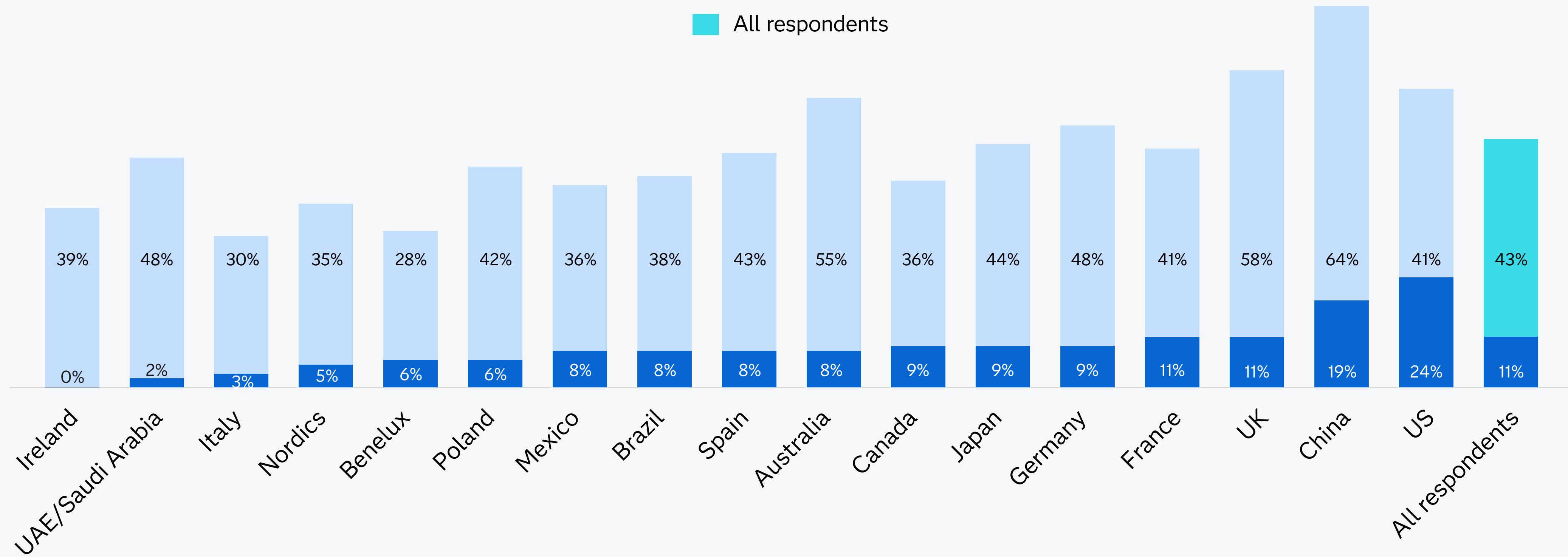
Using but not fully implemented



Those in China are most likely to be using GenAI to some extent but full implementation is most common in the US.

To what extent is your organization using GenAI?

