



# How can you realize the promise of transformational technologies?

EY Reimagining Industry Futures Study 2024

■ ■ ■  
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The better the answer.  
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# Introduction

The digital paradigm for large enterprises is in flux. New frontier technologies – from generative artificial intelligence (GenAI) to quantum computing – are complementing more established capabilities in Internet of Things (IoT) and artificial intelligence (AI), in turn redefining what is possible with technology-enabled transformation. At the same time, other corporate priorities – from environmental, social, and governance (ESG) obligations through to data management and governance principles – are also evolving at pace, forcing businesses to think through the wider implications of their technology investments in terms of sustainability and data ethics.

These complex and interrelated forces are also challenging long-standing technology supplier relationships. Providers of hardware and software capabilities to enterprises are tasked with overhauling their service portfolios and partnering frameworks to ensure that their value proposition remains relevant and compelling. At the same time, suppliers' relationships with their enterprise customers require ongoing attention to ensure they are fit for the future in a fast-changing world.

With this in mind, the EY Reimagining Industry Futures Study 2024 explores enterprise attitudes to both new technologies and the companies that provide these products and services. This year's findings show that business' ambitions to transform through technology remain pronounced, but that more collaborative and strategic relationships with their technology and telecommunications suppliers are essential catalysts to unlocking long-term value.

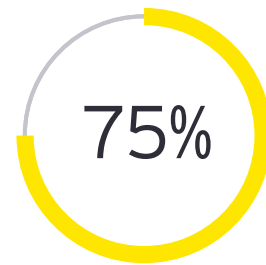


# Executive summary

## Scalability, integration and data governance are key factors weighing on emerging tech investments.

Levels of investment in emerging technologies are robust, with strong year-on-year momentum in 5G and quantum computing. However, most organizations are still only at the proof-of-concept or pilot stage of deploying emerging technologies – with 63% of businesses reporting that they find it difficult to scale trials into organization-wide deployment, up from 46% last year. This is particularly true of IoT, where only one in five current investors have reached the stage of having active deployments.

The proliferation of emerging technologies is also breeding other enterprise needs. One of the most pressing is the need to combine frontier technologies and improve data governance, cited by three-quarters of respondents. Addressing these concerns can in turn smooth the path to broader organizational deployments.

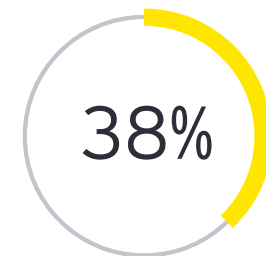


of enterprises believe they require a better understanding of how different emerging technologies can be combined to create value.

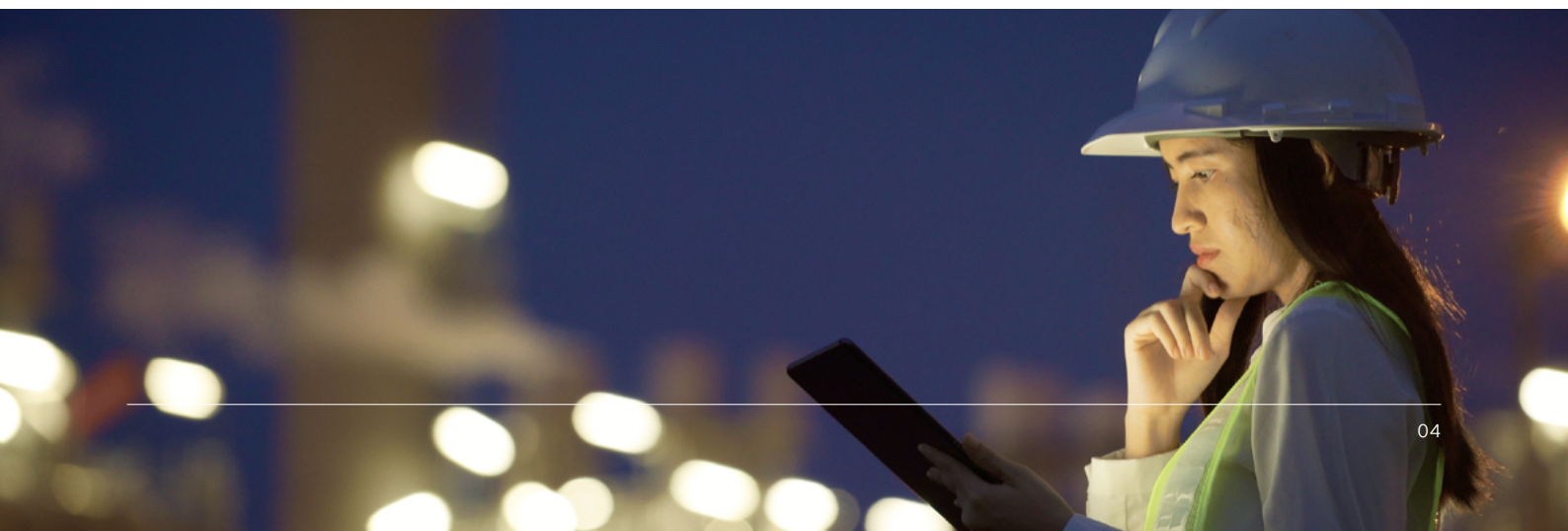
## GenAI is an investment priority, but gradual adoption is favored.

GenAI has rapidly achieved prominence as an investment priority, ranking third out of nine technologies tracked, with 43% of respondents currently investing in it. Businesses are focusing on a wide range of GenAI use cases, with employee training and customer-facing capabilities ranking ahead of other application scenarios.

However, opinions diverge as to how best to activate GenAI capabilities, 38% favor an incremental approach to adoption, the most common choice. Looking ahead, improved data governance tops the list of future priorities around GenAI, cited by 46% of respondents. Meanwhile, there is a knowledge gap to be addressed: Businesses want better understanding of GenAI use cases – but also, just as importantly, of any risks they will need to mitigate.



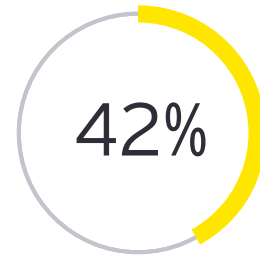
of enterprises think GenAI will be additive to their existing AI and machine learning (ML) initiatives over time.



## Harnessing 5G and IoT to other technologies is now critical, and deeper vendor collaboration is a must.

Enterprises have been investing in IoT for many years, but these initiatives risk isolation from the broader transformation agenda. Looking ahead, businesses' top priority with 5G and IoT is to unlock value in conjunction with other technologies such as AI and edge computing.

At the same time, deeper collaboration with vendors is a growing priority. However, converting this ambition into reality is not straightforward: 69% of organizations believe they require better understanding of the changing supplier landscape. Lack of confidence is another challenge, with half of organizations unable to choose between different 5G deployment models.

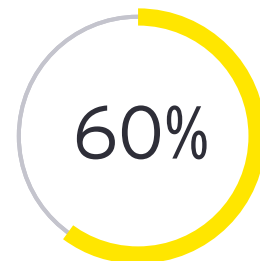


42% of enterprises rank exploring 5G's relationship to other emerging technologies such as AI among their most important 5G priorities in the future.

## Ecosystem strategies are losing their shine, with businesses leaning on suppliers to add more value.

Although 69% of businesses are engaging actively in collaborative ecosystems, a large proportion (60%) believe that multisided partnerships are difficult to execute in practice. Poor strategic alignment with partners is viewed as the leading inhibitor of ecosystem strategies, with other factors such as limited awareness of collaboration opportunities, low willingness to share data, and a focus on noncore initiatives also rising in prominence.

As a result, businesses are now more likely than ever before to prioritize partners that can clearly explain their ecosystem role. And 71% are more interested in working with suppliers that can orchestrate partner networks, taking the pain out of partnerships that are hard to manage.



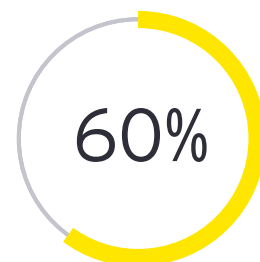
60% of businesses believe that multisided partnerships are difficult to execute in practice.

## Speed and security are the top vendor attributes, with improved service portfolios and knowledge exchange also essential.

Speed and security are the top attributes businesses value in vendors, reflecting the need to scale existing solutions at pace, as well as the challenges around data governance and security that are being propelled by new technology cycles.

In the case of 5G and IoT, businesses want more selective solutions portfolios (70%) and better articulation by vendors of how IoT can be integrated with AI (60%). This reflects growing dissatisfaction with vendor use cases and a perception that AI capabilities among 5G and IoT vendors are lacking.

Crucially, enterprises want a better level of knowledge exchange with their suppliers, translating into greater articulation of technologies' potential and clearer vendor understanding of their business objectives. Taken together, 66% of respondent executives cite these as drivers of better vendor relationships.

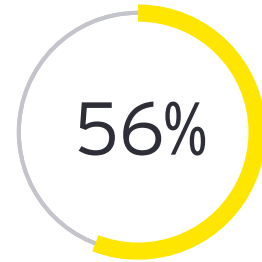


60% of businesses think vendors do not adequately articulate how 5G and IoT can be integrated with AI.

## The sustainable credentials of new technologies are rising in importance.

The importance of sustainability within businesses' emerging technology roadmaps has continued to grow, with 81% of businesses citing ESG as an important consideration when investing in emerging technologies, up from 76% last year.

The perceived sustainability benefits of emerging technologies are also increasingly recognized by businesses, with reduced energy usage and better ESG measurement leading the way. However, there is more work to do to ensure that organizational sustainability and technology strategies reinforce each other: 72% of respondents are seeking greater harmonization of their approaches in these two formerly distinct areas.



of businesses believe that emerging technologies can play a vital role in accelerating sustainability.



