



KPMG global tech report 2023

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Foreword

Be determined, not deterred. Despite the headwinds of global economic uncertainty, digital transformation leaders that are committed to their innovation priorities continue to realize value at pace.

By aligning investment in technology with their strategic ambitions, these organizations are upholding momentum. When it comes to digital transformation, a hesitant mindset could prove costly, and not just because competitors will continue to invest: new technologies can give businesses ways to deal with the difficult market.

The good news is that the latest KPMG research suggests that many organizations refuse to be blown off-track. In this year's edition of our global tech report, technology professionals are resolute. Some leading organizations are already generating profit from their investments in emerging technologies — and are coping well with priorities such as the environmental, social and governance (ESG) agenda.



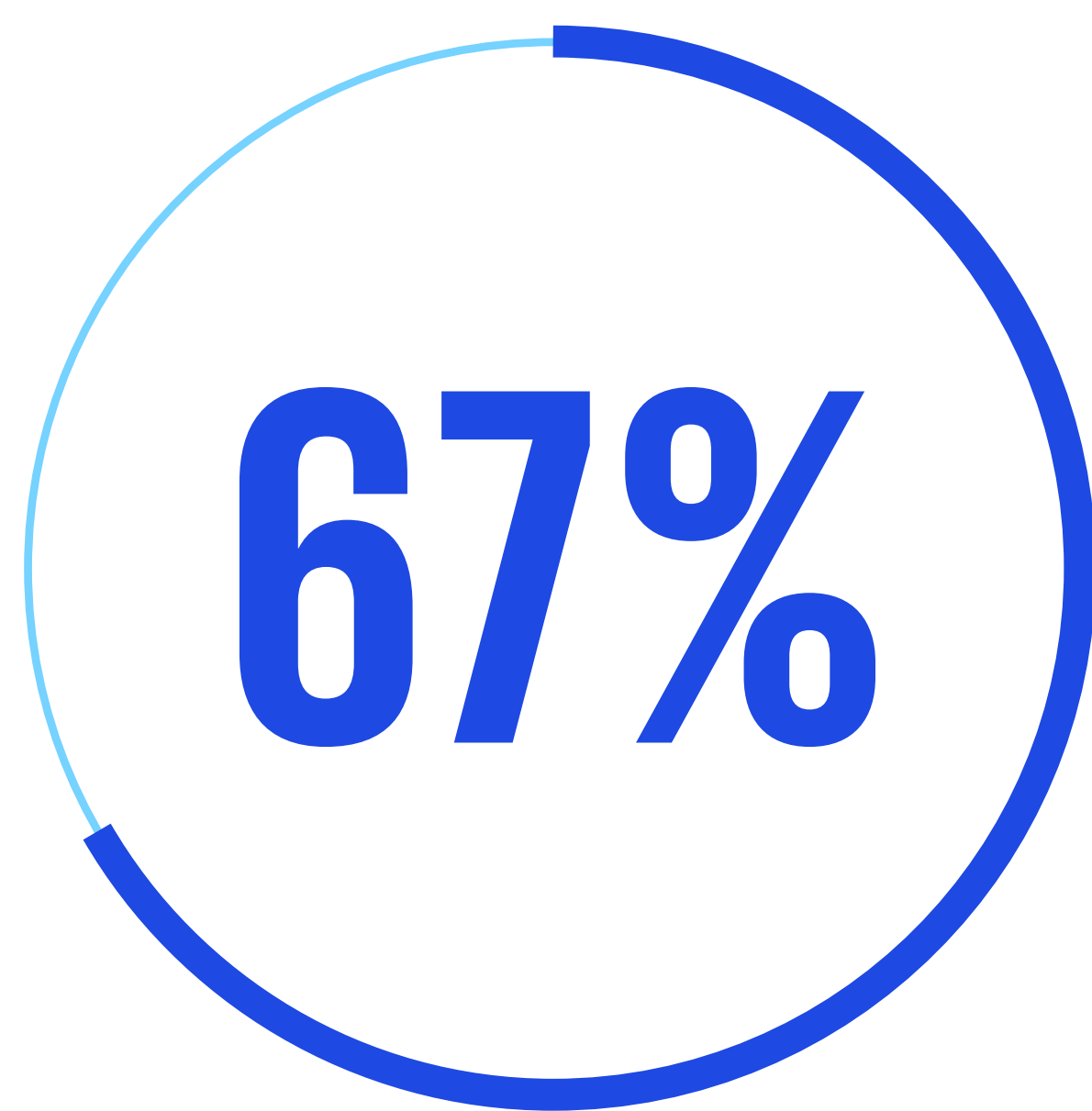
This is not to downplay the challenges. Notably, 67 percent of technology leaders say they are now expected to do more with smaller budgets than they were last year: 72 percent and 69 percent of Asia-Pacific (ASPAC) and Americas businesses respectively say this, while 61 percent of those in EMA feel the same. Also, coordination issues between technology functions and the rest of the business frequently derail digital transformation progress. But despite these pressures, organizations must rise to the challenge and continue to find ways to digitally transform to avoid falling behind the competition.

Tech on track

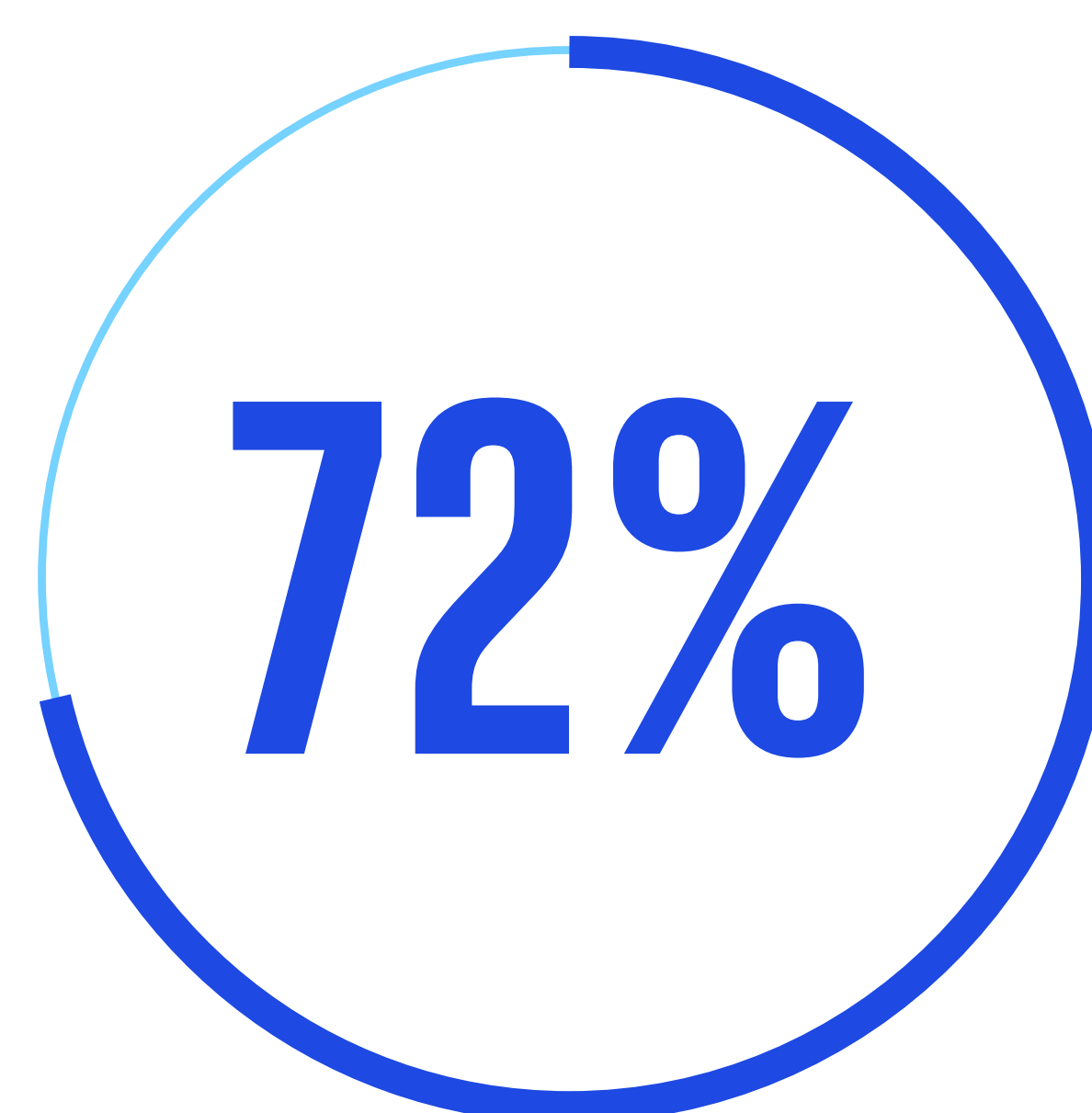
In last year's report, 66 percent of organizations said they were either very or extremely effective at using technology to advance their business strategies. Almost all said they had successfully used digital transformation to improve profitability or performance over the previous two years. Today, that track record is paying off as buy-in from senior leaders for the deployment of emerging tools and technologies has almost quadrupled.

These results show what is possible. By demonstrating the potential returns of well-placed technology investments, tech teams can unlock support for future technology bets. And having made significant advances, many businesses are exploring new innovation opportunities — particularly in areas such as artificial intelligence (AI). They are also thinking hard about how to build on the improvements they have already made — with more rigorous management of their cloud-based infrastructure, for example.

In this year's research, we look at organizational priorities and plans for technology. We surveyed 2,100 executives and carried out in-depth discussions with industry experts to find out how organizations are looking forward to the next stage of the digital transformation journey. Where do they expect emerging technologies to drive new value? And how will they move forward with pace and confidence?

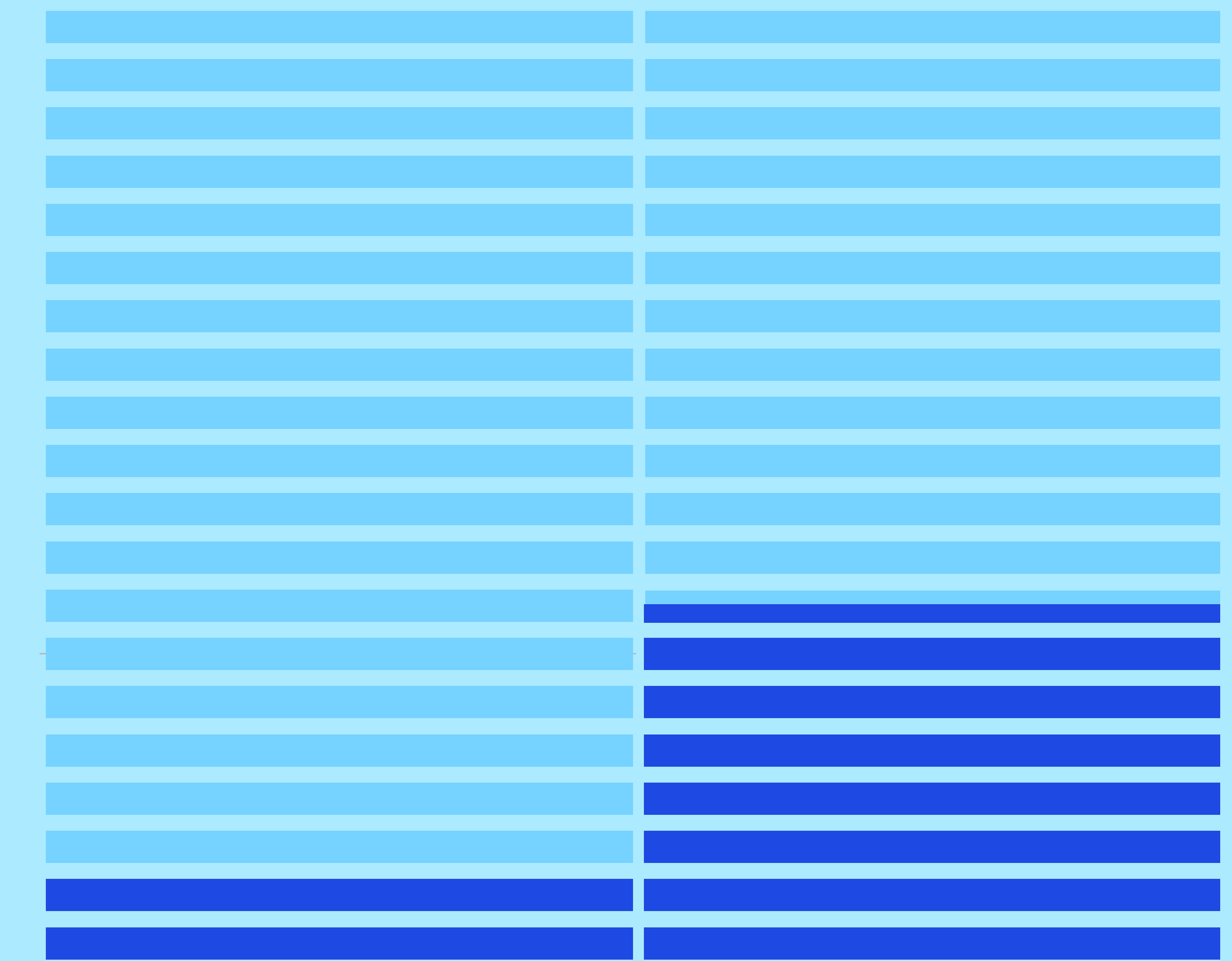


67% of technology leaders say they are now expected to do more with smaller budgets than they were last year