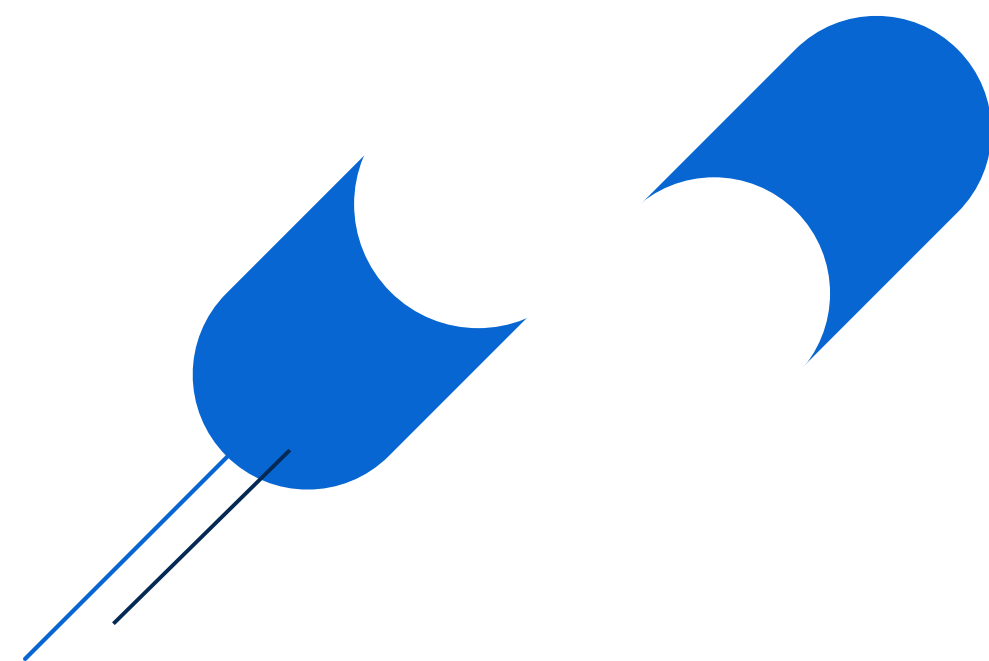
- We are using generative AI but haven't yet fully implemented it (i.e., running initial tests/experiments)
- We are using generative AI and have fully implemented it (i.e., integrated GenAI into our regular processes)
- All respondents



Organizations are using – or planning to use – GenAI across multiple departments. A massive 86% of respondents have either begun to deploy GenAI across sales departments or are planning to do so.

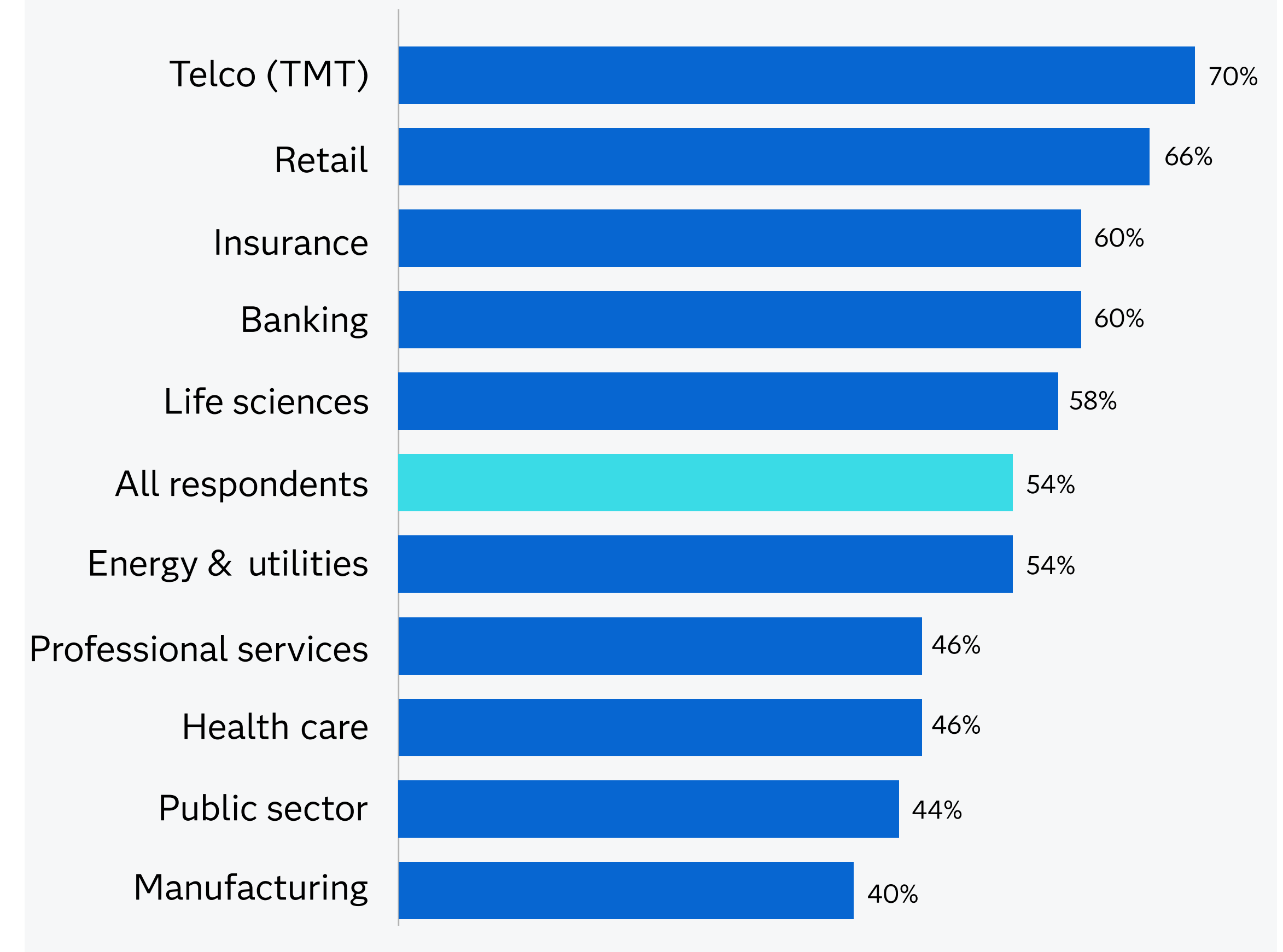
For marketing, that figure is 85%; for IT 81%; and for finance it's 75%. Even in those departments where GenAI adoption is least likely, the majority are still either using or planning to bring it on board; 59% in HR and 49% in legal departments. A fifth of the workforce (20%) currently use GenAI tools to generate text, images or video every day.