# 1

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Detailed survey findings

## Emerging technologies adoption

## GenAI has quickly become an investment priority, with investment momentum also positive for 5G and quantum computing.

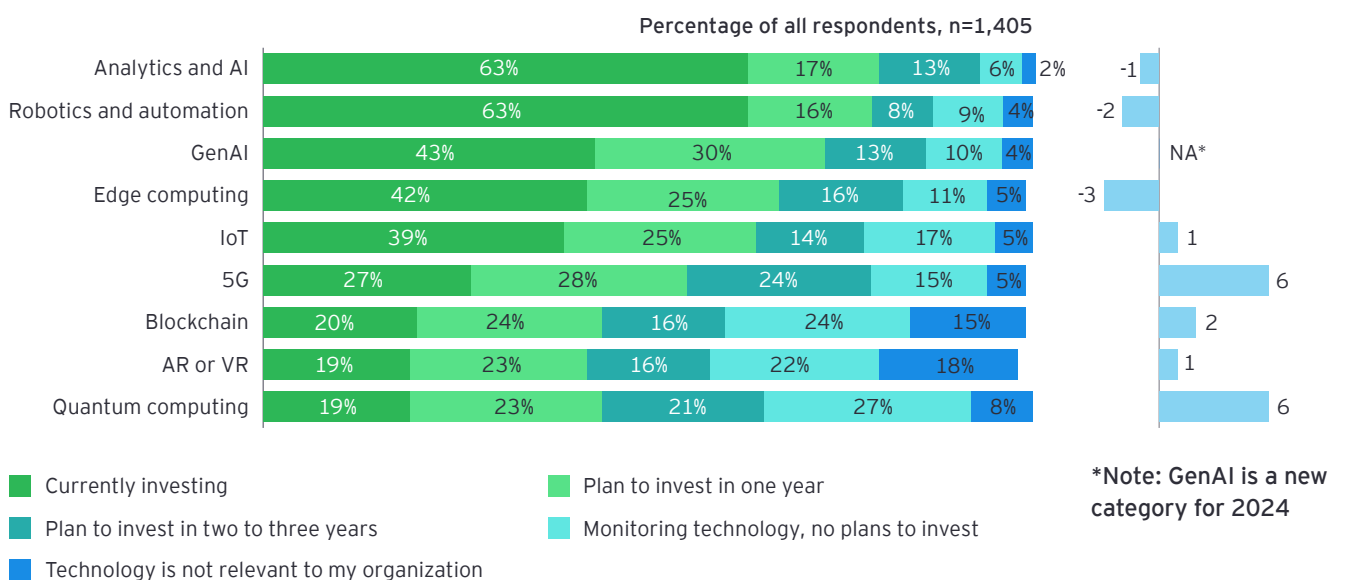
GenAI (GenAI) has rapidly moved to the forefront of the enterprise investment agenda this year: With 43% of organizations currently investing in it, GenAI ranks third among the nine emerging technologies tracked in our study. A comparison by region shows that levels of current investment are highest in the Americas (49% of respondents), followed by Asia-Pacific (45%) and Europe (39%). The rapid growth of investment in GenAI underlines its status as a breakthrough technology, complementing high levels of investment in other forms of AI (63%).

Elsewhere, 5G and quantum computing are seeing rising investment activity year-on-year, both up six percentage points. Investment levels in other frontier technologies show that business priorities are shifting, with current levels of investment in edge computing, automation and AI all trending slightly downward. Nevertheless, the proportion of businesses that view emerging technologies as irrelevant is on the decline. The most notable decrease is for blockchain: Last year, 20% of respondents considered it irrelevant, but this has dropped to 15% in 2024.

Figure 1: Investment in emerging technologies

Which of the following technologies is your organization investing in?

Year-on-year change in current investment (pp)



## Proof-of-concepts and pilots dominate emerging tech initiatives, with active deployments highest for AI and automation.

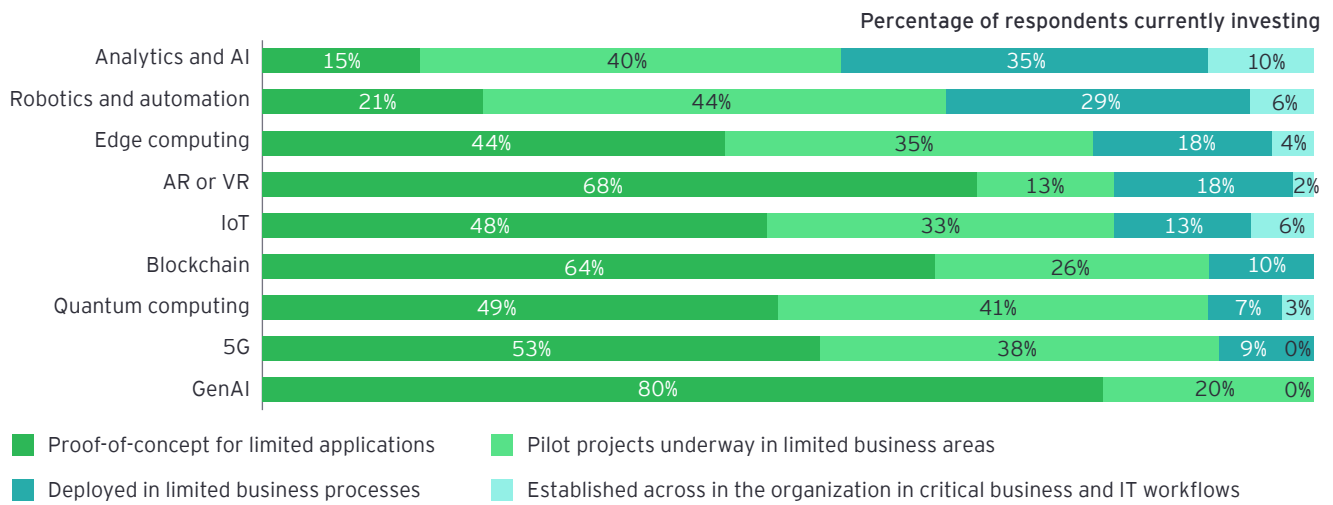
The majority of organizations currently investing in emerging technologies are still only at the proof-of-concept or pilot phase of deployment, regardless of technology. AI and automation are the most established, with limited or extensive deployments accounting for 45% and 35% of the organizations currently investing in these technologies. Edge computing, IoT and augmented reality/virtual reality (AR/VR) rank a little further back: Active deployments account for around one in five companies investing in these technologies. Deployment levels in IoT appear surprisingly low, given that this technology has been offered to enterprises for many years.

There are also some revealing variations at the industry level. For example, health care (50%) and manufacturing companies (41%) have the highest proportion of IoT deployments (43%), while energy companies and government are still in the pilot or proof-of-concept stage. Although there are no active deployments of GenAI as yet, government (42%) and consumer and retail companies (34%) have the highest proportion of pilot projects.



Figure 2: Deployment status of technologies among current spenders

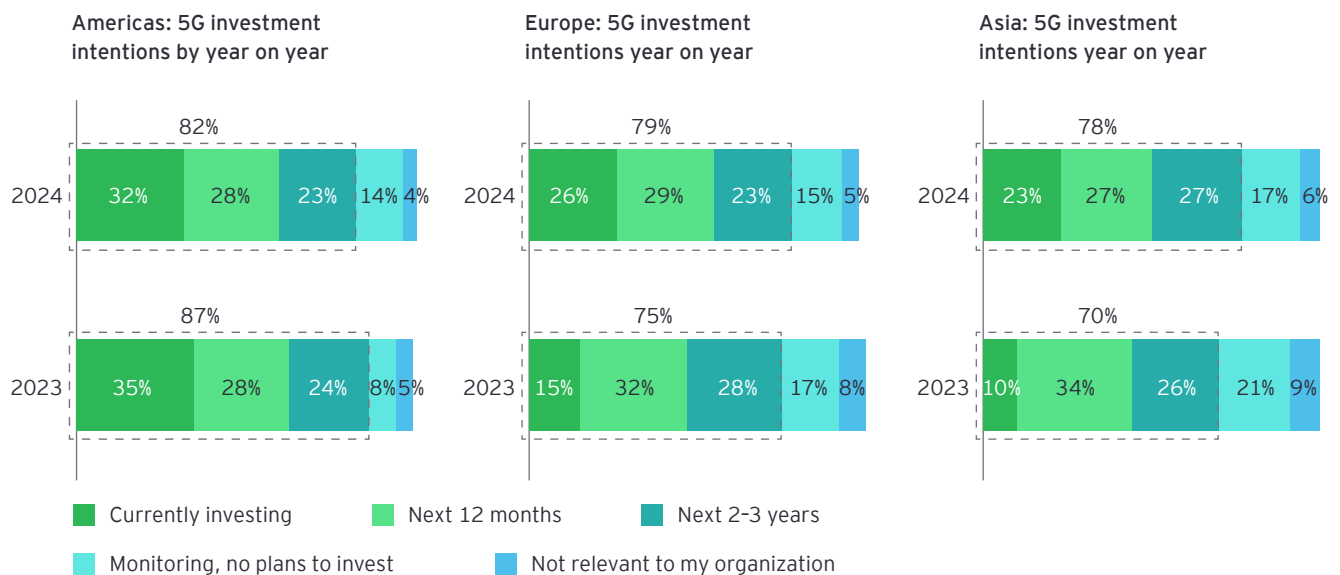
What is the deployment status of emerging technologies that you are currently investing in?



### The Americas lead globally on 5G investment, though Europe and Asia are gaining ground.

Enterprises in the Americas continue to lead their counterparts in other regions on 5G investment, despite the fact that their current investment levels have declined by 3 percentage points since last year. Meanwhile, Europe and Asia have closed the gap with the Americas over the same period, with their current levels of investment rising by more than 10 percentage points year-on-year, reflecting the more recent advent of 5G standalone (5G SA) in these regions. With regard to future plans, enterprises in the Americas still lead on overall investment intentions, but one in five businesses globally still have no plans to invest in 5G.

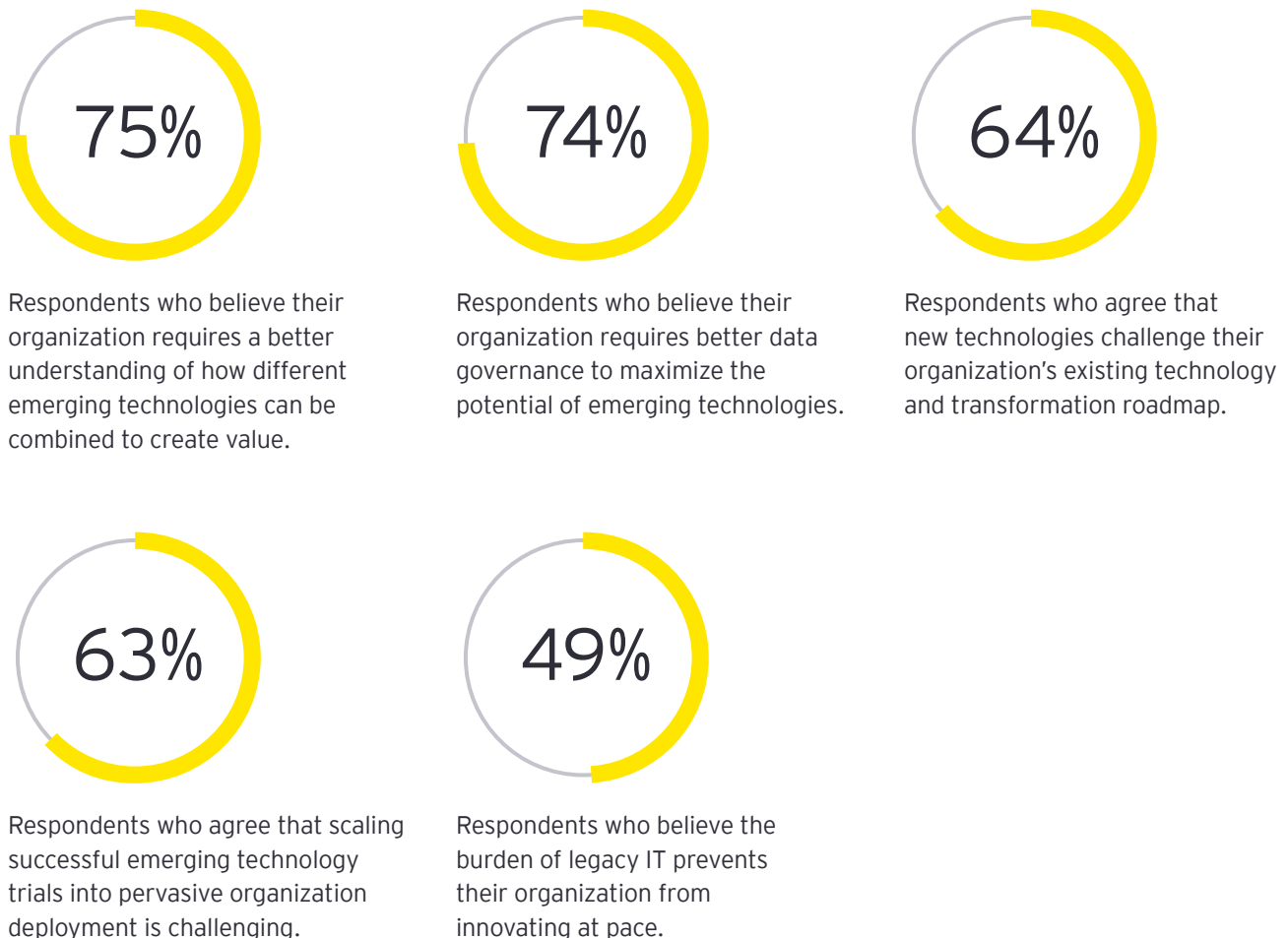
Figure 3: Current and future 5G investment