72% of Asia-Pacific (ASPAC) and 69 percent of Americas businesses say this, while 61 percent of those in EMA feel the same

Emerging tech buy-in has leapt forward



10%

In 2022, only 10% of those surveyed had leadership buy-in for emerging tech

38%

In 2023, 38% have buy in from leadership for emerging tech



About the research:

The study is based on a survey of 2100 executives from 16 countries:

- 29 percent from Asia Pacific (ASPAC)
- 38 percent from Europe, Middle East and Africa (EMA)
- 33 percent from the Americas

There are representatives from across nine industries including: energy, education, financial services, government, healthcare, industrial manufacturing, life sciences, tech, retail and consumer packaged goods.

A significant proportion of the sample is composed of senior leadership, including board members or members of the C-suite, VP or head of department and director level.

In terms of the size of these organizations, annual revenues sit above \$100 million.

We also interviewed seven senior technology leaders and experts:

David Reeve

CIO at University of Technology Sydney

John (jt) Tonnison

Executive Vice President, Chief Information & Digital Officer at US Foods

Masashi Kaneko

CDO, Vice President and Head of the Digital Technology Department at Mitsubishi Tanabe Pharma Corporation

Michael von Roeder

Group Chief Digital Officer at 50Hertz Transmission GmbH

Nandha Kumar

Chief Information Tech and Data Officer for Americas at Danone

Nan Wang

Executive Director, China Market IT Head at Merck

Swamy Kocherlakota

Executive Vice President and Chief Information Officer at S&P Global

The study is based on a survey of 2100 executives from 16 countries:



33%

Americas

38%

Europe, Middle East and Africa (EMA)

29%

Asia Pacific

Section 1:

State of play



State of play: unlocking value from transforming with intent

Rather than embracing new technologies simply for the sake of it, organizations should ensure their digital innovation plans are intentionally tied to their dynamic strategic and commercial goals.

“Being intentional means being really clear what value you intend to generate from the technology you deploy,” says David Reeve, CIO at the University of Technology Sydney. And this value needs to be quantifiable in some way, “...whether that’s in dollars or other measures of efficiency. When you’re not intentional about the returns you intend to achieve, technology projects can drift aimlessly, and become protracted continuing for far too long.”

The good news is that by following a systematic, value-led approach, many organizations have already created tech infrastructures that are generating useful benefits for their business models.

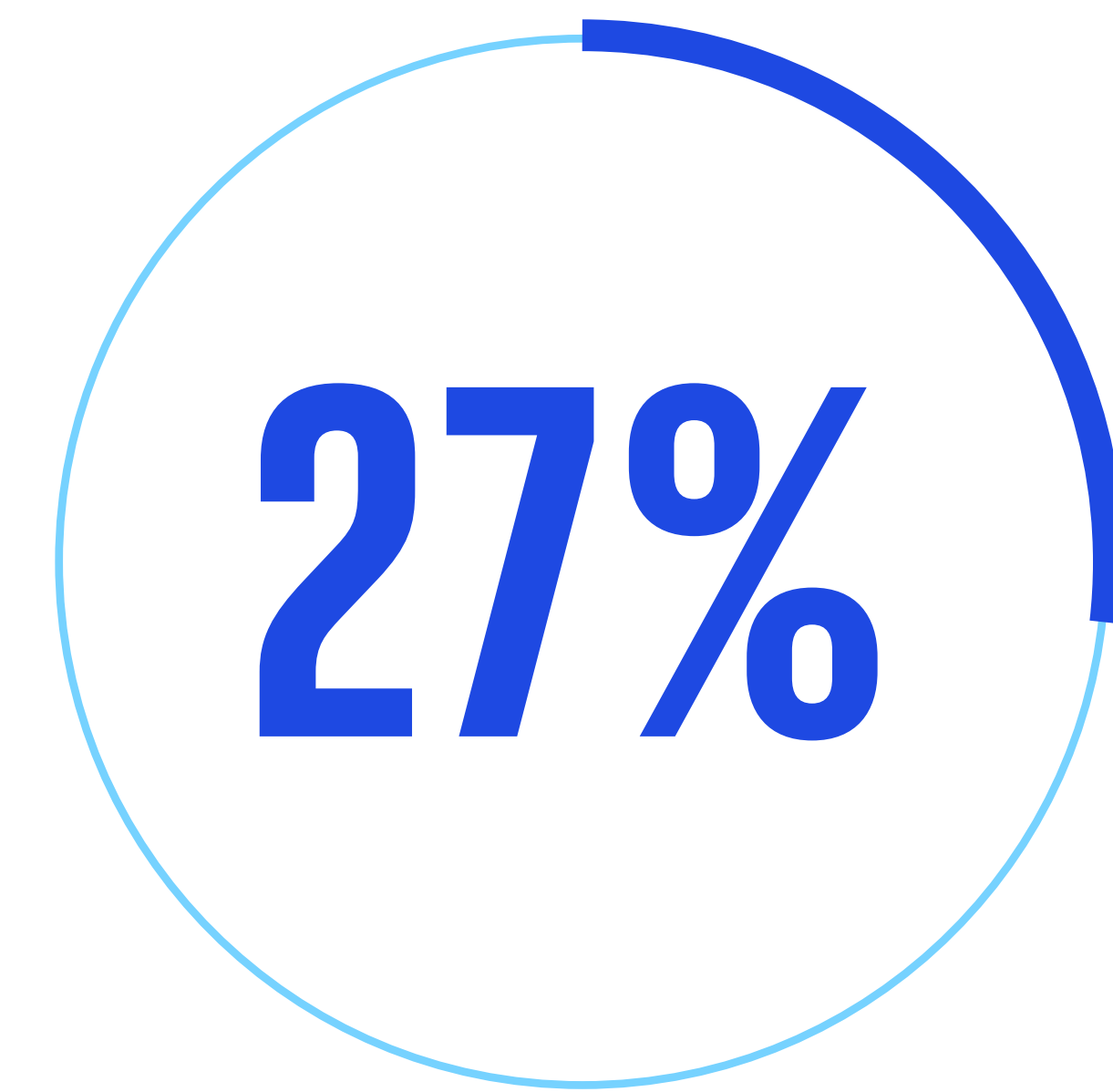
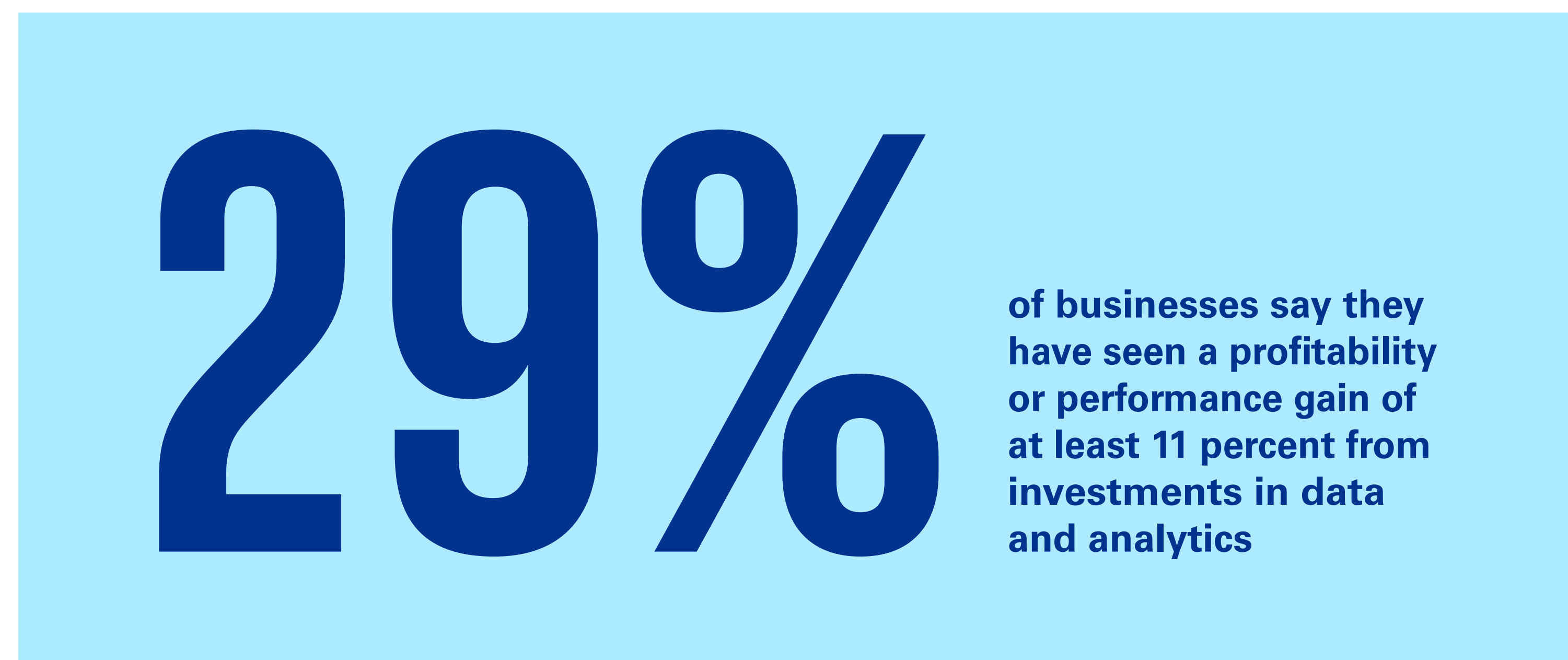
“ Being intentional means being really clear what value you intend to generate from the technology you deploy. ”