As organizations adopt GenAI, they seek to understand how to use it safely and ethically. Nearly two-thirds (61%) have a GenAI usage policy in place, indicating that even where governance is patchy, leaders are making efforts to standardize GenAI usage. Almost half (46%) are planning to enlist third-party support to ensure that they make the most of GenAI's potential.



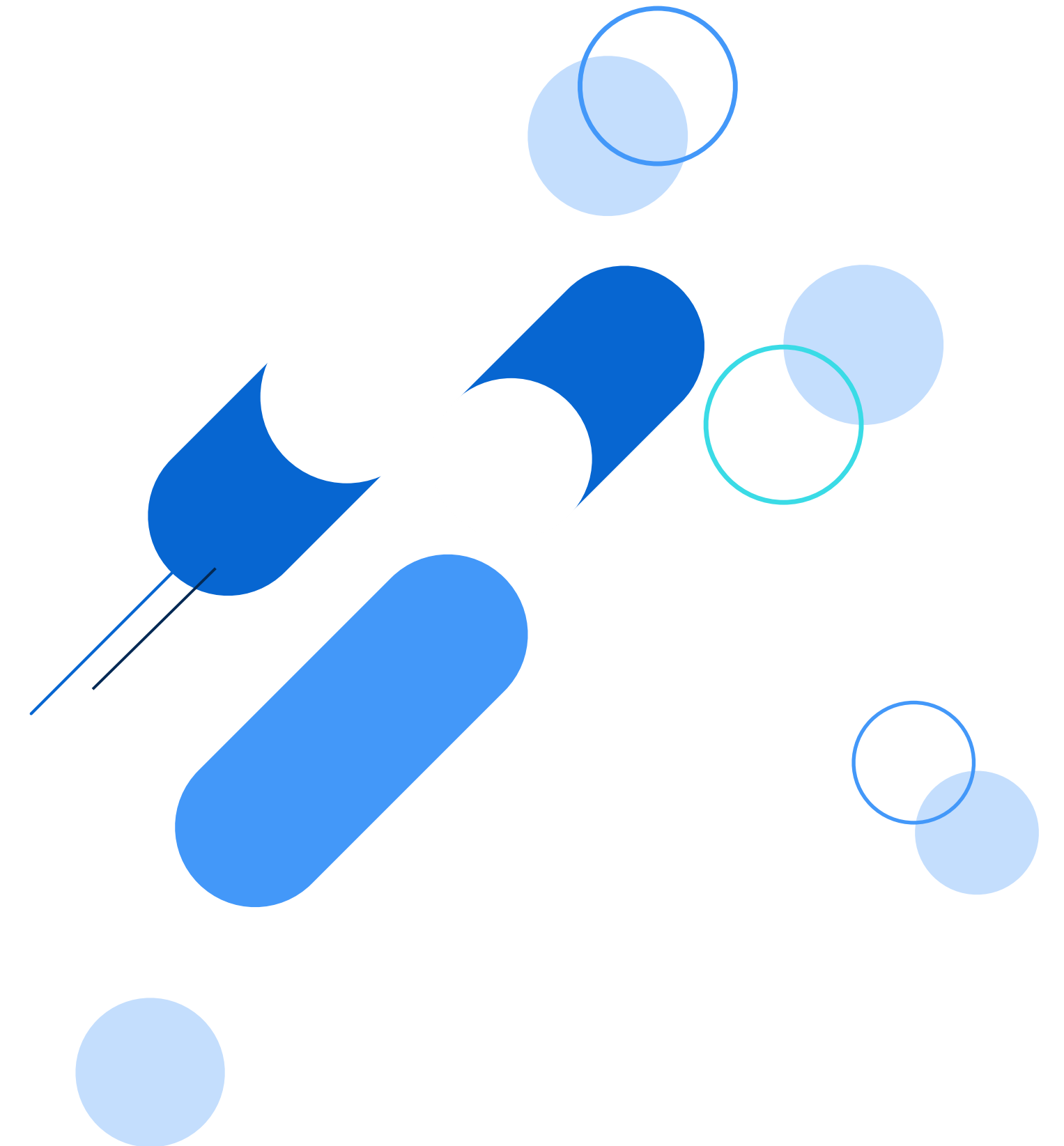
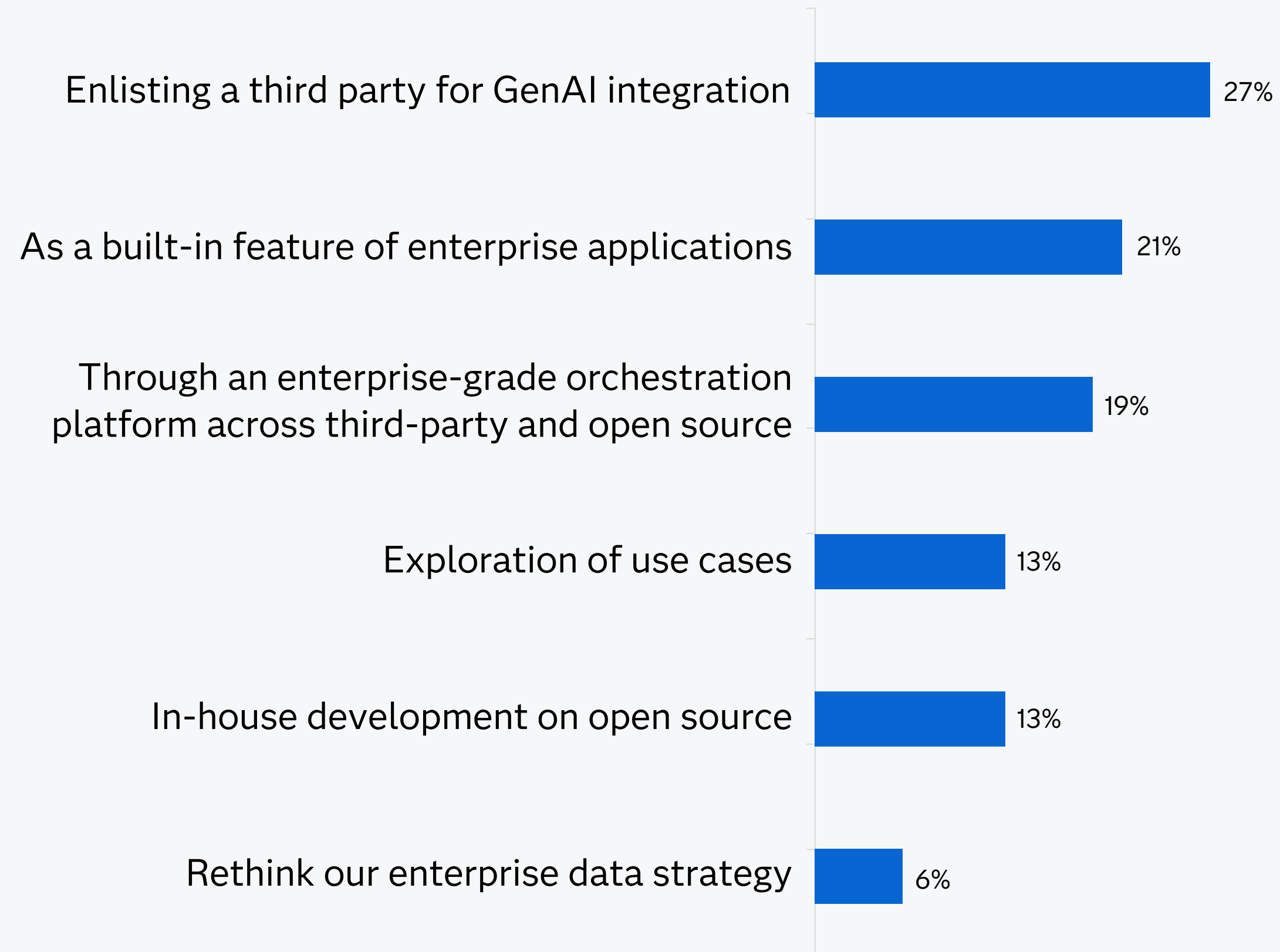
Telco, retail, insurance, banking and life sciences organizations lead in GenAI usage.