## As businesses transition to emerging technologies, they're voicing significant concerns relating to integration, scalability and data governance.

Enterprises' moves to increase their current and planned investments in a growing range of emerging technologies are raising some pronounced challenges. Most notably, three-quarters of businesses are seeking a better understanding of how to combine different technologies to enhance value creation. Making data governance more robust is a further priority, as businesses look to mitigate data privacy and security concerns prompted by a fast-changing technology stack. An additional challenge is that the transition to new technologies is putting transformation programs under strain through two effects. On the one hand, organizations are finding it difficult to convert technology trials into more pervasive rollouts: 63% of businesses highlight this issue, up from 46% last year. On the other, there are obstacles to addressing this problem: Enterprise-wide technology roadmaps may not be fit for purpose, while the burden of legacy IT can hamper efforts to scale new technologies.

Figure 4: The transition to emerging technologies – enterprise challenges



# 2

Detailed survey findings

## The GenAI opportunity

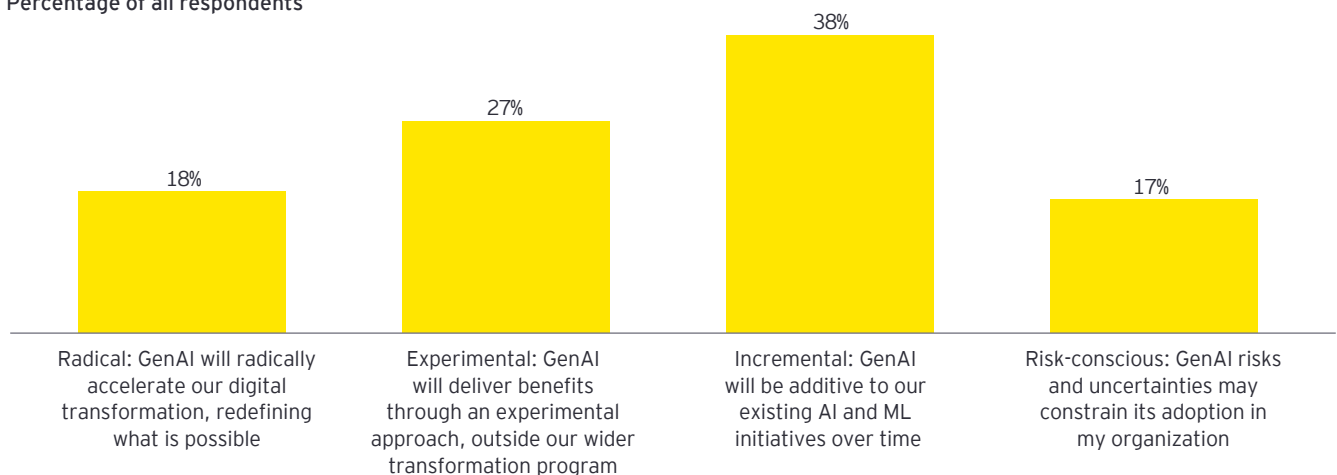
## Enterprise attitudes toward GenAI tend to favor its incremental rather than radical impact on transformation.

With nearly half of organizations now investing in GenAI, businesses are evaluating its overall impact on their organization. When asked to clarify their views of the technology, more than half respond in ways that suggest a cautious and measured mindset holds sway. Thirty-eight percent of organizations believe that GenAI will be additive and complementary to preexisting AI initiatives over time, while a further 17% hold an explicitly “risk-conscious” view where uncertainties are seen as limiting the adoption of GenAI. This cautious mindset is most pronounced in the consumer (21%) and health care sectors (21%), indicating relatively high sensitivity to concerns around data ethics and accountability. Meanwhile, less than one in five businesses (18%) think GenAI will have a radical impact, rapidly accelerating their digital transformation. Moreover, the delicate relationship between GenAI and broader technology transformation programs is reflected in the fact that 27% believe GenAI will deliver benefits outside the existing transformation agenda, with more freedom to experiment and learn.

Figure 5: GenAI – anticipated impact on organizations

Which of the following best describes your view of how GenAI will impact your organization?

Percentage of all respondents



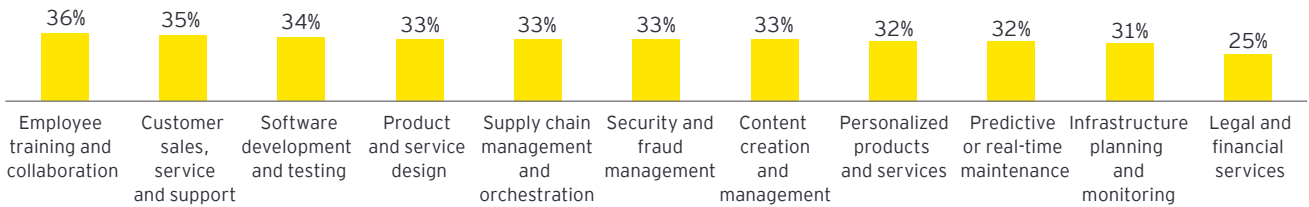
## Businesses are open to a range of GenAI use cases, with employee collaboration and customer experience in the forefront.

As businesses size up opportunities to use GenAI to unlock value, they are considering a wide array of use cases, stretching from the front- to the back-office. Employee training and collaboration (36%) leads the way, reflecting GenAI's potential to break down information silos and accelerate learning, with automotive (44%), energy (40%) and manufacturing respondents (39%) most receptive to this application scenario. Customer sales, service and support (35%) also ranks highly, reflecting GenAI's potential to enhance customer interactions by building on existing chatbot capabilities. Software development and testing ranks third (34%), and – unsurprisingly – is the top response among technology companies (45%). Interestingly, personalized products and services (32%) ranks slightly further back, perhaps reflecting evolving regulatory considerations around AI more generally. Notably, legal and financial services are less favored by respondents (25%), reflecting the typically sensitive nature of the data involved in this type of application.

Figure 6: Demand for GenAI by application type

Which are, or will be, the most significant AI and GenAI application types for your organization?

Percentage of all respondents



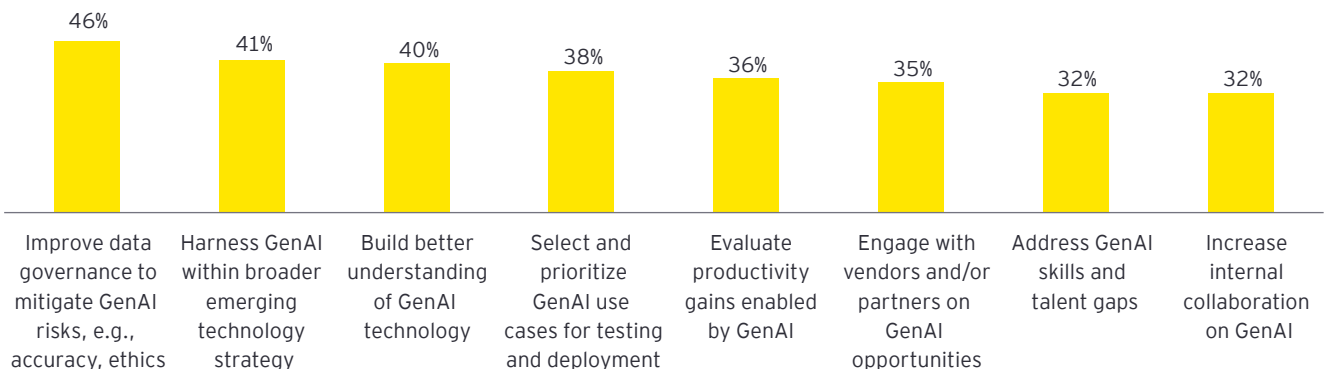
### Improving data governance leads as a future GenAI priority, with GenAI’s role in broader technology strategy also in focus.

Looking forward, enterprises’ future priorities regarding GenAI are topped by the need to improve data governance in order to combat risks around data accuracy and ethics. This is cited by 46% of businesses, scoring highest among financial services respondents (52%). Harnessing GenAI within the broader enterprise technology strategy ranks second (41%), echoing other responses stressing GenAI’s additive role to broader AI initiatives and the importance of combining different technologies to add value. Building a better understanding of GenAI is a further leading priority, cited by 40%, while 38% highlight the selection and prioritization of use cases, underlining enterprises’ appetite to convert GenAI’s promise into immediate benefits. Interestingly, people-related issues rank further back, with less than one in three respondents saying they regard addressing skills gaps and increasing internal collaboration as priorities.

Figure 7: GenAI – future priorities

What are your organization’s most important GenAI priorities in the future?

Percentage of all respondents



## Businesses recognize the value of GenAI – but accept that there are strategic questions and knowledge gaps that must be addressed.

Businesses' overarching attitudes to GenAI underline its considerable potential. But they also point to areas of uncertainty that vendors should be aware of as they engage with their customers. Encouragingly, 75% of organizations believe their leadership are interested in GenAI's potential to create value. However, almost as many face a knowledge gap, with 73% highlighting the need to build a greater understanding of GenAI concepts and use cases, and 69% seeking greater understanding of the related risks. This fundamental need for education is coupled with other concerns relating to fears of job displacement (52%) and obsolescent transformation frameworks (52%), while half of respondents are also struggling to identify the right kind of vendor to support them. These findings underline the practical challenges of embracing a breakthrough technology, with such concerns being especially pronounced among automotive, energy and manufacturing respondents.