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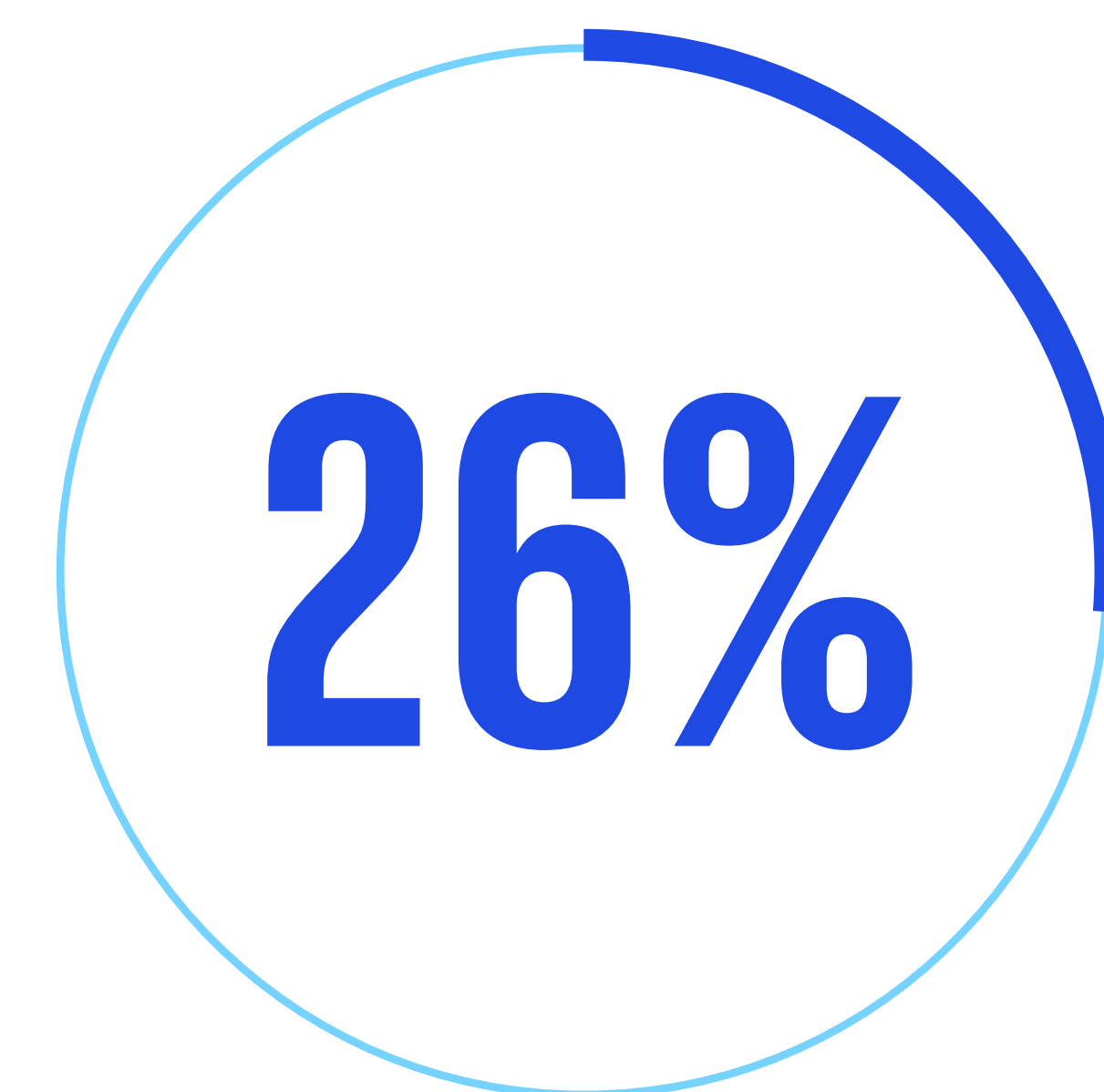
Efforts poured into digital transformation projects to date are paying off

Similar to the findings in the 2022 research, the majority of this year's respondents confirm they have successfully used digital transformation to improve their profitability or performance in some way. But, this year, the performance uplift has experienced a year-on-year increase. Overall, an average of 63 percent of respondents have reported an increase in performance as a result of their digital transformation efforts over the past 24 months. The largest group of respondents see technology investment driving profit or performance improvement uplift of over 10 percent, up from last year's most common rate of improvement uplift of around 2.5 percent.

In many cases, digital transformation investments are providing returns that have exceeded expectations and are driving tangible gains:



say the same of investment in public cloud and as-a-service tools



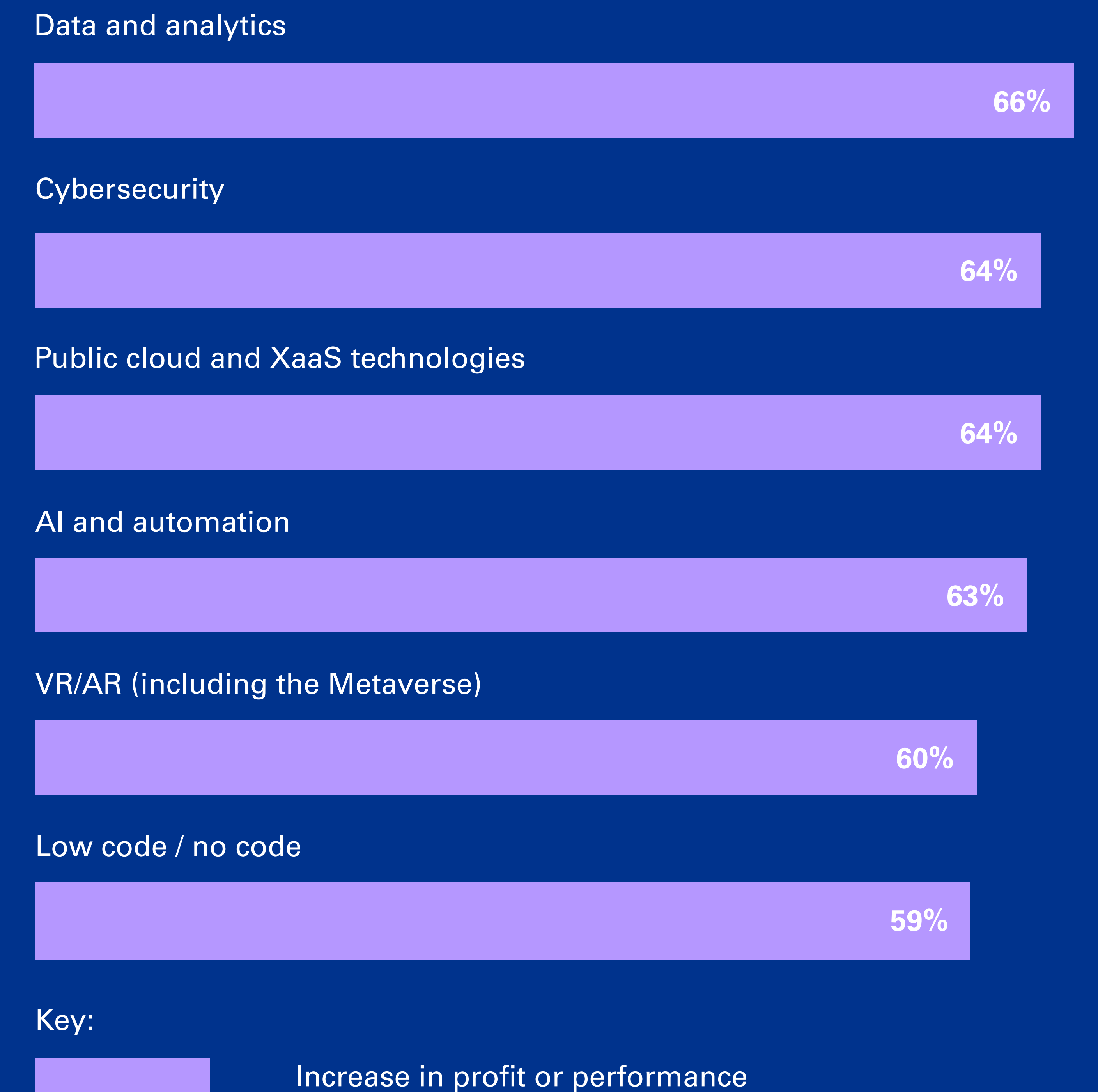
have seen such gains from investment in artificial intelligence and automation

Other benefits respondents shared include increased employee productivity, improved efficiency and cost control, enhanced customer engagement, higher levels of employee satisfaction, support for new business development and the enablement of innovation.

But some parts of the world seem to be moving more quickly than others. In the Americas, for instance, only 24 percent of organizations report a significant increase in profitability and performance from investments in data and analytics; that rises to 28 percent in EMA and 35 percent in ASPAC. These regions are seeing more noteworthy gains across the board.

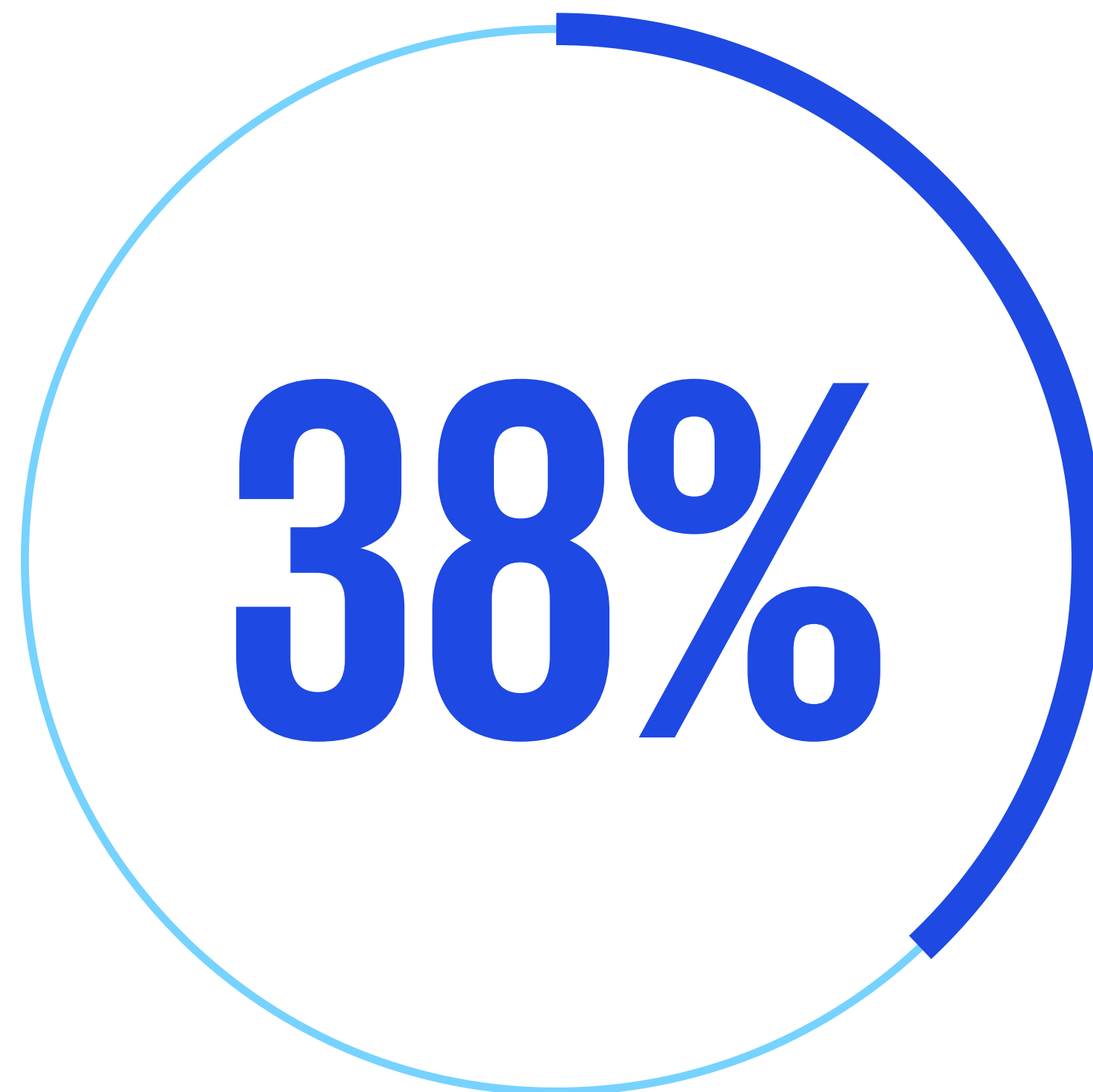
All new technologies are improving organizations' profitability or performance

Over the past 24 months, have your digital transformation efforts with the following technologies positively impacted profitability or performance?



Against this backdrop of successful recent digital transformation, many businesses have a level of self-assurance: 73 percent say they will be able to grow using their existing technology stack. Interestingly, 38 percent say they now have buy-in from senior leaders for the deployment of emerging tools and technologies — this figure has increased from just 10 percent when this research was conducted last year. In the industrial manufacturing sector, the figure is now up to 50 percent, with energy, government (both at 44 percent) and healthcare (43 percent) not far behind.