To what extent is your organization using GenAI? (% currently using)



Many are enlisting third parties to support GenAI integration, including through orchestration platforms.

How do you envision scaling GenAI within your business processes?



05

Blueprint for gaining a competitive advantage

It is crucial that GenAI projects are built in a way that not only meet current needs but are also prepared for future growth and innovation.

For a successful GenAI program, you should have a clear strategy for each of the following areas:

- **Accelerated innovation.** Seamlessly integrate GenAI models into decisioning workflows, AI and machine learning applications, and existing business processes by using decisioning flow tools such as intelligent decisioning.
- **Data protection.** Ensure user privacy and security with robust data quality measures – including synthetic data generation, data minimization, anonymization and encryption – that provide sensitive information safeguards.
- **Trustworthy and explainable results.** Data experts can apply natural language processing techniques to preprocess data, explain the generated output in easily understandable terms, minimize hallucinations and reduce token costs.
- **Enhanced governance.** Use built-in workflows that validate the entire life cycle of LLMs, from regulatory compliance to model risk management.

As organizations continue to experiment with GenAI, real business value will come down to identifying real-world use cases that deliver trusted and scalable value.

As one of the data and AI companies with the longest experience in the field, SAS is equipped to be the trusted partner that helps organizations confidently succeed in the GenAI journey across different industries, regulatory scenarios and application areas.

At SAS, we focus on identifying high-ROI, ethically applied use cases. Our goal is to enable secure adoption, boost productivity, produce trusted results, and accelerate innovation across diverse industries and regulatory landscapes.

06

SAS Viya is the platform for governing GenAI


GenAI and LLMs can augment, accelerate and streamline processes across an organization. However, to solve industry-specific problems and deliver value, these pioneering technologies require support. Organizations need systems and technology that integrate LLMs with their existing processes, providing governance and decisioning capabilities. Human intervention is necessary to maintain and govern them.

SAS® Viya® is a data and AI platform that supports organizations implementing GenAI. It helps align GenAI usage with business objectives, empowering your organization with this pioneering technology.

Specifically, with SAS, organizations can:


- Integrate LLMs safely into their current business processes, using SAS Viya's APIs to manage prompts, govern models and build decisioning flows.
- Use Viya Copilots as agents to accelerate tasks from data analysis, model building, industry and business tasks in a conversational experience.
- Generate high quality synthetic data with SAS Data Maker to address data quality, scarcity and privacy scenarios.