Figure 8: Enterprise attitudes to GenAI



# 3

Detailed survey findings

## The sustainability imperative

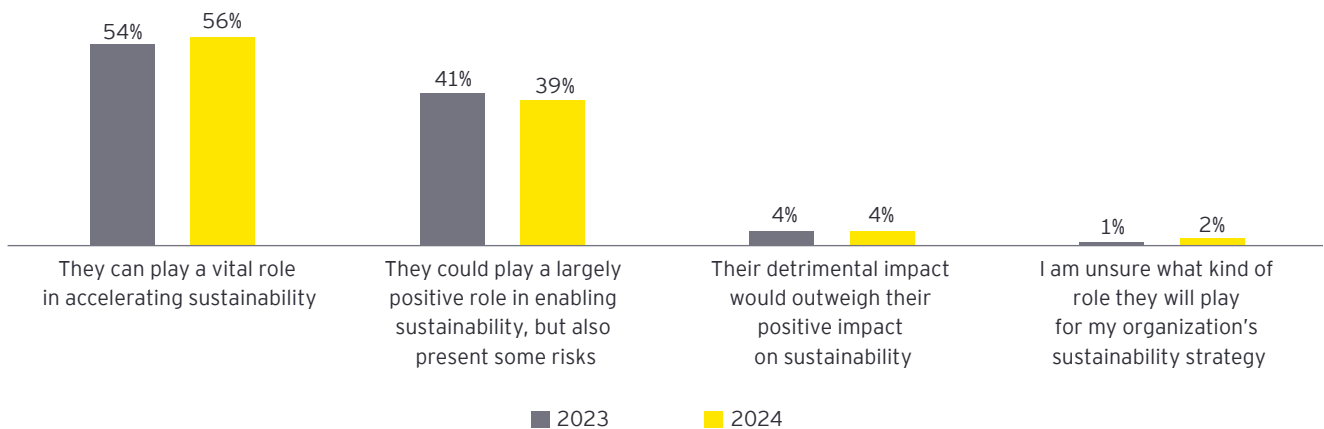
## Organizations remain confident of emerging technologies' positive impact on sustainability.

There is clear recognition among enterprises of emerging technologies' positive role in improving their sustainability performance. Over half – 56% – of businesses worldwide believe that emerging technologies can play a vital role in accelerating sustainability. Meanwhile, 39% believe that emerging technologies can play a largely positive role but also some present some risks – a view that's most prominent among European enterprises (43%). The proportion of businesses who see emerging technologies' role as vital has increased slightly year-on-year. Nevertheless, awareness of potential risks remains important at a time when reducing the carbon footprint of different technologies – from AI<sup>1</sup> through to IoT and edge computing<sup>2</sup> – is a growing focus for technology suppliers and industry ecosystems.

Figure 9: View of emerging technologies' impact on the sustainable enterprise

Which of the following best describes your view of how emerging technologies could impact your organization's long-term sustainability?

Percentage of respondents, n=1405



<sup>1</sup> "Reducing AI's Carbon Footprint," Microsoft, 2023.

<sup>2</sup> "IoT and Edge Computing Carbon Footprint Measurement Methodology Report Release 2," Alliance for IoT and Edge Computing Innovation, 25 September 2023.





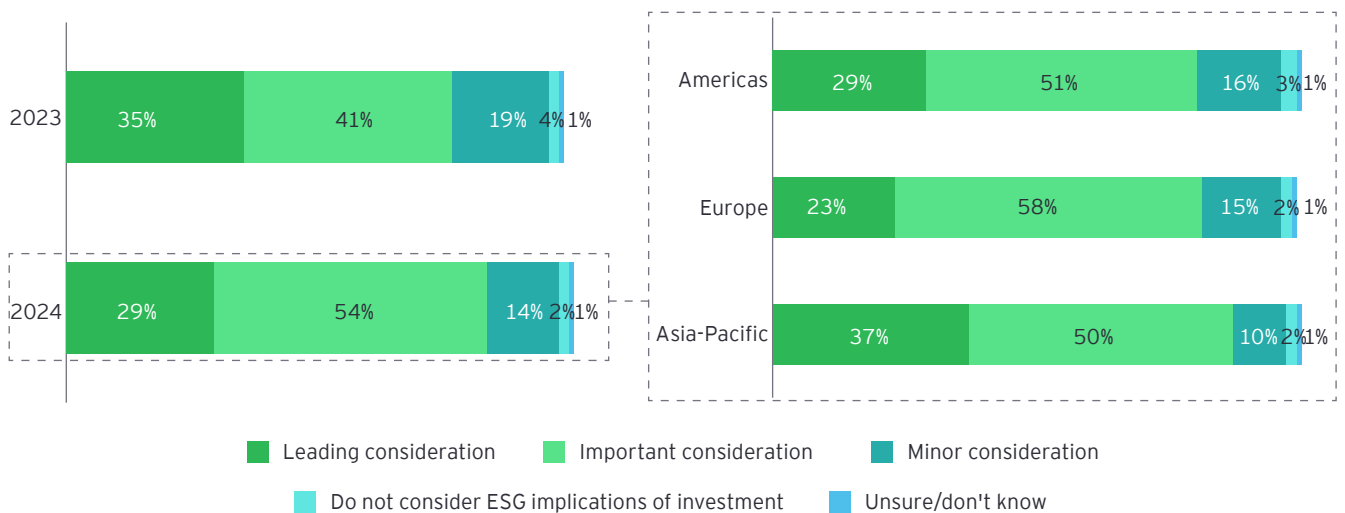
## More than eight in 10 businesses cite ESG as a major consideration when investing in emerging technologies – led by Asia-Pacific enterprises.

Environmental, social and governance (ESG) considerations are an increasingly important driver of technology buying decisions: The proportion of businesses citing ESG as a leading or important consideration when planning investments has risen from 76% in 2023 to 82% in 2024. Breaking down these sentiments by region, Asia-Pacific businesses notably outscore those in other regions, with 87% citing ESG as a leading or important consideration. Within sectors, it's noteworthy that government respondents under-index for taking ESG into account when investing in emerging technologies: Just 72% cite it as a leading or important consideration, while 24% highlight it as a minor consideration.

Figure 10: ESG considerations in emerging tech investment

### How do ESG considerations inform your investment plans or decisions in emerging technologies?

Percentage of respondents currently investing or planning to invest in emerging technologies, n=1391



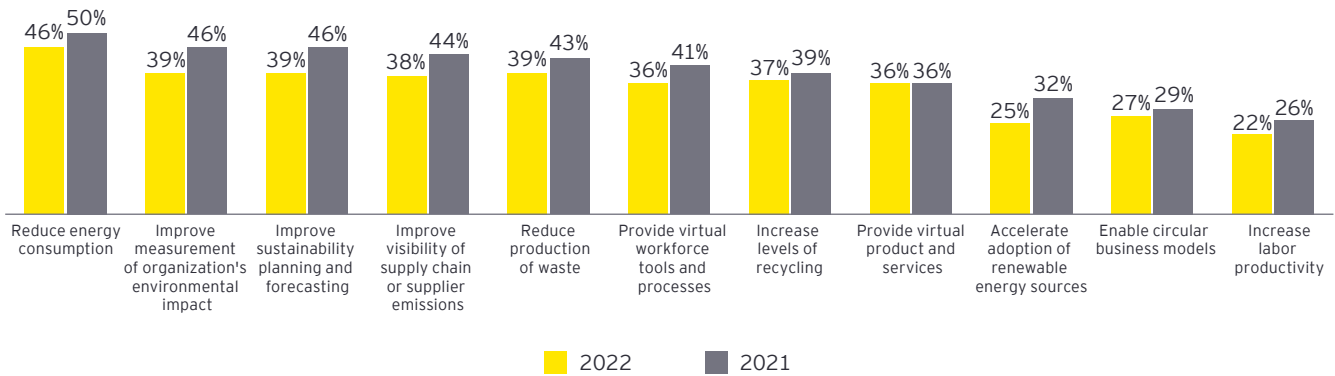
## There is growing recognition of specific sustainability benefits unlocked by emerging technologies, led by reduced energy use and better ESG measurement.

Enterprises see emerging technologies as providing a range of positive contributions to their long-term sustainability strategies, with recognition growing year-on-year. Emerging technologies' role in helping to reduce energy consumption leads the way, cited by 50% of businesses overall, rising to 57% among automotive and manufacturing respondents. Improved measurement of environmental impact, as well as improved sustainability planning and forecasting, also feature prominently, with both cited by 46%, up seven percentage points year-on-year. Nevertheless some of the most potentially substantial benefits – such as enablement of circular business models and increased labor productivity – still rank further back, cited by less than three in 10.

Figure 11: Impact of emerging technologies on organizations' sustainability strategies

How can the adoption of emerging technologies (e.g., AI, automation, 5G, IoT) benefit your organization's long-term sustainability strategy?

Percentage of respondents who believe that emerging technologies can play a vital or largely positive role in sustainability, n=1332



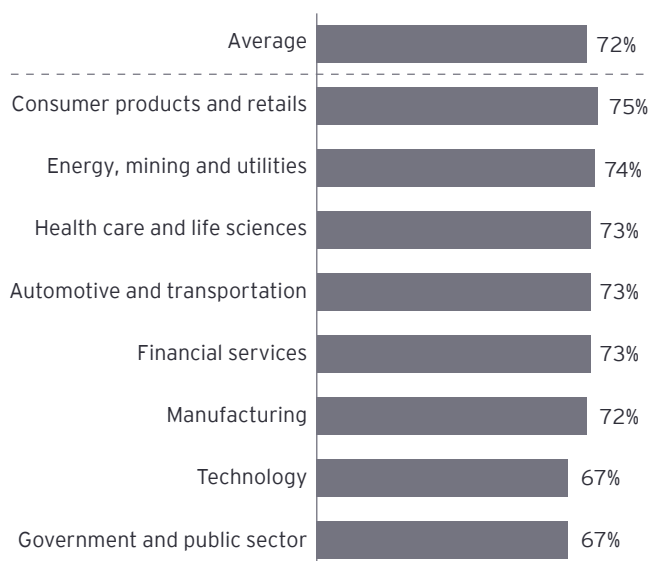
### Aligning sustainability and technology strategies is critical for businesses – while sustainability is increasingly influential in vendor selection.

Given the high and rising importance of ESG as a consideration in decisions on emerging technology investments, and the increasing emphasis on the positive sustainability outcomes that emerging technologies can deliver, businesses are very mindful of the need to align their overall sustainability and technology strategies. At the same time, they are also increasingly factoring sustainability considerations into their choices of technology providers. This year 77% of businesses say they do this – a figure that's up by three percentage points from last year and rises to 84% among energy sector respondents and 81% of those in financial services.