While it is positive to see organizations enjoying the rewards of their hard work with digital transformation, they must avoid the trap of becoming complacent. If they fail to stay in tune with new industry developments and shifts in customer expectations, organizations may soon see their competitors overtake them.



say they now have buy-in from senior leaders for the deployment of emerging tools and technologies

Customer engagement and cybersecurity stand firm as popular focus areas for digital transformation projects

Consistent with what was observed in last year’s report, digital innovation projects are primarily focused on achieving performance uplifts around cybersecurity and customer engagement.

A desire for improved customer centricity, for instance, is a common trigger for digital transformation:

- 57 percent of respondents say improving upselling and cross-selling opportunities is a leading driver for their digital transformation efforts
- 51 percent say that the need to do a better job of converting prospects into customers is a trigger of transformation

By some measures, ASPAC businesses lead the way here: 61 percent are focused on upselling and cross-selling, for example, rising to 64 percent in China.

Diving deeper into how customer needs are shaping digital transformation journeys, tech innovation initiatives are primarily focused on meeting buyer expectations around cybersecurity, speed of service and convenience.

The three most influential customer expectations in digital transformation projects

01

Stronger data privacy /cybersecurity

02

Speed of customer service

03

Convenience (including 24/7 access)

To get better at converting prospects into buyers and boosting the loyalty of existing customers, organizations should ensure their digital evolution journeys involve service and product upgrades that can save customers time and minimize any chances of frustration.

Rather than risk becoming complacent about the strength of their existing tech stacks, leading organizations recognize the importance of being nimble with innovation in the face of rapid technology change and evolving customer expectations. It is significant, for example, that AI is now seen as the most important technology for achieving their organizations' short-term ambitions. They are moving quickly to embrace rapid advances in areas such as generative AI.

Swamy Kocherlakota, Executive Vice President, Chief Information Officer, S&P Global, notes that the financial index firm is assessing how the likes of generative AI is moving customer behaviors towards more conversational engagement experiences. "Manually reading and digesting information is going out of fashion in favor of more conversational styles of communication, where the exact information a customer is searching for is served up to them in a personalized way."

He adds: "So we are looking at our assets and saying: "That's going to go out of fashion over time. How are we going to communicate with our customers going forward? How do we make our products more conversational, and what new products and business opportunities come with this new channel of interaction?"

Important technologies are delivering real value, but management challenges remain

Looking at the research respondent base, progress is faster in some areas than in others. For example, while businesses are excited about the potential for AI ([see Section 3 for more on this](#)), they are still in the early stages of using it. Just 15 percent have reached a stage where they are progressing proactively in the delivery of their AI strategies.

By contrast, 68 percent of organizations report that their work with data and analytics has gone beyond the experimental phase, while 17 percent describe their approach to data and analytics as "embedded" — it is fully integrated into daily operations and is generating returns.

"We're bringing all our data to a single platform," says Nan Wang, Executive Director and Head of IT at pharmaceuticals company Merck. "This provides us with solid, rich and comprehensive big data within and outside the company, which we can leverage to generate revenue, make decisions, or tell compelling stories."

Most organizations have recognized the value of data and are well on their way in executing their data strategies. But they still have more to achieve, especially around the integration issue of data sets not working together across an organization.

Similarly, the everything-as-a-service (XaaS) approach to technology is benefitting many organizations in a number of ways, but managing XaaS environments is far from straightforward. Apart from the cyber and compliance benefits, the advantages of XaaS in 2023 are different from those reported in 2022. The new entrants to the top four include better data management, accelerating technology innovation and reducing the carbon footprint.

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Nan Wang
Executive Director and Head of IT at Merck



These benefits seem to be supporting an increase in productivity:

63%

of the organizations we surveyed have increased their profitability or performance by using XaaS in the past 24 months

say the risk of moving to XaaS is worth it for the opportunities

XaaS gives us important insights into some of the challenges of digital transformation. Our research shows that while many organizations are preoccupied with the benefits of further migration, they are not managing their existing XaaS environments efficiently.

When looking ahead at organizations' top ambitions for XaaS in 2023, the goals that revolve around optimizing existing XaaS environments all sit outside the top three priorities.

Having successfully shifted to XaaS, organizations should now learn how to intentionally optimize managing their technology estates.

This is an important lesson — particularly in the context of budget constraints. [KPMG research](#) from 2022 found that 77 percent of respondents were at least considering pausing or reducing [digital transformation](#) investment as economic uncertainty escalated. Businesses want to manage initiatives intentionally to get the highest returns possible. This means looking at how to:

- Bring people and technology together more closely
- Work with partners to drive value
- Use emerging tools to get closer to customers

Overall, the lessons of the past 12 months are clear. Digital transformation must be done with intent. To build on the momentum they have created so far, technology leaders must work closely with business partners to align their innovation efforts to strategic ambitions. The way they achieve those ambitions might change as emerging technologies continue to evolve rapidly, but it is the business outcome that is all-important.



Primary ambitions for XaaS are mainly focused on migration

What are your primary ambitions for cloud at the moment?

Supporting the operation of emerging technologies (e.g, AI, quantum computing etc)



Connecting data sources to enable advanced analytics



Maximizing the amount of applications that are shifted to public cloud (XaaS technologies)



Enhancing security and compliance



Supporting new products/service development



Cost optimization (FinOps)



Transforming the business model



Section 2:

Trusted transformation



Trusted transformation: leading to better outcomes

To preserve the hard work put into digital transformation journeys, technology leaders are intentionally keeping a close eye on cybersecurity considerations. In fact, many organizations have discovered that proactively managing security risks in the early stages of projects has significantly increased the success rates of their transformation projects.

This is a wise approach, because digital transformation and the adoption of new technologies can increase cybersecurity risk. As the surface area of a business's systems expands, "bad actors" have a bigger target. And changes to the business's infrastructure can introduce points of weakness. Greater connectivity, meanwhile — for employees, customers and partners — creates new attack vectors.

Crucially, this is not simply a technical challenge. Businesses that do not prioritize security in transformation processes will undermine their trusted relationships with stakeholders ranging from customers to suppliers. An emphasis on security during innovation is therefore a vital part of transforming with intent, and the business ambition here should be to drive trust in the organization.

Cybersecurity and privacy concerns were ranked as primary factors that could slow down transformation progress. And amid the ongoing migration to cloud infrastructures, 40 percent say that enhancing security has become a key goal in their XaaS projects.

Security is being acknowledged as an opportunity

Rather than just being regarded as a resilience necessity, cyber is being recognized as a key commercial opportunity. Organizations that perform strongly on security will secure competitive advantage; 63 percent of the organizations in our research say that improving cybersecurity and privacy helps them to provide a loyalty-winning customer experience. They can also move forward with digital transformation more rapidly, because business leaders will likely be confident in their ability to protect the organization even as it changes.

No wonder, then, that enhancing resilience and trust through cyber is now one of the top innovation goals for technology functions. More than half (51 percent) of cybersecurity teams are focusing on how to automate, streamline and embed security into the core of the business. Their challenge is to do this without making security a hindrance. If they can manage that, it can help people to work confidently, make productive choices and play their part in protecting the organization.

This work must be an integral element of digital transformation projects right from the start — it cannot be an afterthought.

Thankfully, security by design is becoming an accepted principle: 62 percent of businesses have discovered that managing risk in the early stages of projects, with security and control by design, significantly increases the success rates of transformation programs. And in some countries this figure is far higher: 74 percent in Brazil, 83 percent in China and 88 percent in India.

This success is fueling appetite to become even more proactive with cybersecurity. Seventy-one percent of organizations say they want to become more proactive at integrating trust, security, privacy and resilience into technology rollouts.

Proactiveness is also part of staying within budget, says Merck's Nan Wang. "Sometimes the costs attached to cyber and privacy are higher than the costs of technology development costs," he says. "Not only is it expensive to tackle cybersecurity and data governance elements one by one, but it's also not the most accurate or efficient way to manage such issues."

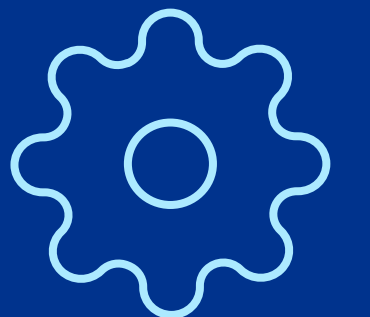
Instead, he says, security should be part of the product itself. But he accepts that this is difficult: "It's hard to do, largely due to a shortage of skills around implementing cybersecurity across a plethora of software and platforms."

“Sometimes the costs attached to cyber and privacy are higher than the costs of technology development costs”

Nan Wang
Executive Director, China Market IT Head at Merck

Three top ways to put security at the core of the business

01



Automate, streamline and embed security into the core of the business

02



Secure a complex ecosystem of third parties and external service providers

03



Reinforce the trust that customers and clients have in the cybersecurity and protection of their data and services



But the alternative may be even less appealing. Retrofitting security protections can take longer to achieve, with less guarantee of success. So it makes sense to slow down early on in order to progress faster later.

This is an important principle to apply more broadly in digital transformation projects, says Michael von Roeder, Group Chief Digital Officer at 50HertzTransmission GmbH, and is one reason he believes in building more varied technology teams. “Sometimes you come to decisions more slowly when you have more diverse teams because you have implicitly different perspectives to bring to the discussion,” he says. “It can feel slower. But in the end my experience is that every single decision is better.”

“The key to diversity is to have a common goal but remember that your ways to the goal might be different,” says von Roeder. “As long as you always have in mind that you all want the same thing, it will work out.”

Spending time to establish secure and trustworthy foundations in tech stacks can empower organizations to move forward with confidence towards new digital ambitions.

“ The key to diversity is to have a common goal but remember that your ways to the goal might be different ”

Michael von Roeder
Group Chief Digital Officer at 50HertzTransmission GmbH

Section 3:

Digital ambitions





Digital ambitions: we aren't slowing down

As organizations strive to move their digital transformation plans forward, the most successful innovators will continue to recognize the dangers of embracing new technologies simply for the sake of it. Encouragingly, many organizations have clear digital ambitions.

In line with last year's research, boosting customer engagement and cybersecurity remain significant focus areas for digital investments. But a notable priority shift is seen in ESG targets rising to the very top of the agenda for many organizations.

After being ranked as the lowest digital transformation priority out of the areas measured in 2022, advancing ESG commitments is expected to be the primary driver of technology innovation over the next two years.

ESG is the top tech innovation priority

Businesses are working to take the initiative on ESG issues, and this focus will drive the technology innovation agenda too.

Almost half of respondents (48 percent) say that, over the next two years, advancing their ESG priorities will be a primary innovation goal for their technology functions; this is consistent regionally with 53 percent in ASPAC, 46 percent in the Americas and 47 percent in EMA.

As ESG transitions from being an important reporting responsibility to a driver of value creation, digital transformation will likely be crucial. [KPMG's work](#) in this area highlights the role of technology in helping organizations achieve such a transition.