Watch a short demo and learn more about our portfolio [here](#).



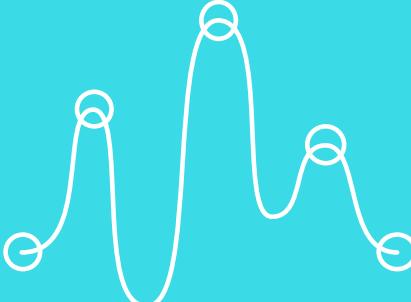
GenAI Orchestration Platform

Explain, Govern, Orchestrate LLMs



SAS Viya Copilots

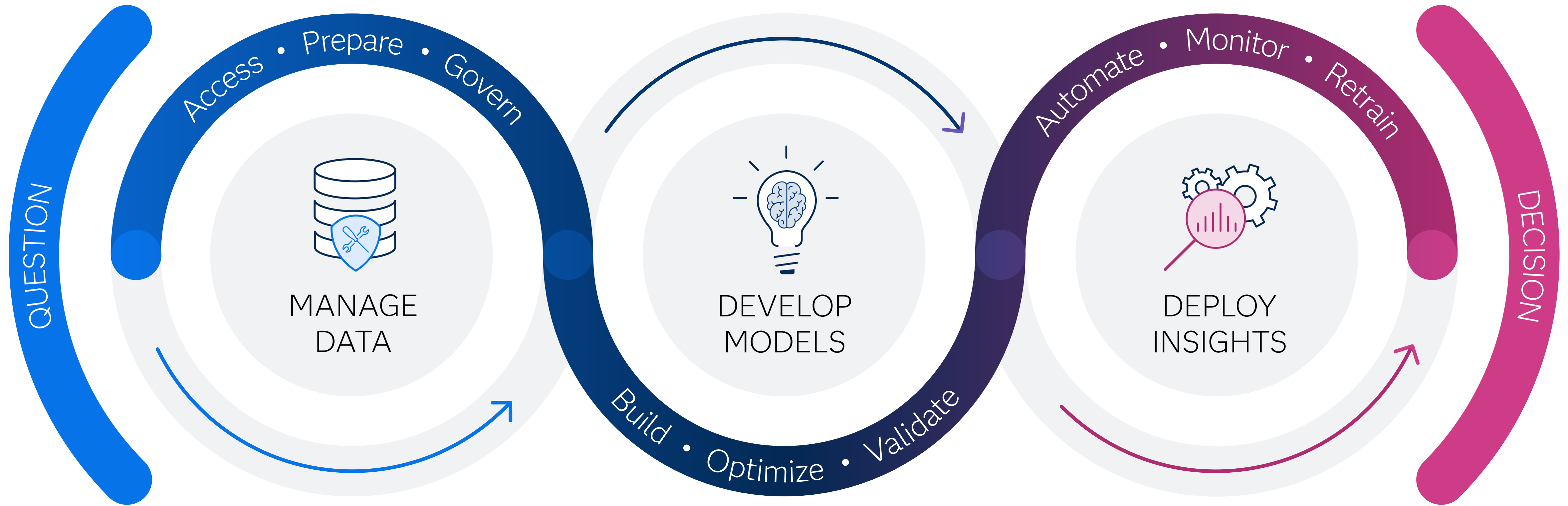
Accelerate AI/Business Tasks



Synthetic Data Generation

Mitigate Data Quality and Scarcity

GenAI for increased business productivity with SAS Viya.



GenAI orchestration: SAS Viya integrates existing GenAI models to orchestrate LLMs for enterprise use cases.

07

About this research

The survey was conducted by Coleman Parkes from February to April 2024, and targeted 1,600 decision makers in GenAI strategy or data analytics in organizations across key sectors globally. Survey respondents work across a range of sectors: banking, insurance, the public sector, life sciences, health care, telco, manufacturing, retail, energy and utilities, and professional services. Their job titles include data manager, IT director and chief information officer. The smallest organizations we surveyed employed a workforce of 500-999 people and the largest had more than 10,000 employees.