Figure 12: Emerging technologies and sustainability – enterprise perceptions

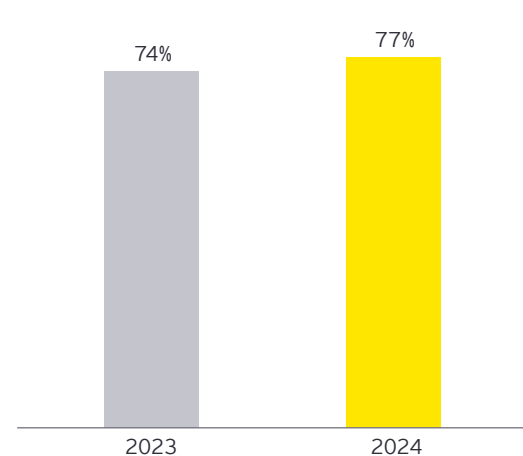
My organization's sustainability and technology strategies require greater harmonization

Percentage of all respondents agree



Sustainable principles inform their organization's choice of technology providers

Percentage of all respondents agree



# 4

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Detailed survey findings

## 5G-based IoT: trends and takeaways



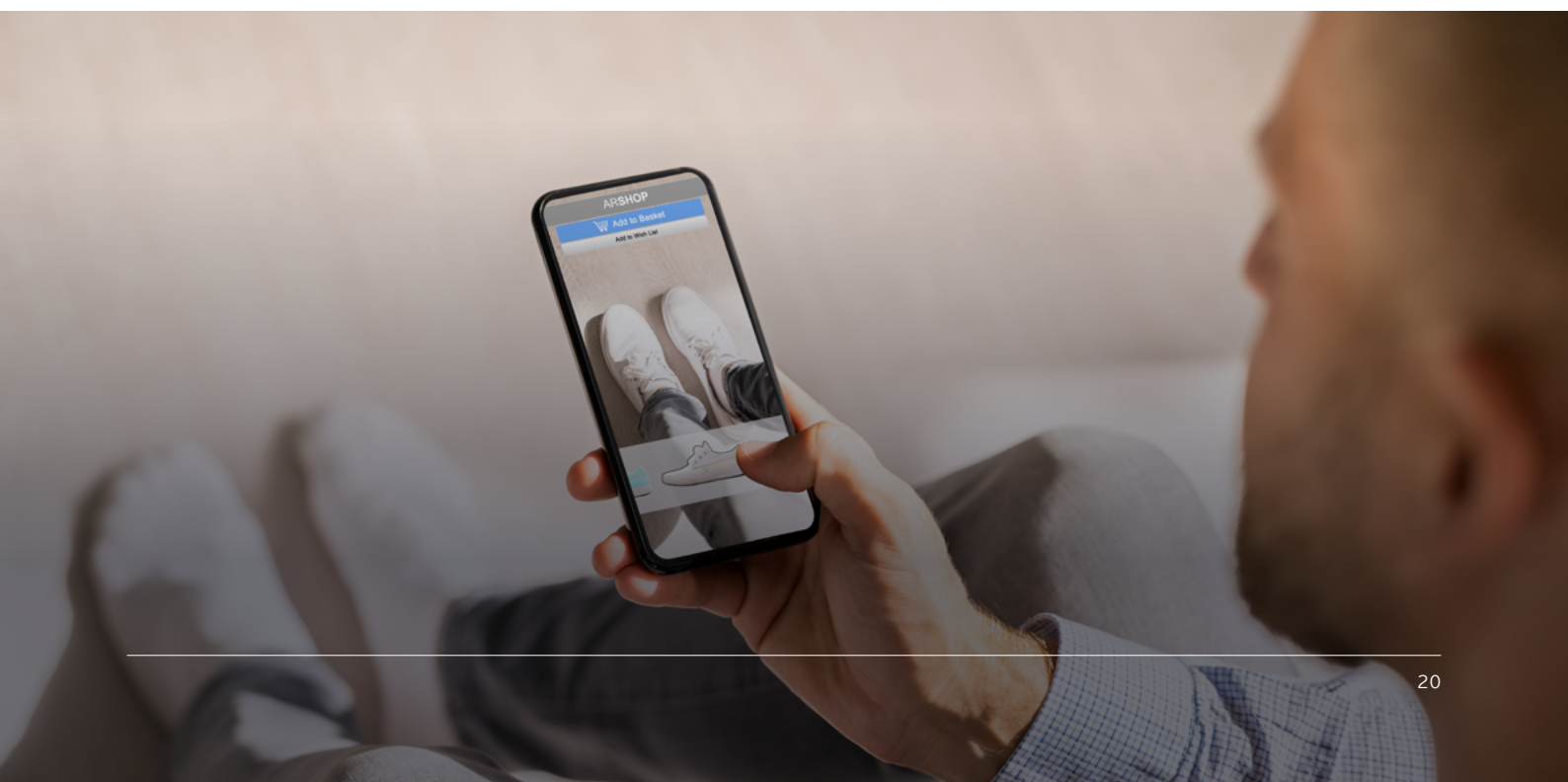
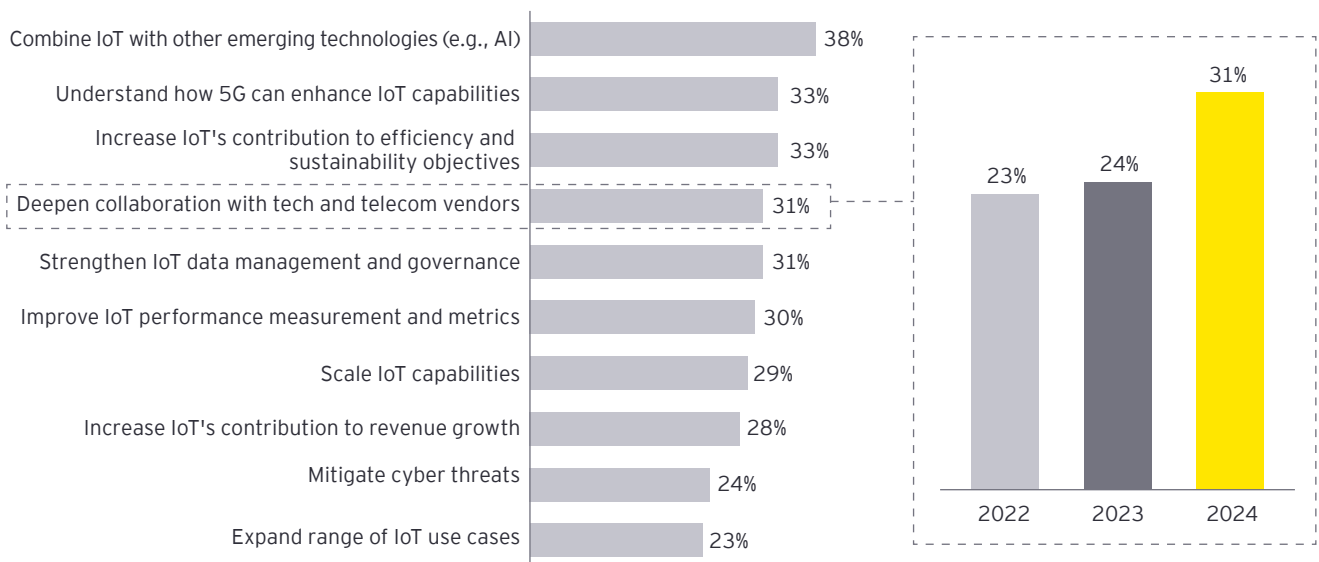
## Combining IoT with other technologies is the top priority, while deeper collaboration with vendors is rising in importance.

As enterprises plan out their IoT programs, leveraging IoT in combination with other emerging technologies such as AI stands out as their number one future priority, cited by 38% and ranked top across all regions. From an industry perspective, manufacturing respondents are the most likely to cite this as their number one driver (44%). Alongside looking to combine IoT with other technologies, businesses are also increasingly focused on deepening collaboration with their technology and telecoms providers – a priority cited by 31% of respondents this year, up from 24% last time. From a regional perspective, Americas enterprises are the most likely to highlight deeper collaboration with suppliers (34%), while at the sector level, energy respondents (41%) are markedly more likely to cite this as a priority.

Figure 13: Future IoT priorities

Percentage of respondents, n=1100  
(enterprises currently investing or planning to invest in IoT)

Future IoT priorities:  
year-on-year comparison



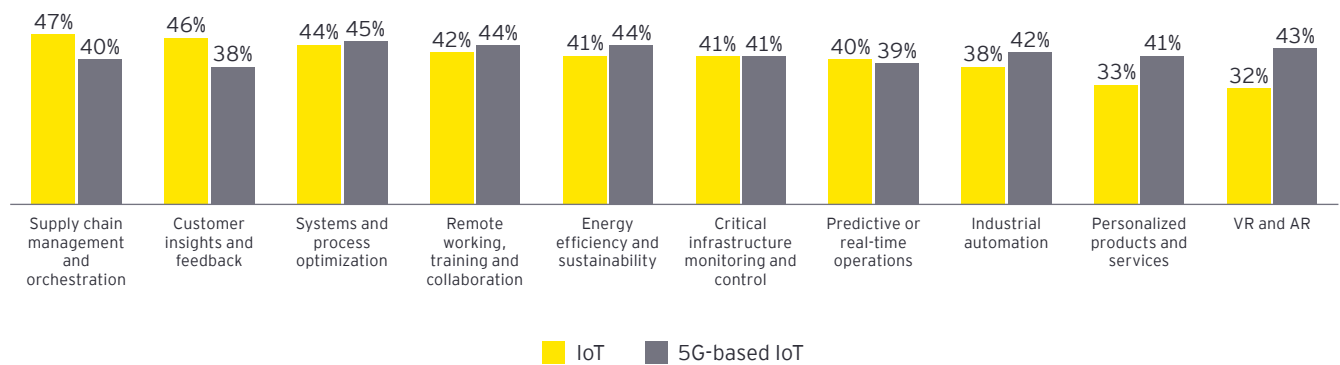
## Supply chain management and customer insights lead as preferred IoT use cases – while 5G is more highly prized for automation, personalization and AR.

This year's survey results on enterprises' preferences in terms of IoT use cases confirm that a range of application scenarios remain "in play" for businesses. Preferences around use cases tend to vary more for applications serviced by legacy IoT technologies, such as low-power wide area networks or earlier iterations of cellular. In this category, supply chain management and customer insights rank ahead of other use cases. Conversely, if 5G is involved, businesses tend to be more receptive to use cases such as VR/AR, personalized products and industrial automation – reflecting the need for higher-performing technology to support them. Consumer products and retail companies record the top score for 5G-based VR and AR use cases (47%), while manufacturing (54%) and energy respondents (50%) are the sector groups most interested in industrial automation delivered through 5G.

Figure 14: Demand for IoT and 5G-based IoT by application type

Which are or will be the most significant IoT or 5G-based IoT application scenarios for your organization?