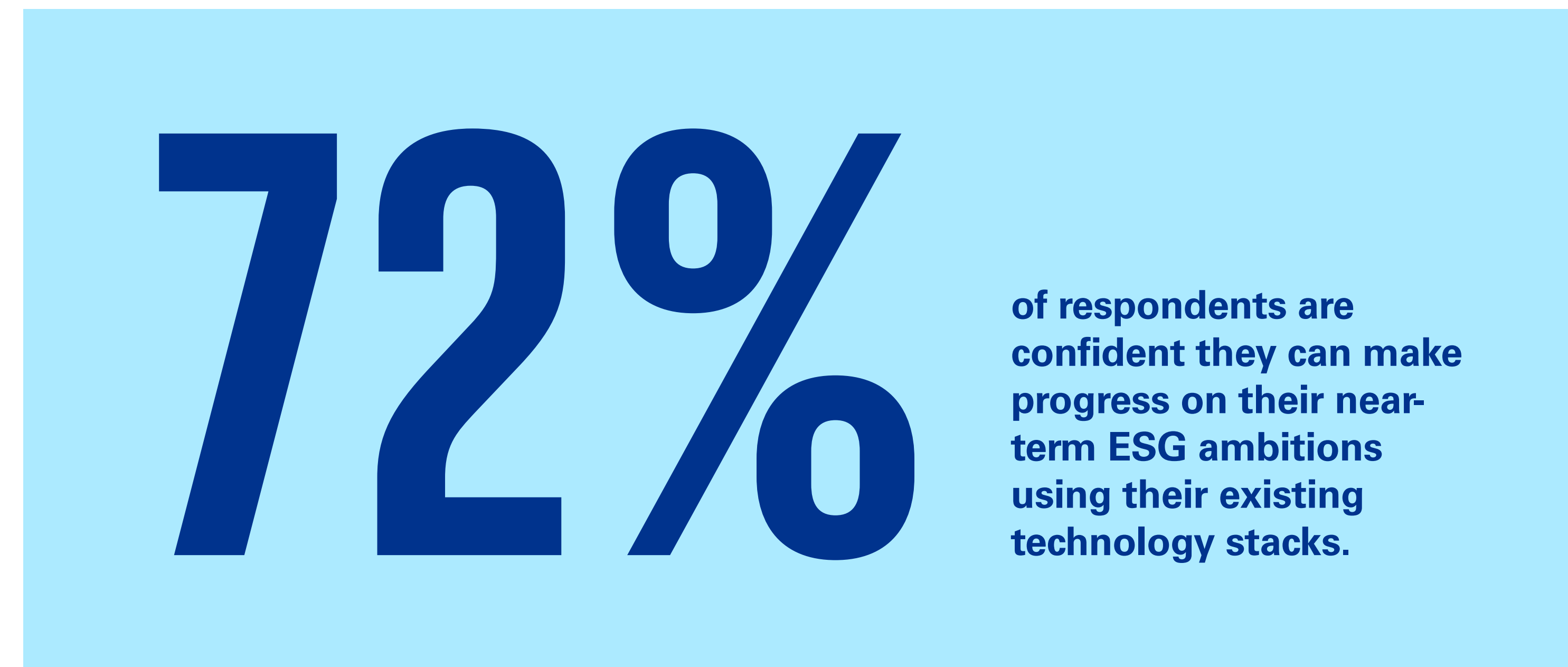
Almost three-quarters of respondents (72 percent) are confident they can make progress on their near-term ESG ambitions using their existing technology stacks. One example of this is using data and analytics tools to track performance, manage reporting and identify improvements.

The opportunity here is considerable, and many businesses are focusing on how they can use technology to tackle their environmental ambitions. To reduce their carbon emissions through more efficient working practices, for example, or to measure and report their carbon emissions more accurately.

Organizations are also looking at how to use technology to drive up ethical standards in the workforce, and to support diversity, equality and inclusion initiatives — including during recruitment. There is also the possibility of using technology to develop more sustainable products and services.

As operator of parts of Germany's transmission grids, not only does 50Hertz Transmission GmbH have its own environmental responsibilities, it also helps others achieve their sustainability goals through technology. Michael von Roeder explains: "Green energy is becoming an increasingly important factor for new industrial settlements in our grid area. There is a high demand from businesses for 24/7 green power. What we can do as a transmission system operator is to expand the grid and use innovative technologies in system-operations so that we can integrate a large share of renewable energies in the electricity grids."

Our aim is to enable the integration of 100 percent renewables for the electricity consumption in our area by 2032," Von Roeder adds.



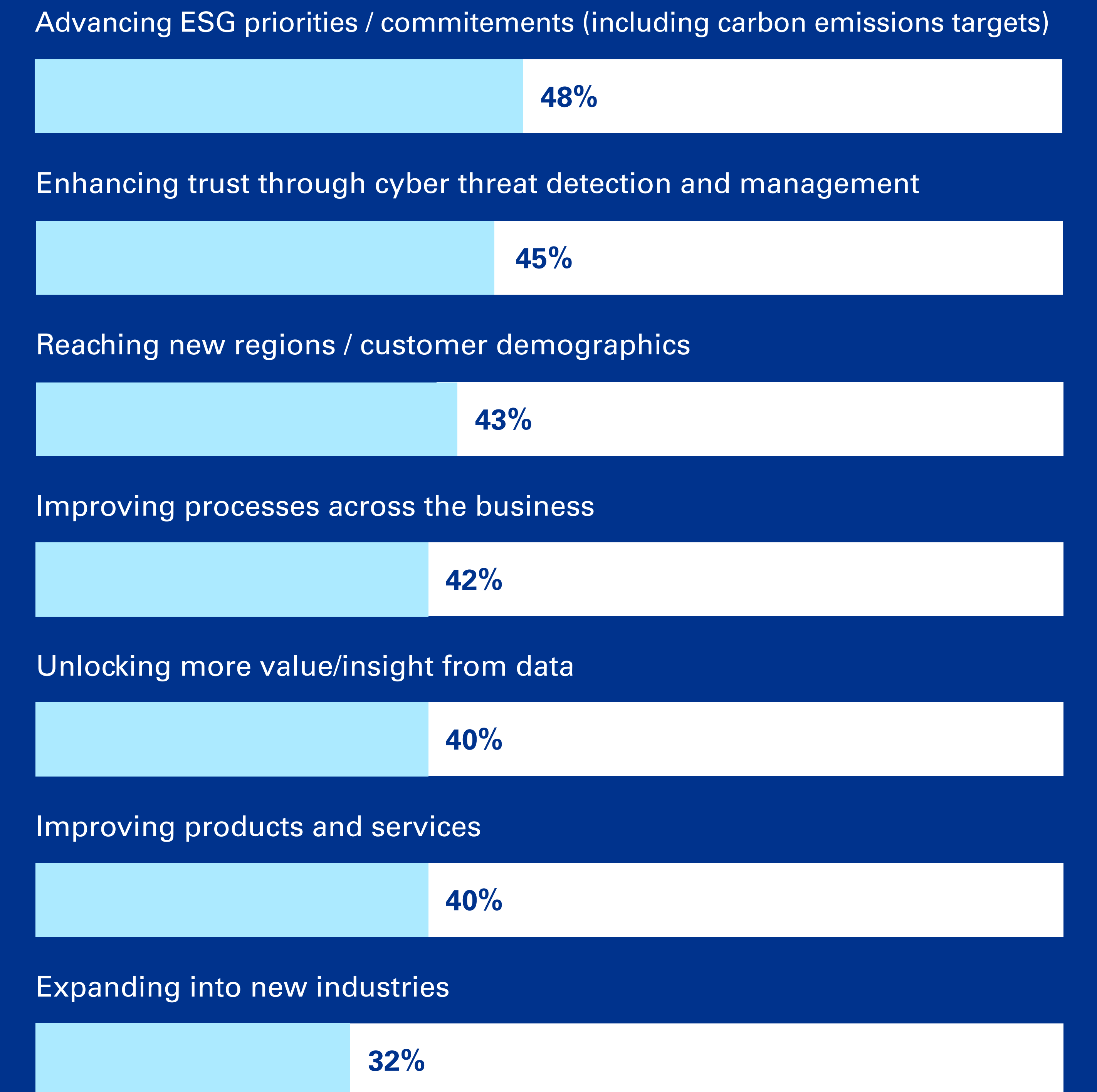
But, organizations admit they are slightly hesitant about taking risks with new investments

Looking at how organizations plan to evolve their tech stacks to achieve their goals - there is a sense of nervousness around investing in new technologies. Economic uncertainty has left 65 percent of businesses feeling less confident about investing in new technology; however, it would be a mistake for them to completely shy away from innovation and settle for the strength of their existing tech stacks. A halt in progress could give their competitors a window of opportunity to overtake and become industry leaders.

This nervousness around market uncertainty does seem to be impacting investment plans: 67 percent say they are expected to do more with a smaller budget than last year — rising to 72 percent in the ASPAC region.

Tech functions are increasingly contributing toward ESG priorities

Which of the following innovation goals will your tech function primarily contribute towards in the next two years?



Rather than become frustrated with this dynamic, John “jt” Tonnison, Executive Vice President and Chief Information & Digital Officer at US Foods, says technology teams must rise to the challenge. By demonstrating real value in the early stages of a project, technology teams can likely unlock more resource or budget down the line. He says: “In every environment I’ve been in, when returns are clearly demonstrated, further capacity follows.”

“Take the capacity allotted and manage it well to deliver” says Tonnison. “Demonstrate returns in one area of the business, perhaps around customer-facing tools or machine learning optimizations of a major balance sheet item, and you’ll soon see that other business units will want to be involved. Then you’re in the space where your business is willing to look holistically at its budget and make reassignments.”

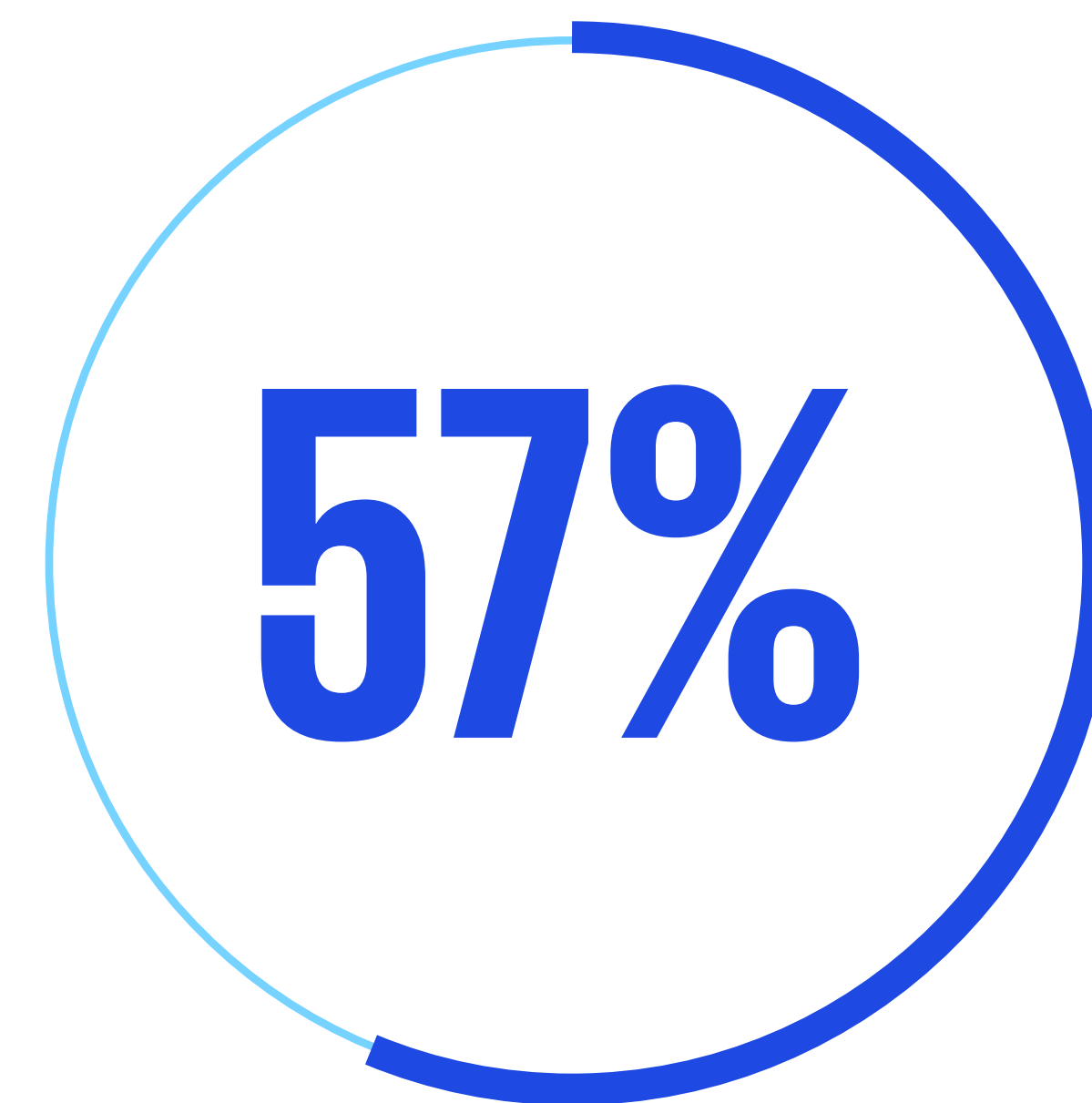
The IT function must learn to tell its story more effectively. Among industrial manufacturing companies, for example, confidence and performance are elevated; it is no coincidence that 81 percent of businesses in this sector say they are fully aware of the productivity impact and financial costs of their existing technology debts. No other sector comes close to such self-awareness; only 59 percent of life sciences businesses, for example, say the same.