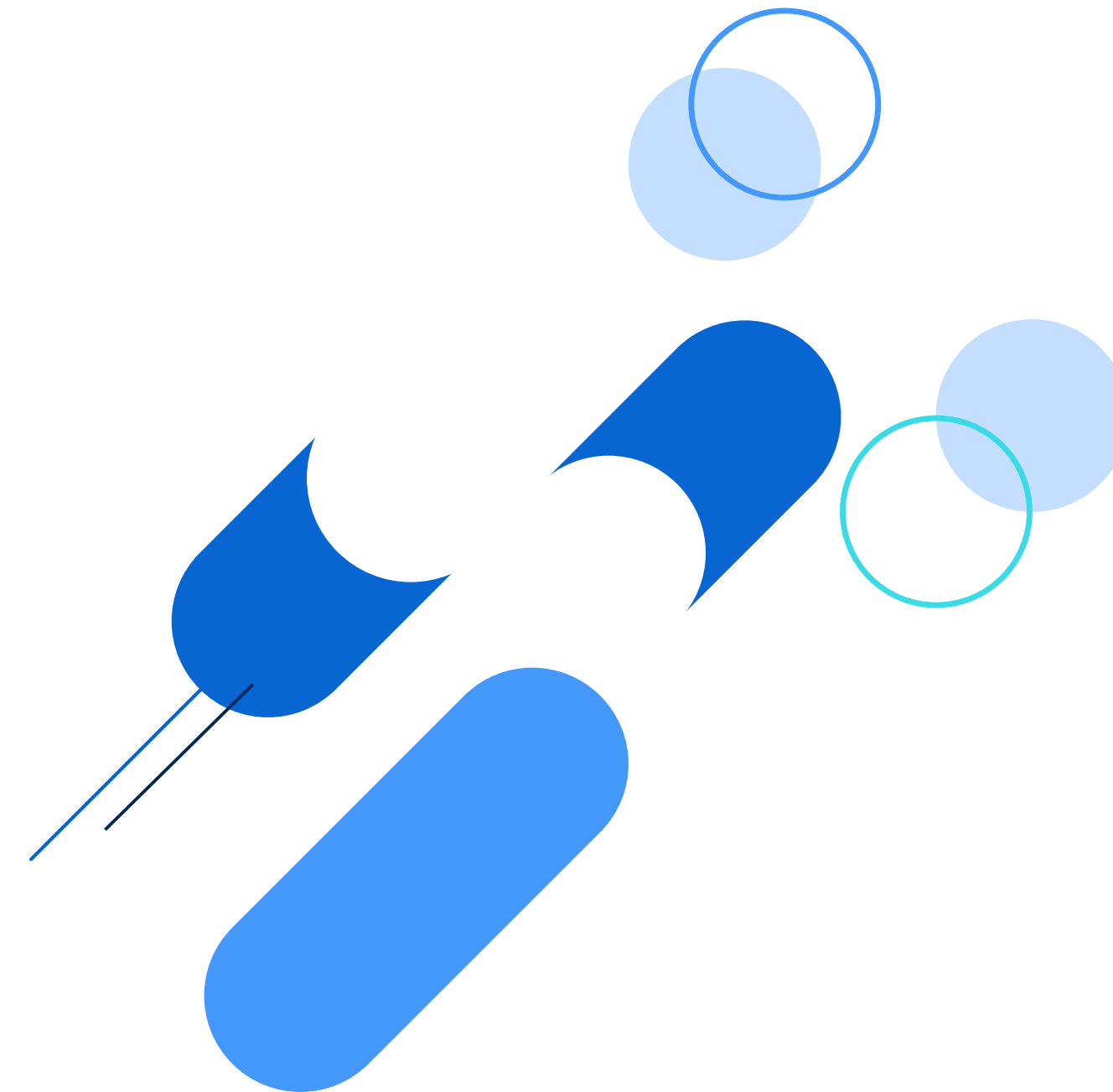
About Coleman Parkes

Coleman Parkes is a full-service B2B market research agency specializing in IT/technology studies, targeting senior decision makers in SMB to large enterprises across multiple sectors globally.