Percentage of respondents currently investing or planning to invest in IoT



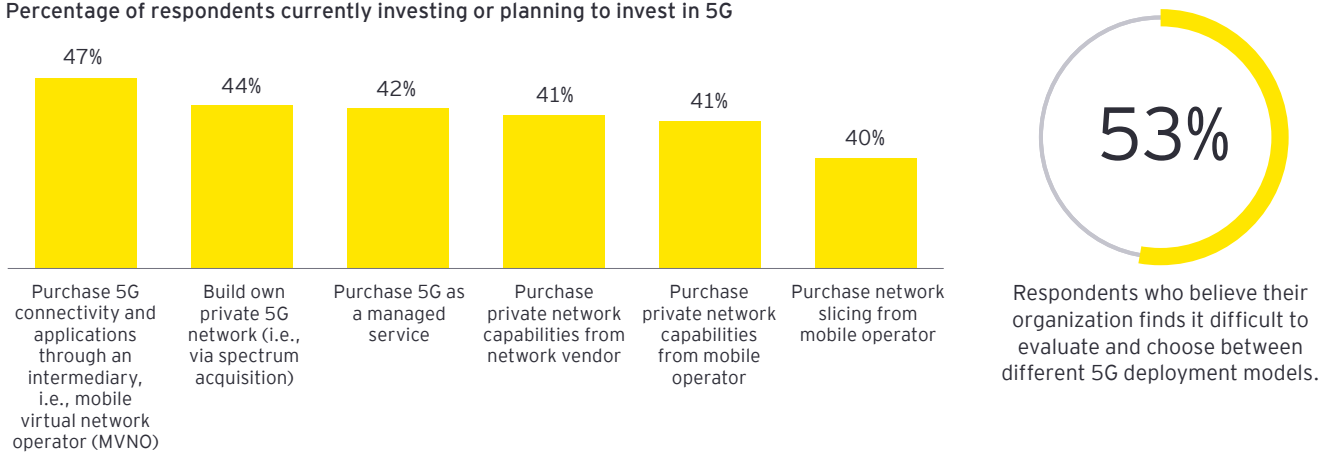
## Enterprises are open to a range of 5G purchasing models, but struggle to evaluate the diverse options on offer.

EY findings show that businesses are receptive to several different ways of purchasing 5G-based IoT. While the most popular is buying 5G connectivity and applications via an intermediary such as a mobile virtual network operator (MVNO), a range of private network deployment options – either executed in-house or purchased from a mobile operator or network equipment vendor – are relevant to half of the businesses surveyed. Preferences vary by region: Asian businesses are markedly more open to building their own private networks, while American enterprises are more inclined toward purchasing 5G as a managed service. However, the breadth of options for deploying 5G-based IoT can be a source of confusion and frustration, with 53% of businesses finding it difficult to work out which 5G deployment model is best for them. Given that both telcos and equipment vendors offer private network solutions – sometimes via partnerships – it's vital that enterprises fully understand the different options available to them.

Figure 15: Enterprises' preferred purchasing models for 5G

What would be your organization's most important 5G investment strategies?

Percentage of respondents currently investing or planning to invest in 5G



### The perceived benefits of private networks vary by region and industry.

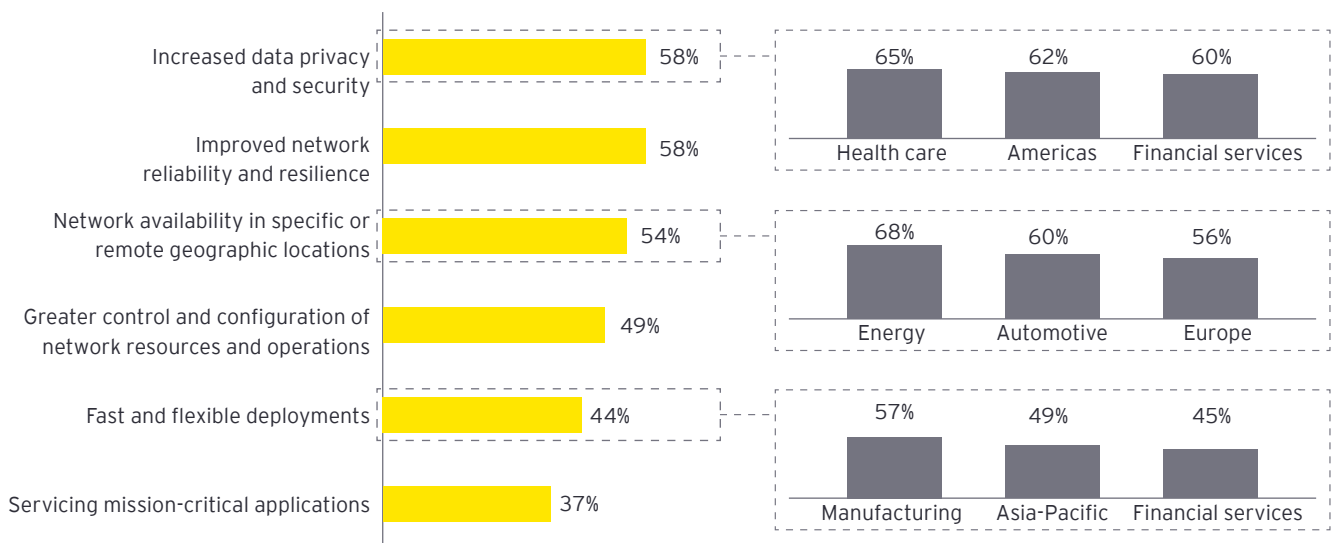
Enterprises point to a range of benefits offered by private networks. Improvements to data security and network reliability lead the way, both cited by 58% of respondents. However, views vary widely between different regions and industries. Organizations in the Americas are more likely to highlight data privacy and security, as are respondents in health care and financial services. Meanwhile, respondents in energy, utilities and mining are much more likely to cite network availability in remote locations. Manufacturing businesses put a high value on fast and flexible deployment with private networks (57%), a view echoed by Asia-Pacific respondents (49%).

Figure 16: Benefits of private mobile networks

What do you see as the most important benefits of private mobile networks for your organization?

Percentage of respondents who select purchase private network capabilities as an investment strategy

Selected industry and regional scores per benefit



# 5

Detailed survey findings

## Enterprise 5G: pain points and priorities

## Technology integration is the biggest internal 5G challenge, with growing concerns over understanding the supplier landscape and securing budget.

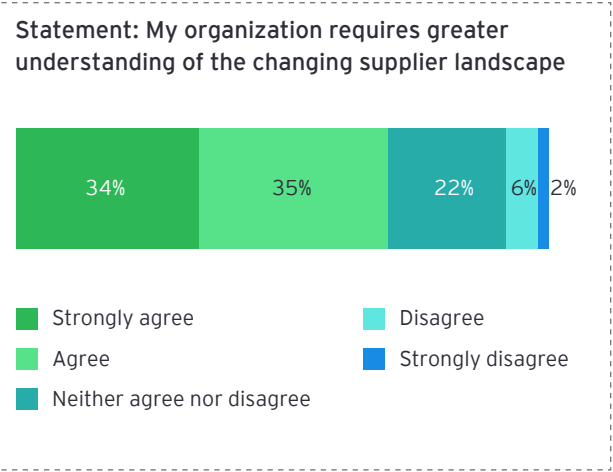
Integrating 5G with existing technology and processes remains the top internal 5G challenge for enterprises this year, with poor understanding of 5G’s relationship to other technologies such as cloud again ranking second. Limited awareness of the 5G supplier ecosystem ranks third, up from fifth last year, reflecting a broader challenge – with 69% of businesses agreeing they need a greater understanding of the changing technology supplier landscape. Lack of budget is another growing concern, reflecting a spending environment where investments in cloud and AI are being prioritized.<sup>3</sup> More positively, two of last year’s leading concerns – a lack of relevance of 5G to their organization’s overall strategy, and uncertainty over deployment scenarios and timing – have dropped out of enterprises’ top five, suggesting some strategic and operational challenges relating to 5G are moderating.

Figure 17: Top five internal 5G challenges

Which are the most critical internal challenges informing your organization’s view of 5G?

2023 2024

1	1	Complexity of integration with existing technology and processes
2	2	Poor understanding of 5G’s relationship to other emerging technologies
5	3	Limited awareness of 5G supplier ecosystem
7	4	Lack of budget support for 5G investment
6	5	Poor understanding of 5G, benefits and use cases



<sup>3</sup> “Gartner Forecasts Worldwide IT Spending to Grow 8% in 2024,” *Gartner*, [www.gartner.com/en/newsroom/press-releases/2023-10-18-gartner-forecasts-worldwide-it-spending-to-grow-8-percent-in-2024](https://www.gartner.com/en/newsroom/press-releases/2023-10-18-gartner-forecasts-worldwide-it-spending-to-grow-8-percent-in-2024), 18 October 2023.





## Cyber risks top the list of external 5G challenges, with businesses also sensitive to their degree of reliance on technology suppliers.

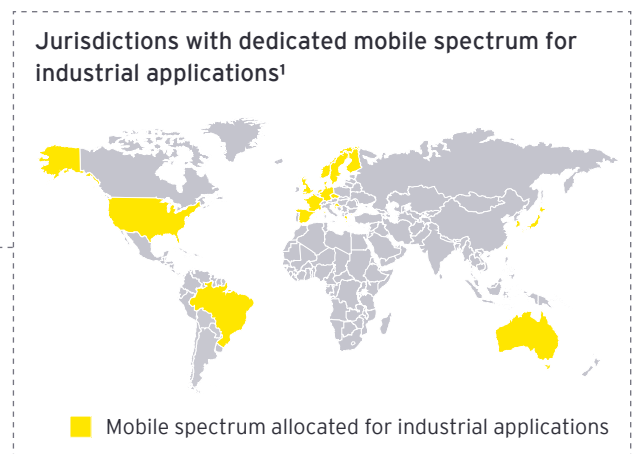
Organizations rate cyber and data protection risks as the biggest 5G challenge outside their control, reflecting ongoing rises in cyber attacks on IoT devices.<sup>4</sup> Interestingly, increased reliance on technology partners and vendors has grown as a concern over the past year, and is most pronounced among manufacturing, automotive, and energy respondents. Limited clarity on 5G policies and regulations remains a top-three concern globally and is ranked top by European businesses. This reflects both an evolving landscape of national spectrum availability for industrial applications and also growing regulation of network equipment vendors more broadly. Environmental concerns also feature, underlining that emerging technologies do not come without ESG risks. Asia-Pacific enterprises are most sensitive to this issue, for whom it ranks second, mirroring the overall prominence of ESG in their emerging tech strategies.

Figure 18: Top five external 5G challenges<sup>5</sup>

Which are the most critical external challenges informing your organization's view of 5G?