Intentionally highlighting the business outcomes and returns up for grabs can help transformation leaders win access to the support and resources they need to reach their key ambitions, for instance around ESG or customer engagement.

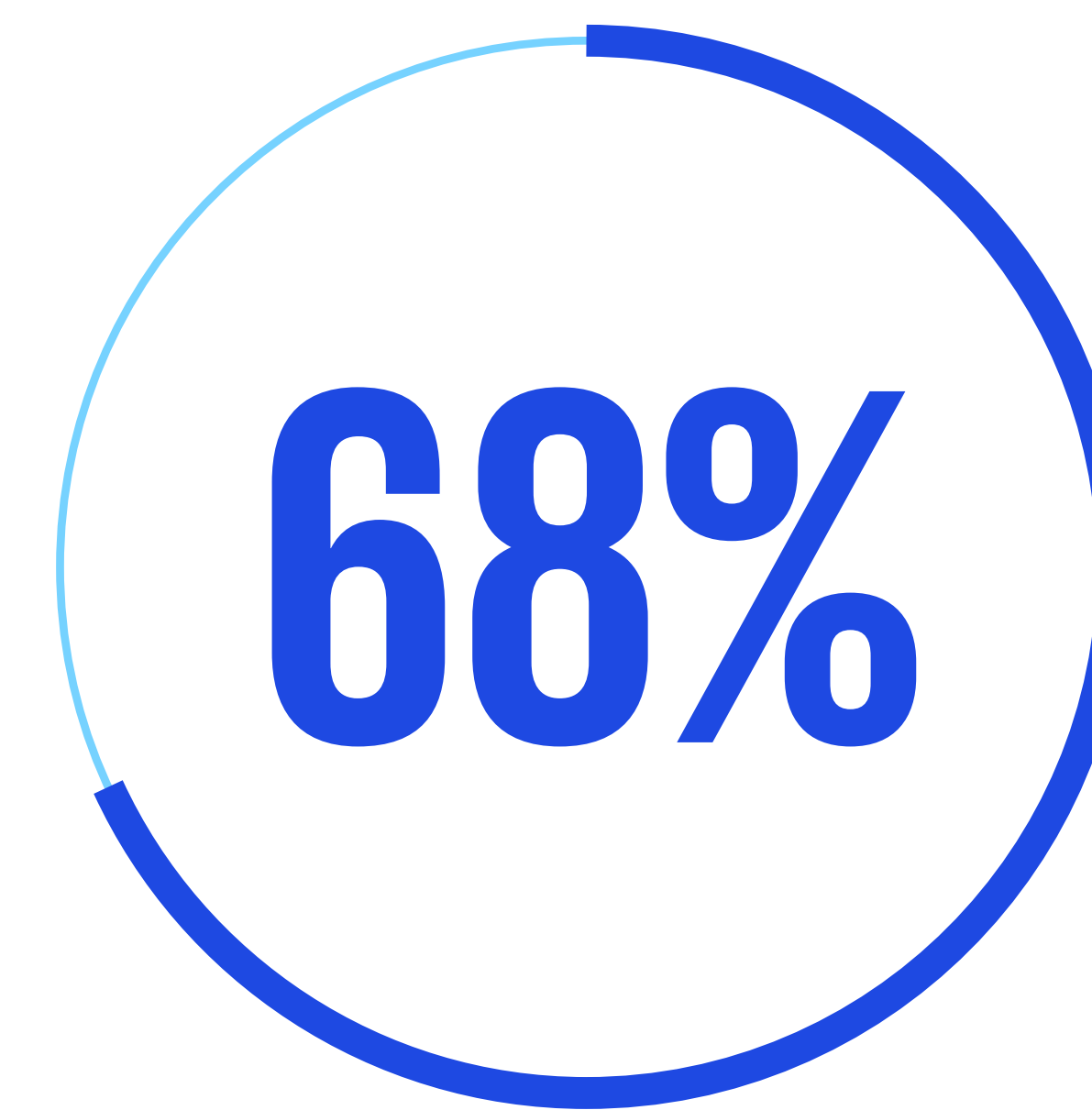
The AI and machine learning boom continues to burn bright

Organizations consider AI and machine learning as the most important technologies for achieving their short-term ambitions. More than half of the technology professionals we spoke to (57 percent) believe that AI and machine learning, including generative AI, will be important in helping them achieve their business objectives over the next three years. This is significantly ahead of the next technology in the rankings: edge computing (42 percent).

Among leading businesses where investment in technology is driving confidence and profitability most quickly, AI and machine learning are even bigger priorities. More than two-thirds (68 percent) say these technologies will be vital in helping them to achieve their short-term business goals, compared with 57 percent of the total sample.



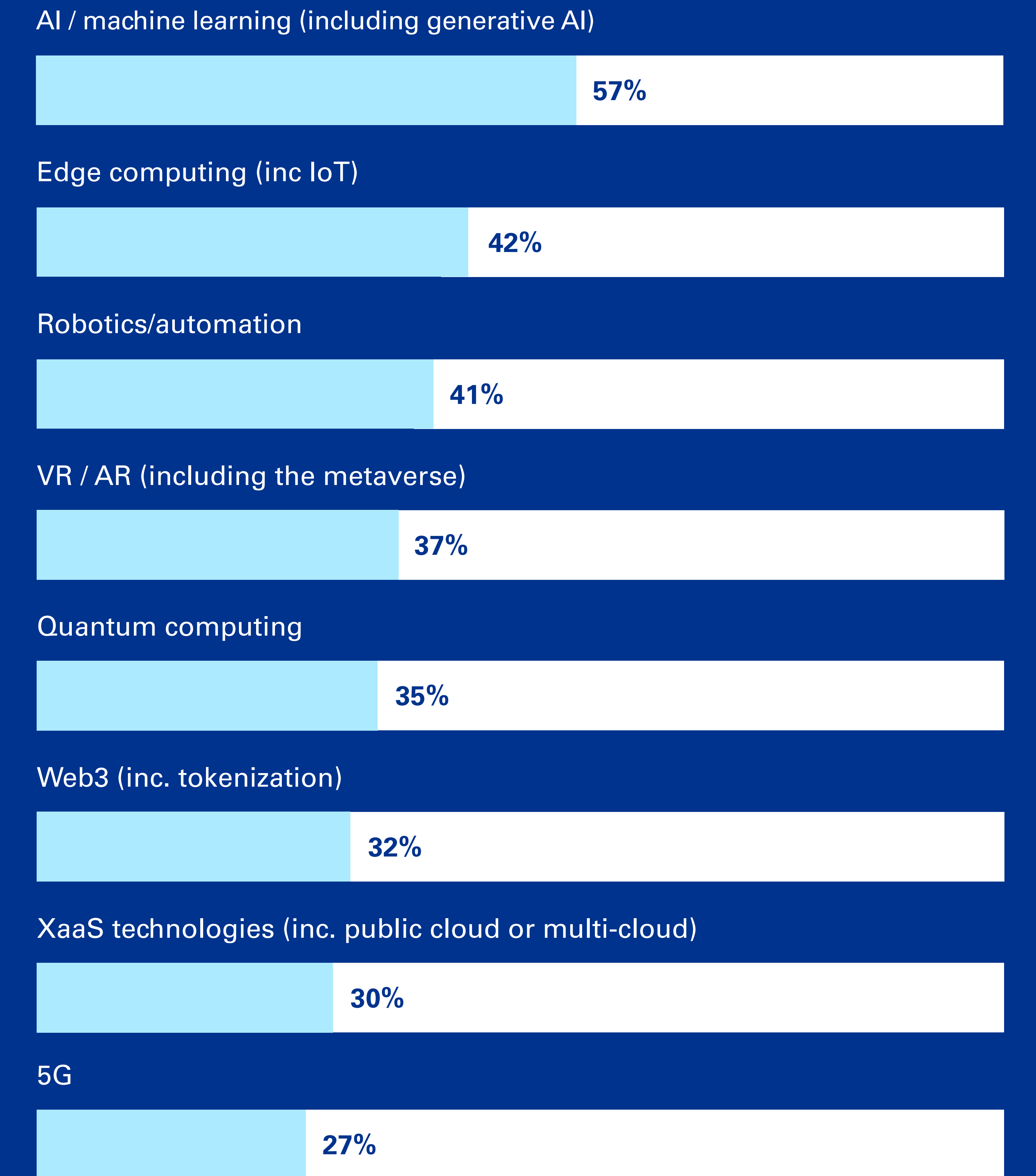
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AI and machine learning are key to delivering on short-term ambitions

Of the following technologies, which do you think will be most important in helping your business achieve its short-term ambitions (over the next 0-3 years)?



AI strategies are changing at speed

As a result of the rapid advances in AI, and generative AI in particular, many businesses are being forced to reassess their AI strategies. In last year's report, 40 percent of businesses said they had reached the "proactive" stage of their strategy for AI deployment; today, that figure has dropped to just 15 percent. While they recognize the potential of AI to help them with their short-term ambitions, they are also determined to be agile in their approach to execution.

One reason for this is the debate about how to introduce AI ethically and safely: 55 percent of organizations say progress toward automation has been delayed because of their concerns about how AI systems make decisions. As scrutiny of AI increases, organizations will need policies and practices they can articulate and apply with confidence.

So while the pace of evolution in AI has accelerated, it remains crucial that organizations put the right foundations in place before rushing ahead, says Michael von Roeder.

"I can see why companies have taken a step back with their AI strategies — in the last 12 months organizations saw that AI is leaping forward and can do awesome stuff, but companies also realized they need to structure its application," says von Roeder. "That is where I see work needs to be done: implementing change management and ensuring that the right procedures and governance are in place, especially around the technological and data foundations." Generative AI requires high-quality training data that is searchable and retrievable, he adds.

How to succeed with AI

It is important to remember that AI provides a way to drive value from many other investments in technology, particularly in the data arena, says Masashi Kaneko, Chief Digital Officer at Mitsubishi Tanabe Pharma Corporation.

"Data and AI are important to businesses in two ways," says Kaneko. "First, they help us to make better decisions. And second, they can make the invisible visible. In pharma, for instance, we need evidence to develop new processes, and we have a lot of data. However, when it comes to analyzing big data, the human brain is limited. That's where AI comes in. The marriage between big data and AI helps us to find what we can't initially see."

Merck's Nan Wang says that businesses that are struggling with integrating multiple technologies or advanced capabilities, such as AI, in their tech stack may need to revisit the basics. Businesses often overlook the need to strengthen their foundational IT layers so that advanced technologies can thrive. "There are three main layers: infrastructure, process and data," says Wang. "And with this foundation in place you can introduce advanced technology layers on top."

“Data and AI are important to businesses in two ways, first, they help us to make better decisions. And second, they can make the invisible visible.”

Masashi Kaneko
Chief Digital Officer at Mitsubishi Tanabe Pharma Corporation

Three most common benefits of AI and automation

01

Supported new business development



02

Enhanced customer engagement



03

Raised employee satisfaction levels



Three steps towards improved integration

01

Build a strong infrastructure layer, comprising cloud, on-premises elements if required, and connectivity.

02

Focus on process: move from manual operations to digital processes, integrated where necessary with external processes, especially on customer engagement. This will enable increased innovation.

03

Develop deep data expertise: focus on constant improvement, with foundations such as governance, as well as with tools that generate actionable insight such as analytics and AI.