For more information, contact Stephen@coleman-parkes.co.uk.

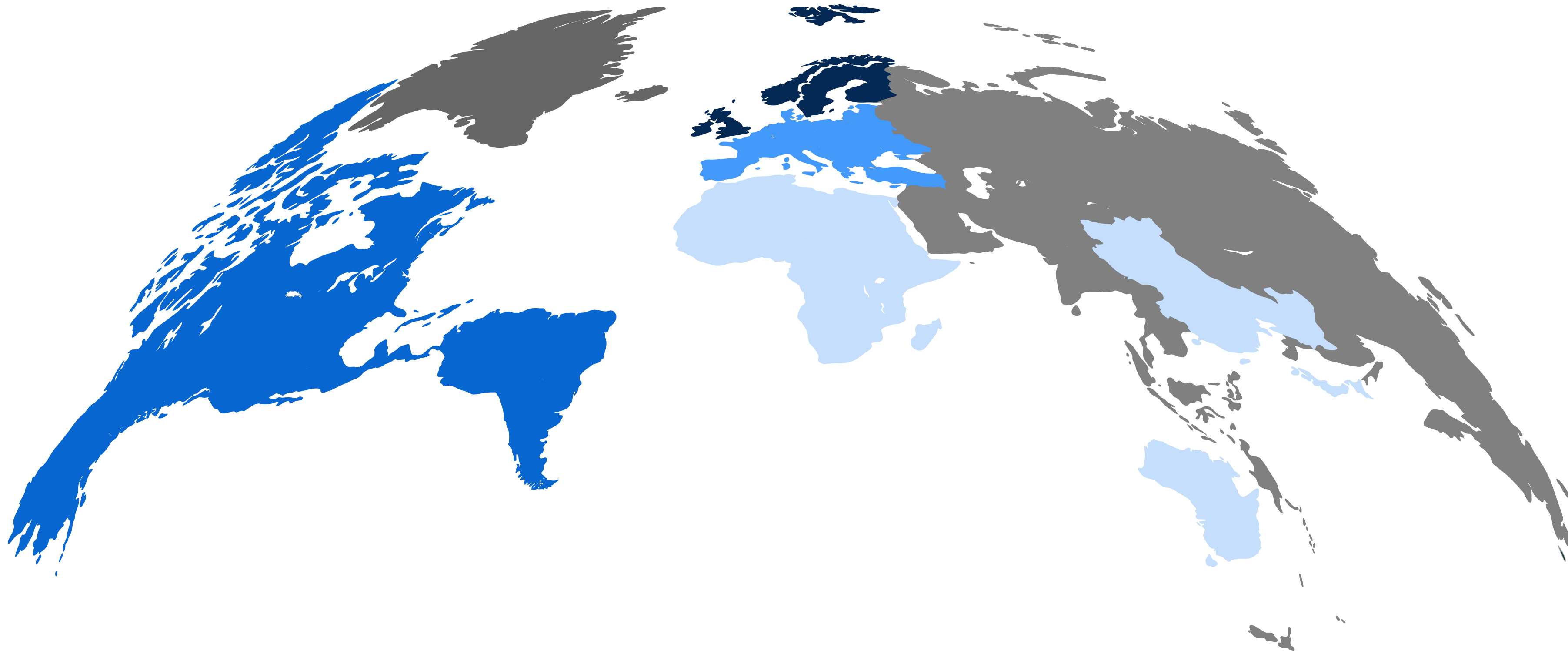
About SAS

SAS is a global leader in data and AI. With SAS software and industry-specific solutions, organizations transform data into trusted decisions.



Geographical coverage

Americas	550	USA, Canada, Brazil, Mexico
Northern Europe	300	UK/Ireland, Sweden, Norway, Finland, Denmark
SWEE	475	France, Germany, Italy, Belgium/Netherlands/Luxemburg, Spain, Poland
APAC	275	Japan, Australia, China, UAE/Saudi Arabia





To learn more, please visit sas.com/generative-ai



To contact your local SAS office, please visit: sas.com/contact