2023 2024

1	1	Increased vulnerability to cybersecurity and data protection risks
5	2	Increased reliance on technology partners and vendors
2	3	Lack of clarity on national 5G policy or regulations
4	4	Health and environmental concerns relating to 5G equipment
6	5	Immaturity of 5G technology



## Exploring 5G's relationship to other emerging technologies is critical, while deeper vendor collaboration is on the rise as a priority.

Asked to cite their top 5G priorities going forward, enterprises rank exploring 5G's relationship to other emerging technologies such as AI in first place, echoing their responses in previous waves of the survey. Asian enterprises top score (48%) with European businesses under-indexing (35%). Deeper collaboration with vendors has risen strongly up the list of future 5G priorities this year. European businesses rate deeper vendor collaboration as especially important, as do automotive and health care respondents. However, there are signs that the more sophisticated capabilities of 5G connectivity are failing to resonate with enterprises: The desire to access network slicing or private networks has fallen back this year.

<sup>4</sup> "A sharp increase in cyberattacks on IoT devices: Check Point," *SecurityBrief*, [blog.checkpoint.com/security/the-tipping-point-exploring-the-surge-in-iot-cyberattacks-plaguing-the-education-sector](https://blog.checkpoint.com/security/the-tipping-point-exploring-the-surge-in-iot-cyberattacks-plaguing-the-education-sector), 25 April 2023.

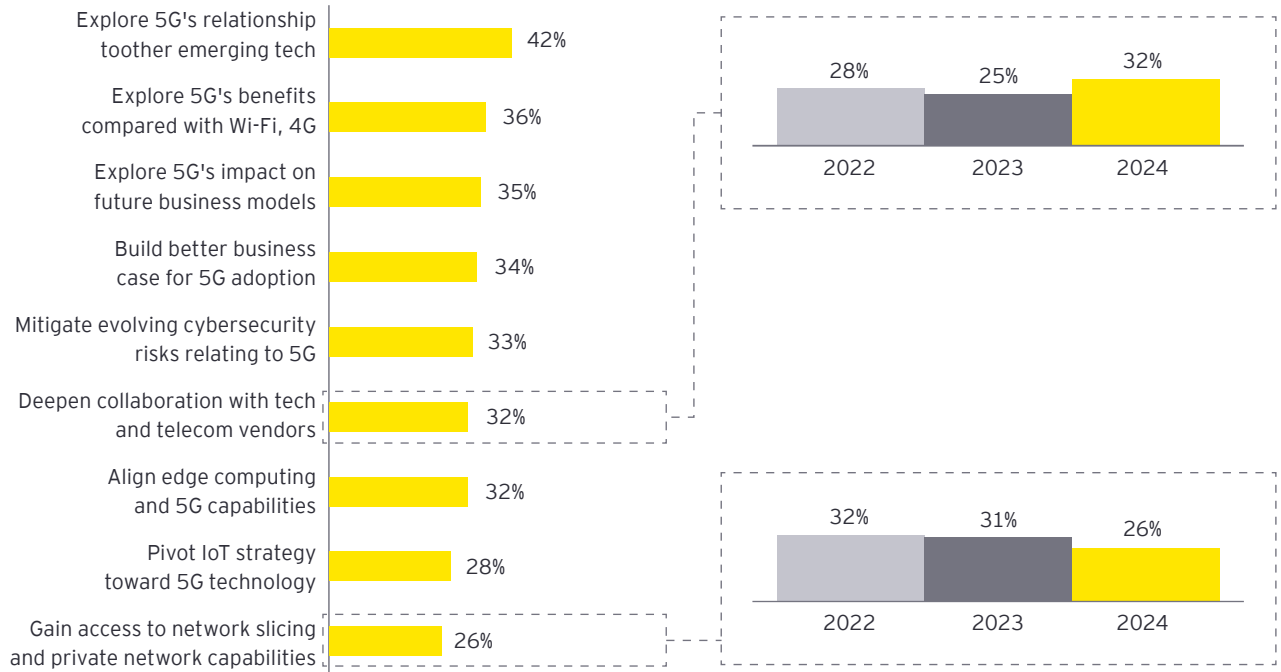
<sup>5</sup> "5G spectrum for local industrial networks," *Ericsson*, 2023.

Figure 19: Future 5G priorities

What are your organization's most important 5G priorities in future?

Percentage of respondents currently investing or planning to invest in 5G

Future 5G priorities: year-on-year comparison



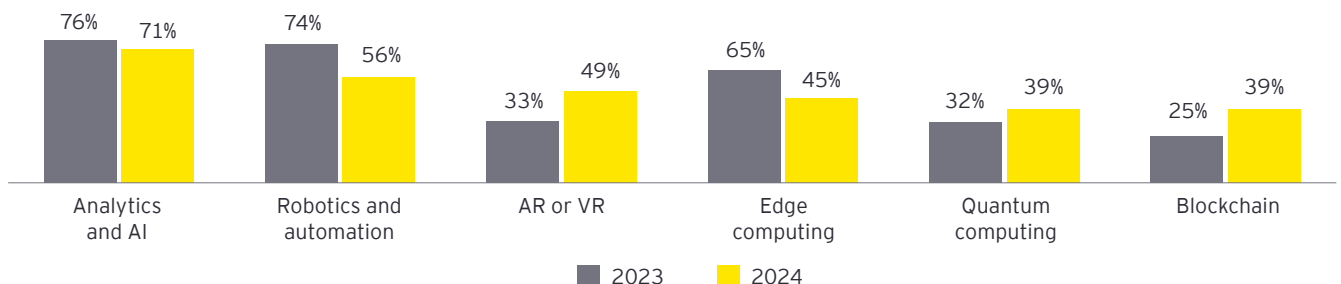
### AI and automation are seen as the most complementary technologies to 5G, with AR, quantum computing and blockchain all rising in importance.

Enterprises recognize that 5G's transformational potential is heightened by integrating it with other emerging technologies. When asked which technologies are most complementary to their 5G and IoT strategies, more than half cite AI and automation, the leading answers. However, this year's responses are more evenly distributed, with AR/VR, quantum computing and blockchain all rising in importance, reflecting a more holistic appreciation of the intersections between different emerging technologies. Meanwhile, some significant variations emerge between sectors: Government respondents are the keenest on AI (85%), manufacturing respondents are most likely to cite automation (56%), consumer products and retail are most likely to point to AR or VR (56%), and technology companies top score for edge computing (54%).

Figure 20: Complementary emerging technologies for 5G and IoT

What are your organization's most important 5G priorities in future?

Percentage of respondents currently investing or planning to invest in IoT and 5G

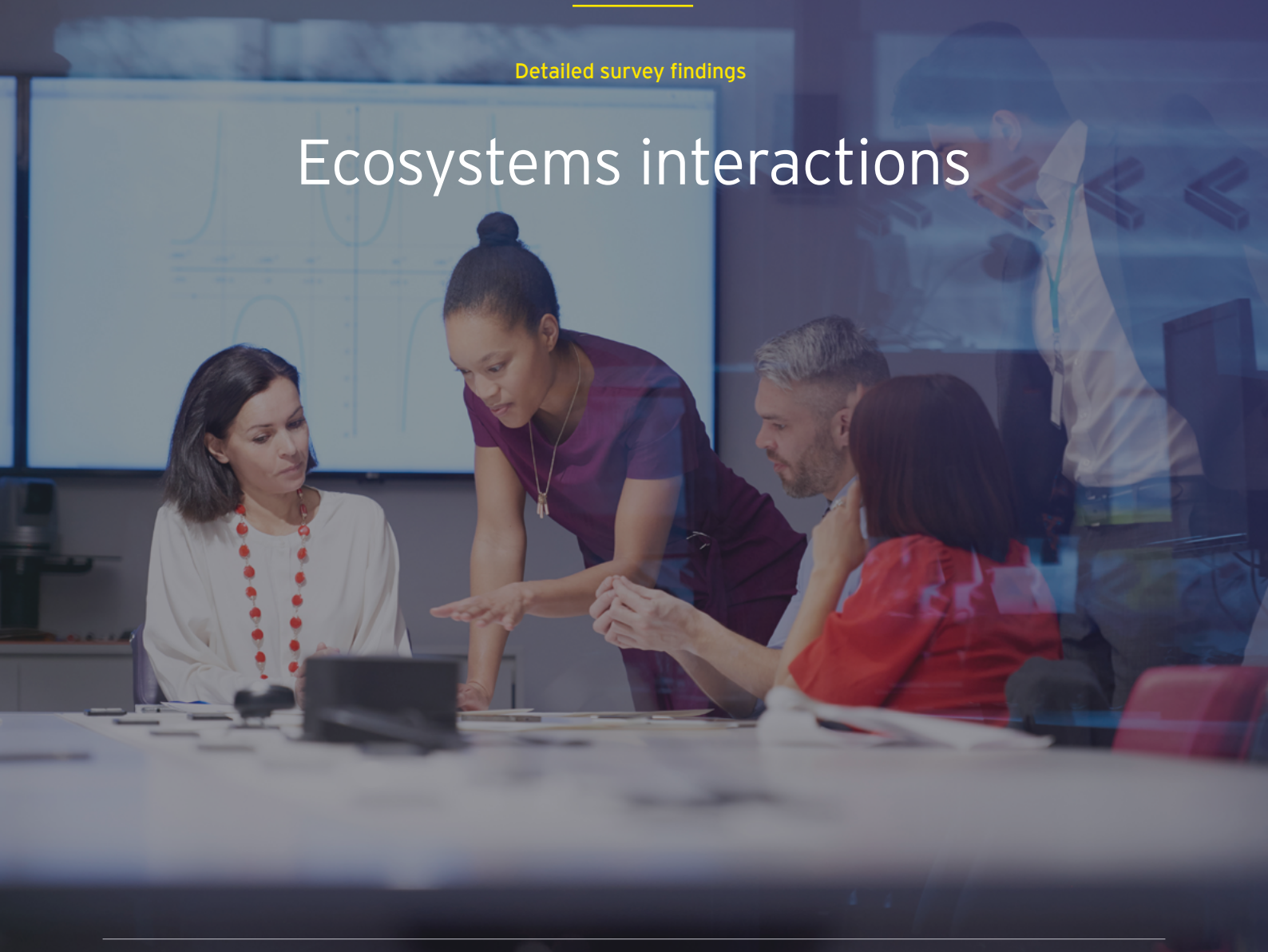


# 6

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Detailed survey findings

## Ecosystems interactions



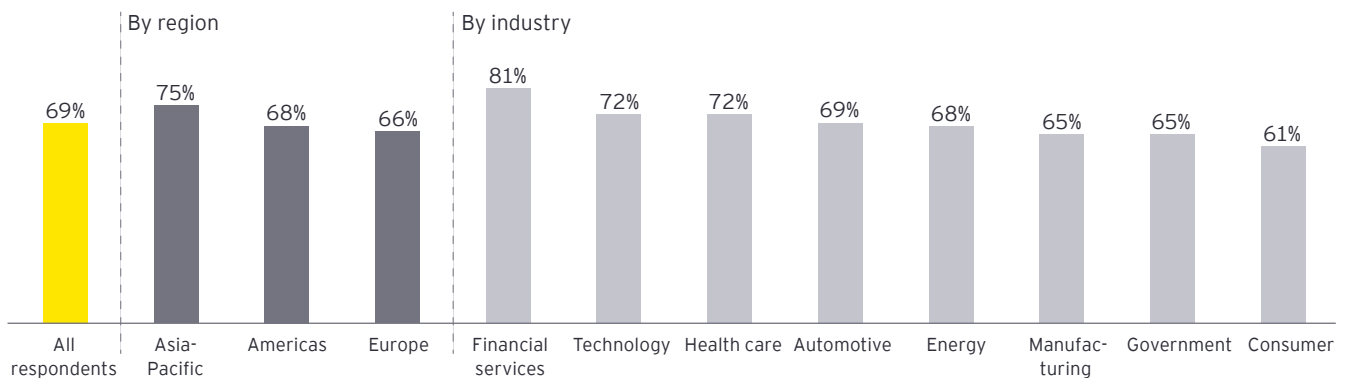
## Two-thirds of enterprises are actively participating in ecosystems, led by businesses in Asia-Pacific.