According to Nan Wang, Executive Director and Head of IT, Merck

It is sensible to proceed carefully and to be ready to change direction — particularly with [generative AI models](#) — and to focus on the needs of users, such as employees and customers. For example, limiting what models can do may ultimately be more transformative, because users are more likely to reject more far-reaching changes. Similarly, [safe usage guidelines](#) for generative AI applications within the organization can help to ensure proper and effective use. The guidelines might include a training requirement for anyone wanting to use these tools.

Beware of following the herd

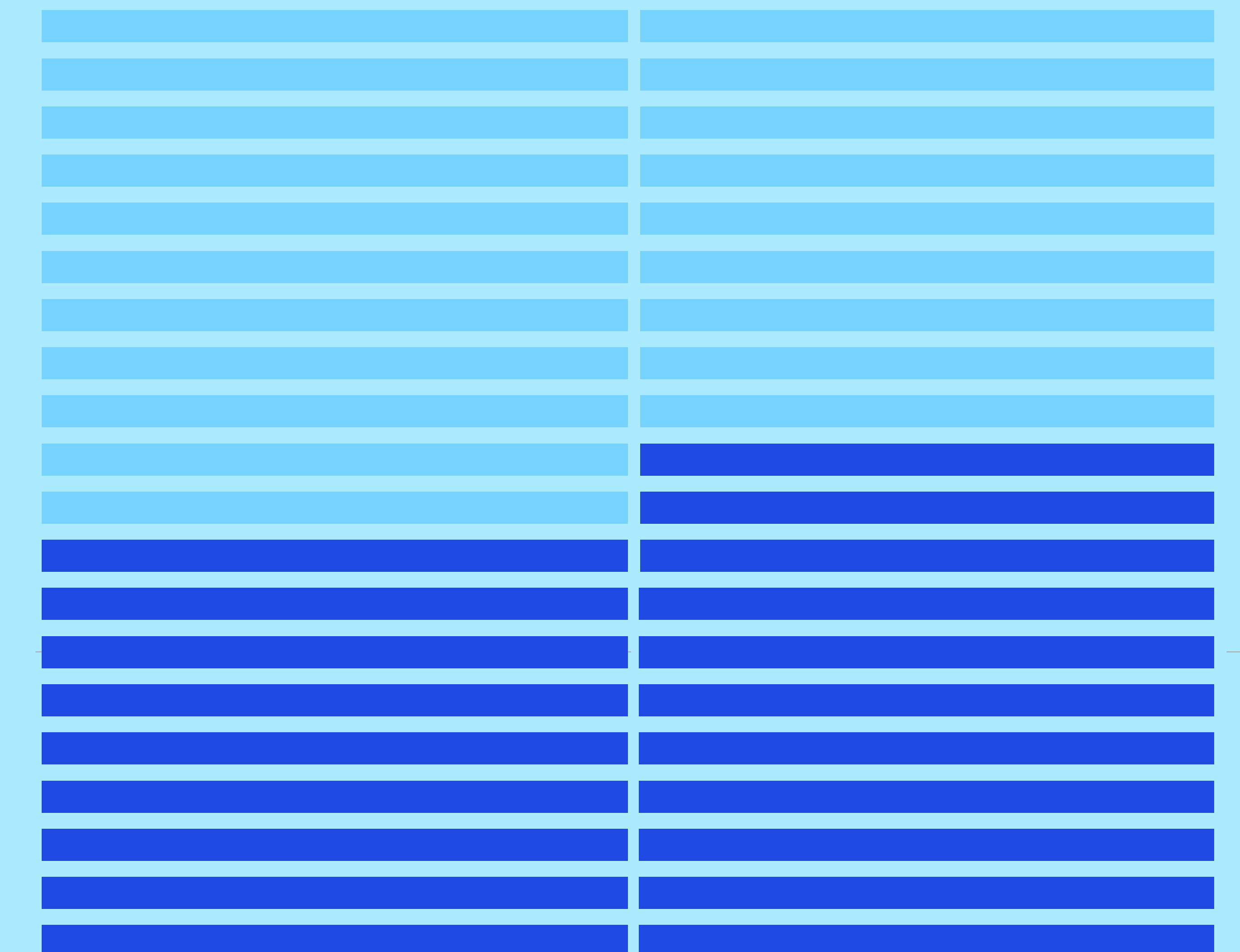
Despite most organizations demonstrating a strong level of diligence in their transformation strategies, the research identifies a blind spot when it comes to technology choices. When asked to explain thought process behind their technology selections, the most popular reason given for investing in technologies was: to copy competitors. In a number of areas, businesses in our research are prioritizing particular technologies because they think competitors have already made the leap:

- 45 percent say they are prioritizing AI and machine learning because they believe market leaders have already adopted this kind of technology
- 52 percent say the same of virtual and augmented reality tools, including the Metaverse

This fear of missing out is understandable, but peer pressure is not a business case on its own. Instead, technology leaders should stay focused on working with business partners to drive commercial and strategic outcomes. Valuable outcomes can only be achieved if business leaders rigorously assess how suitable potential investments are for their own organization.

To build on the digital transformation momentum so far in the face of economic headwinds, organizations must continue to uphold a level of intentionality in their strategies to prevent projects from drifting aimlessly. This will be especially important to ensure organizations do not waste precious money and resources in an era where budgets continue to tighten.

Organizations are prioritizing particular technologies because they think competitors have already made the leap



45%

say they are prioritizing AI and machine learning because they believe market leaders have already adopted this kind of technology

52%

say the same of virtual and augmented reality tools, including the Metaverse

Section 4:

Momentum threats



Momentum threats: culture and collaboration

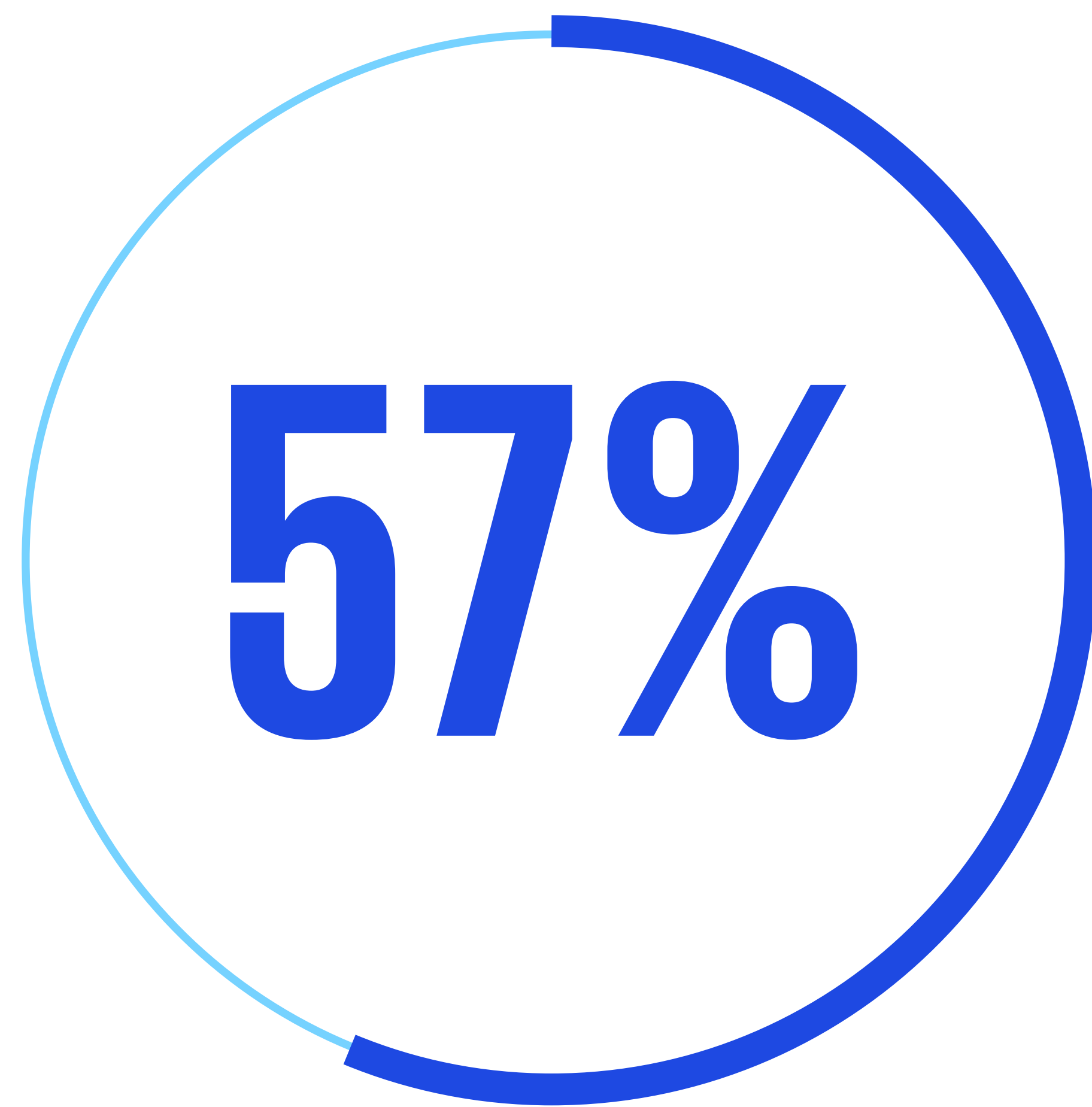
As organizations embark on their digital transformation ambitions, the journeys ahead will inevitably require them to get over technical hurdles. But it is not typically these technical factors that organizations worry about most. In this year's research, respondents are more likely to say that culture, collaboration and communication are the bottlenecks sabotaging successful transformation. Technology functions lacking coordination is seen by respondents as the top hurdle in the way of transformation progress.

Almost half of organizations (46 percent) say their technology function lacks the governance and coordination it needs to effectively support transformation initiatives. More than a third (36 percent) describe their culture as risk averse. And the same number are concerned about the lack of skills within the organization.

Communication needs to go up and down the business as well as across its functions. In particular, while technology leaders say they need executive buy-in to succeed with digital transformation initiatives, 69 percent say they need to get better at helping the board to understand the potential of new technologies. In the ASPAC region this increases to 80 percent.

These communication problems extend to external partners. Third-party relationships can get in the way of innovation by, for example, stifling overall business agility

- 57 percent of businesses say that long-term contracts with vendors hamper their ability to invest in new technology
- 42 percent say the need to manage an ever-growing ecosystem of partners and vendors is a technology stack challenge that threatens innovation



of businesses say that long-term contracts with vendors hamper their ability to invest in new technology

How to drive the collaboration dividend

US Foods' Tonnison says that solving the collaboration problem often comes down to digital teams taking the first step. "In a business or industry that is not digital native, there is onus on the digital folks to lead with advisory skills. To create and sell a vision for a digital future and provide inspiration for change. To bridge the language gap between lived experiences and digital potential."

To minimize the chances of miscommunication between teams derailing project progress down the line, be sure to address the different perspectives and levels of understanding.

Mitsubishi Tanabe Pharma Corporation's Masashi Kaneko says one way to help employees get better at collaborating across the business is to take people out of their individual functions and put them together in new teams. "Create an interdepartmental project," he says. "Where different teams can get to know each other, collaborate and better communicate among themselves and their clients."

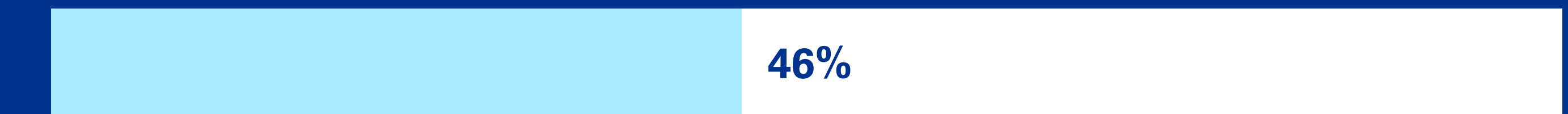
Filling skills gaps will inevitably be challenging because of the pace at which technology is evolving and the huge demand for technologists across multiple industries. However, pursuing diversity will not only broaden the potential pool of recruits, but can also provide access to new in-demand skills.

"The traditional way says to only recruit computer scientists or maybe engineers, but that's not the only route forward," says 50Hertz Transmission's Michael von Roeder. "Sure, a medical doctor needs to major in medicine, but for some digital technologies [educational background] doesn't matter: there are all sorts of transferable skills from other fields."

The tech department's lack of coordination threatens transformation progress

Which of the following challenges are most likely to slow down your transformation?

Technology function lacking the governance and coordination to effectively support transformation initiatives



Cybersecurity or privacy concerns



A risk-averse culture that is slow to embrace change



Lack of skills within our organization



Constraints from legacy technology



Immature data-management strategies



Transformation fatigue



Spiralling costs





To help ensure that IT teams are collaborating effectively with the rest of the business, senior leaders in tech departments may need to bridge skill gaps. “Tech talent often excels with technical skills, but soft skills tend to be a hurdle, so the challenge for tech leaders is to bridge over the gap to create a healthy blend of both,” says von Roeder. “Getting this balance right is something the tech industry has still to master.”

Von Roeder adds that many companies need to fight the urge to overcompensate in their attempts to fill the soft skills gap. “I often see companies in Europe putting non-tech professionals at C-level to manage the tech team, which sometimes is problematic,” he says. Instead: “it is very helpful for tech people to have a leader who truly understands the complexities of technology, but at the same time respects the value of soft skills.”

Skills needed by tech professionals in leadership positions

Empathetic skills		Commercial skills	
1.	Ethical understanding	1.	Strategic thinking
2.	Creativity and innovation	2.	Technical and digital literacy
3.	Collaboration	3.	Leadership

To place future digital transformation projects in a position to succeed, business leaders must take ownership in troubleshooting the collaboration and culture weaknesses that exist in their organization.

Section 5:

Intentional digital transformation





Intentional digital transformation: lessons from the leaders

Last year’s KPMG global tech report witnessed a surge in digital competency from organizations in comparison to previous years. This leap forward in digital effectiveness was to such an extent that it became very clear organizations had outgrown our initial definition of digital leadership.

This year, our research utilizes a new definition to identify digitally advanced organizations. Observations from this group can provide best practice lessons for the rest of the market to consider as they continue with their digital transformation journeys.

To be defined as a digital leader, organizations from our respondent base needed to meet two important criteria:

1. They have built technology stacks that they are confident will deliver their digital transformation goals
2. They have already started to generate profit or performance uplifts from their technology investments

This group is made up of about 15 percent of the organizations in our research, and the data shows that these digital leaders are transforming at a faster pace and with better results than the global average.

For example, 96 percent of the leaders say their technology function can help the enterprise to confidently explore the potential of emerging technologies, compared with 81 percent of organizations

overall. Two-thirds of the leaders have reached at least the implementation stage on projects connected to emerging technologies, XaaS, data and analytics and AI and automation, compared with less than half of the total respondent base.

Also, the digital leaders have made more progress across many of the collaboration issues that threaten digital transformation progress, and they continue to work hard on many of them. For example, 93 percent agree that greater diversity in the IT team can support collaboration with the wider business, compared with only 67 percent of the rest of the organizations we spoke to; 94 percent are determined to get better at increasing board understanding; and 76 percent are conscious of the need to focus on long-term contracts with vendors.

As a result of this work, the digital leaders are experiencing a wide range of benefits, and are seeing more returns than they had anticipated. On measures ranging from employee productivity to innovation enablement, the leaders are far more likely to have seen business outcomes that exceed their expectations.

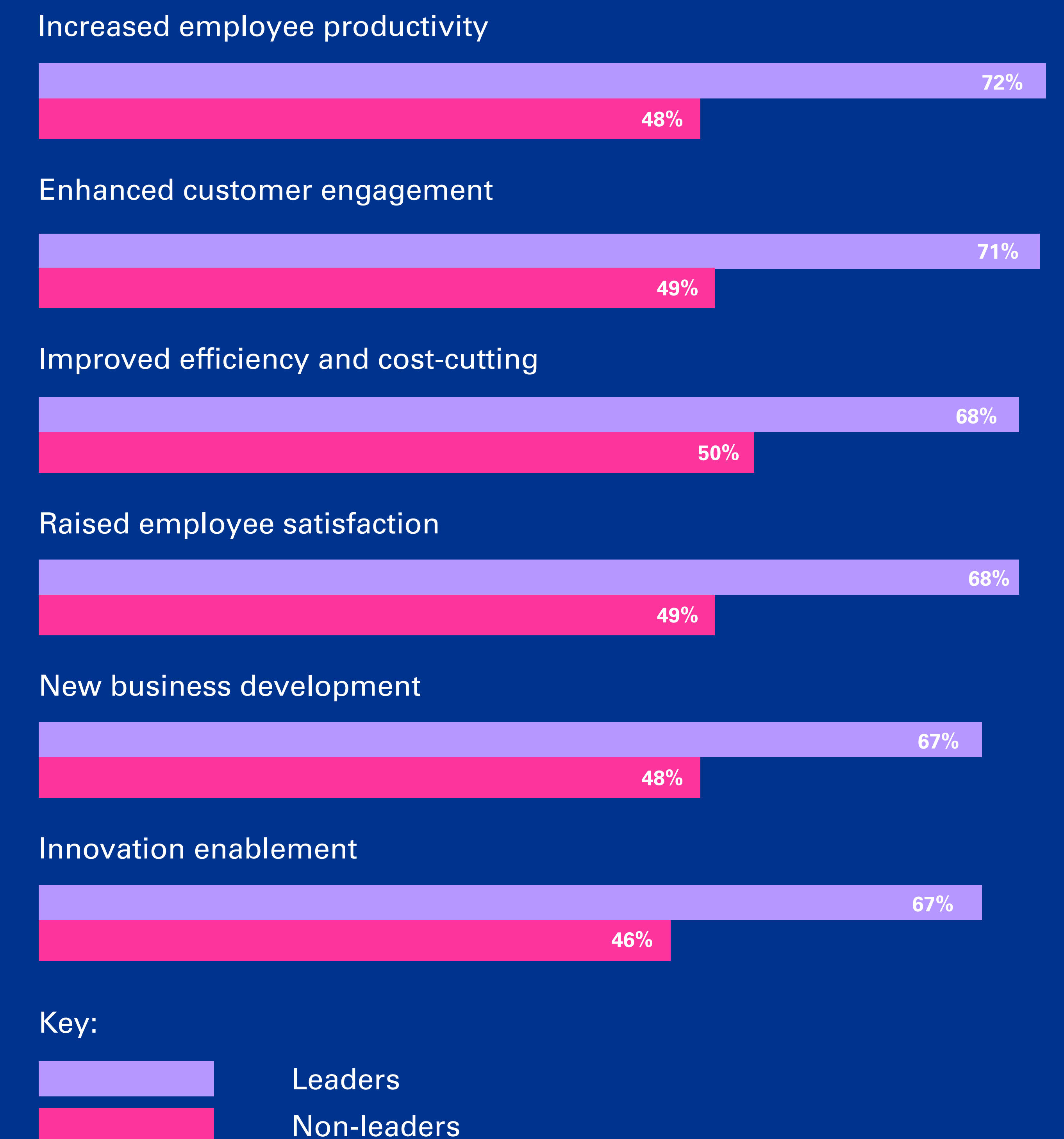
How can other organizations catch up with the digital leaders?

First, they need to focus on agility. When we asked about what is essential to thriving in a digital economy, two of the actions the organizations identified were embedding cybersecurity and privacy in their businesses and increasing empathy and communication between business functions. Significantly, however, the digital leaders are more likely than other businesses to choose “the agility to accurately respond to market signals” as a vital attribute.



To what extent would you say that your digital transformation investments in recent years have contributed to the following outcomes?

(Percentages are those answering “above expectations”)



“The key to becoming a digitally enabled enterprise is having adaptability,” says Nandha Kumar, Chief Information Tech and Data Officer for Americas, Danone. “Rather than a luxury, moving forward it’s going to be a requirement for organizations to be adaptable and agile to the landscape around them.”

“At the end of the day,” Kumar adds, “truly meeting consumer needs requires adaptability to re-engineer products, services and technologies so they align with the preferences of the customer, rather than expecting the customer to adapt to your business.”

Agility provides advantages in multiple areas that businesses should consider. To what extent, for example, have they used data and analytics to create feedback loops that enable them to constantly iterate products, services and their approach to key business problems? Have they overcome the problem of functional silos to support fast-paced and seamless collaboration across the organization? Are they set up to pursue partnerships and projects with third parties?

96%

of the leaders say their technology function can help the enterprise to confidently explore the potential of emerging technologies compared with 81 percent of businesses overall.

Get it right, and the potential benefits are huge:

- 72 percent of digital leaders are recording improvements in employee productivity from digital transformation, compared with only 48 percent of the other businesses
- 71 percent say they have enhanced customer engagement, compared with 49 percent
- 67 percent say they have better support for new business development, compared with 48 percent
- 67 percent are enabling innovation, compared with 46 percent

Reflecting on the task of evolving into an agile model and meeting customers where they are, Kumar says: “Moving towards an agile model challenges your conventional way of doing things. At times it is a little bit scary, because you are rewiring how an enterprise naturally thinks.”

The biggest stumbling block when trying to become more agile is the struggle to trust team members with more control in digital transformation journeys. “Agile teams are autonomous, so when we ask them to find a way to unlock and deliver more value, we have to give them the freedom to do so,” says Kumar. “This involves loosening your grip on past recipes for success and remaining open to subscribing to new innovations and ways of working. It’s not an easy thing to work through initially, but the more you do it, the better you become.”

The ability to think and act with agility, so resources are pivoted in line with rapidly changing priorities, is going to become a key requirement for technology leaders. For almost half of the digital leaders (47 percent), agility is already seen as an essential attribute.

“**Rather than a luxury, moving forward it’s going to be a requirement for organizations to be adaptable and agile to the landscape around them**”

Nandha Kumar
Chief Information Tech and Data Officer
for Americas, Danone

Conclusion



Technology leaders are determined to keep their organizations' digital transformations on track. But they should do it intentionally, and collaborate with the broader business for greater impact. Even in a supportive market environment, investing in technology for the sake of it would be indulgent; in today's challenging times, innovation must be tied to clear business outcomes and carefully monitored for bottom-line returns.

Agility is crucial. Not every experiment pays off, but nimble businesses are able to adjust at speed, responding to internal drivers as well as the changing environment around them to optimize outcomes. The most successful deployments can be expanded while less-rewarding experiments are placed to one side.

To learn from the success of the digital leaders referenced in this research, consider these factors:

- 9 in 10 digital leaders say they still need to get better at helping the board understand the potential of new technologies
- 9 in 10 say they are fully aware of the productivity impact and financial costs of their existing tech debts
- 9 in 10 believe they must be more proactive about integrating trust, security, privacy and resilience into technology roll-outs
- 9 in 10 think collaboration with the wider business would be stronger if their tech function was more diverse
- 6 in 10 say customer expectations of stronger data privacy and cybersecurity are a key influence on their strategic priorities
- Almost half say expectations of ESG transparency are driving their transformation efforts

Above all, focus on what the business needs now and in the future, and how technology can support that most effectively. This is how the IT function can continue to win the support of the C-suite for technology innovation: 38 percent of businesses say that emerging technology investment has executive buy-in, up from 10 percent in last year's research.

And consider the following questions:

- How will you ensure your business is keeping up with rapidly evolving technology trends and remains alert to areas where you could be falling behind?
- Which quantifiable measures of value are you setting for your digital transformation projects, and how tightly are you aligning these to your organization's commercial goals?
- How are you using digital technology to enhance how your organization captures ESG value?
- Which policies should your organization have in place to help your workforce leverage AI safely and with confidence?
- How are you troubleshooting the collaboration weak spots in your organization, to make sure they don't undermine your digital productivity?
- What more should you do to prioritize cybersecurity as a lever for driving and protecting business value?

Those who intentionally address these questions will help ensure their company is equipped to confidently realize value at pace. If you would like more information on how you can accelerate your technology transformation, [speak to a KPMG professional](#).



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