Globally, 69% of organizations collaborate with other organizations as part of an ecosystem, with Asia-Pacific enterprises ahead of other regions at 75%, and financial services leading among sectors at 81%. Interestingly, ecosystem engagement for consumer products and retail companies has declined year-on-year, from 75% in 2023 to 61% in 2024, while ecosystem participation among manufacturers has risen from 55% to 65%. These fluctuations suggest that ecosystem strategies are fluid as a catalyst for collaboration. With this in mind, suppliers should look to encourage their customers to participate more consistently in collaborative ecosystems.

Figure 21: Ecosystem collaboration: enterprise participation

Does your organization collaborate with other organizations as part of an ecosystem?

Percentage of all respondents



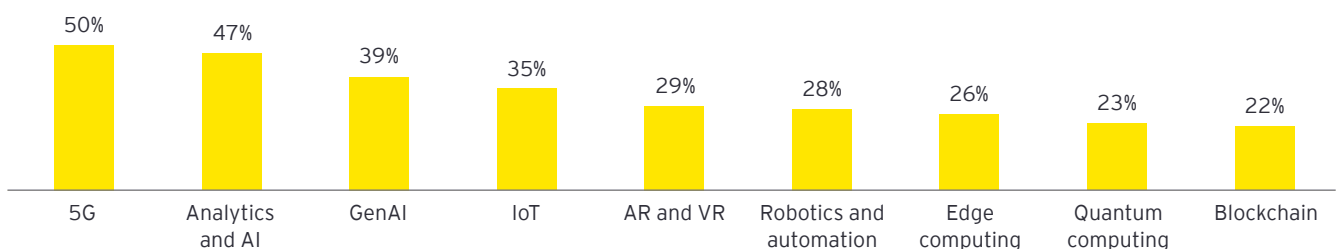
## Businesses are prioritizing 5G and AI as technologies for ecosystem-based collaboration.

5G and AI – and related capabilities in GenAI and IoT – stand out as the technologies most suited to ecosystem-based collaboration. The relative rankings of the technologies most often prioritized for collaborative approaches vary by region: In the Americas, analytics and AI (53%) is on a par with 5G (53%). Meanwhile, AR and VR are more highly prioritized for collaboration in Asia-Pacific (33%) and Europe (31%) than in the Americas (24%). Among sectors, prioritization of 5G for ecosystem collaboration is highest in manufacturing and automotive (both 56%), underlining its important role in the collaborative ecosystems forming around [Industry 4.0](#) opportunities.

Figure 22: Emerging technologies for ecosystem collaboration

Which emerging technologies are you prioritizing for collaboration with other organizations as part of an ecosystem?

Percentage of all respondents



## Low awareness of collaboration opportunities is increasingly viewed as an inhibitor of ecosystem strategies, which also suffer from under-prioritization.

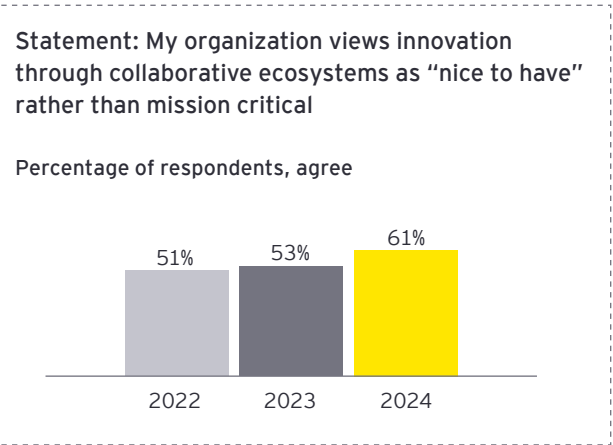
A lack of strategic alignment remains the biggest inhibitor of collaboration via ecosystems both globally and in every region. Limited awareness of collaboration opportunities has risen to second position, and is rated top by government and public sector respondents (46%). A focus on noncore initiatives for collaboration also makes the top five this year, at a time when a growing proportion of businesses believe that ecosystem collaboration is “nice to have” rather than mission critical. This may also explain why a lack of time and resources has slipped down the ranking of collaboration inhibitors this year, since ecosystem strategies are seen as less central to core business initiatives and thus carry fewer resourcing requirements.

Figure 23: Top five inhibitors of collaboration through ecosystems

What are the inhibitors of your organization’s collaboration with other organizations as part of an ecosystem?

2022 2023

1	1	Lack of strategic alignment with other organizations
4	2	Limited awareness of collaboration opportunities
5	3	Low willingness to share data with other organizations
2	4	Lack of time and resources for collaboration
9	5	Focus on noncore initiatives for collaboration



## Enterprises are increasingly receptive to suppliers that can communicate their ecosystem position and orchestrate other partners.

Looking ahead, a growing proportion of businesses are prepared to prioritize partners that can articulate their role in industry ecosystems. This aligns with our findings that organizations are prioritizing deeper collaboration with vendors – with open innovation principles widely accepted by 71% of organizations – but, crucially, they lack knowledge and awareness of the supplier landscape and resulting opportunities for collaboration. Moreover, businesses are not only seeking better conceptual understanding of suppliers' positioning in the value chain, but will also prioritize those vendors that can orchestrate other suppliers. This need for practical expertise reflects the fact that 60% of businesses find multisided partnerships difficult to execute, and therefore favor having a lead partner or partner orchestrator involved.

Figure 24: Enterprise attitudes to suppliers' ecosystem capabilities

**My organization will prioritize vendors that can clearly articulate their role in changing industry ecosystems.**

Percentage of respondents agree



# 7

Detailed survey findings

## The view of the vendor



## Security and speed: the top attributes that enterprises are seeking in their technology providers.

Security capabilities and credentials emerge as the attribute that enterprises are most looking for in their current ICT vendors and second as a future attribute. This clearly reflects businesses' growing sensitivity to data protection and security, as cyber attacks continue to increase and new technologies such as GenAI challenge existing approaches to data governance. Speed of deployment and execution ranks second as a current priority, one place down from last year, and first as a future priority, reflecting enterprises' interest in scaling existing proof-of-concept and pilot projects into organization-wide deployments. While many of the attributes businesses are currently seeking in vendors remain similar to last year, the desired future attributes have shifted. Notably, competitive pricing has slipped down the future ranking this year, while the ability to co-create new products and services has risen, echoing the growing focus on vendor collaboration around IoT and 5G.

Figure 25: Top five desired vendor attributes – now and in the future

What are the most important attributes sought in your ICT vendors now?

2023	2024	
NEW	1	Security capabilities and credentials
1	2	Speed of deployment and execution
3	3	Sustainability capabilities and credentials
2	4	End-to-end solution capabilities
5	5	Competitive pricing or pricing model

What are the most important attributes sought in your ICT vendors in the future?

2023	2024	
6	1	Speed of deployment and execution
NEW	2	Security capabilities and credentials
8	3	Ability to co-create new products and services
1	4	Sustainability capabilities and credentials
2	5	Competitive pricing or pricing model





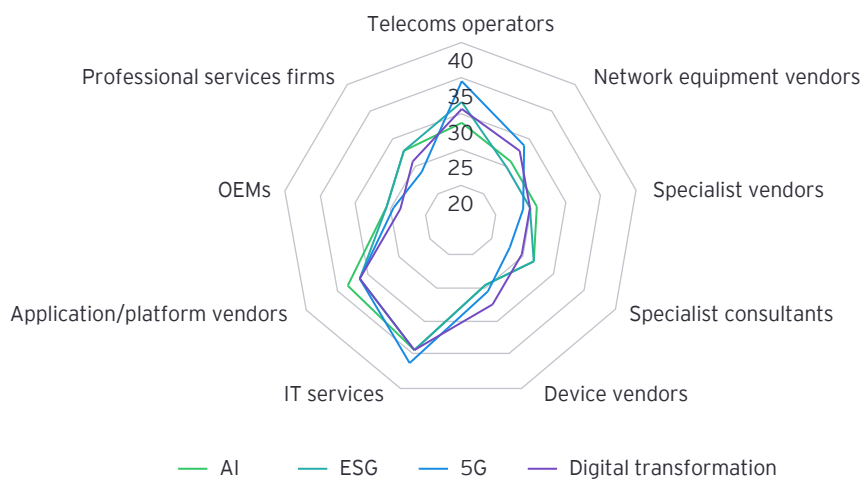
## IT services providers, platform vendors and telcos tend to lead in perceived expertise across different technologies.

Enterprises' opinions are divided on which types of ICT supplier they trust most as providers of various technology and advisory capabilities. Across all domains – AI, ESG, 5G and digital transformation – IT services providers score highest (40% average score), followed by platform vendors (37%) and telcos (36%). All other vendor types score between 29% and 32%.

However, a breakdown by sector and geography reveals some interesting variations. In terms of being trusted for 5G expertise, IT services providers lead globally (42%) and in the Americas (44%), while European businesses prefer telcos (43%), as do manufacturing respondents (47%). For AI expertise, IT services providers lead in the Americas (42%), while platform vendors rank first in Europe (40%); at the industry level, government respondents prefer professional services firms (42%), while technology firms have a strong preference for IT services providers (52%). Meanwhile, for ESG advice, IT services providers are the most trusted vendors in the Americas and Europe (both 43%), but telcos rank first in Asia-Pacific (40%), with professional services and IT services providers joint second (34%).

Figure 26: Enterprise perceptions of ICT supplier expertise

Which types of ICT supplier are most trusted as experts in the following areas by your organization?

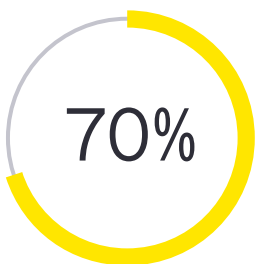
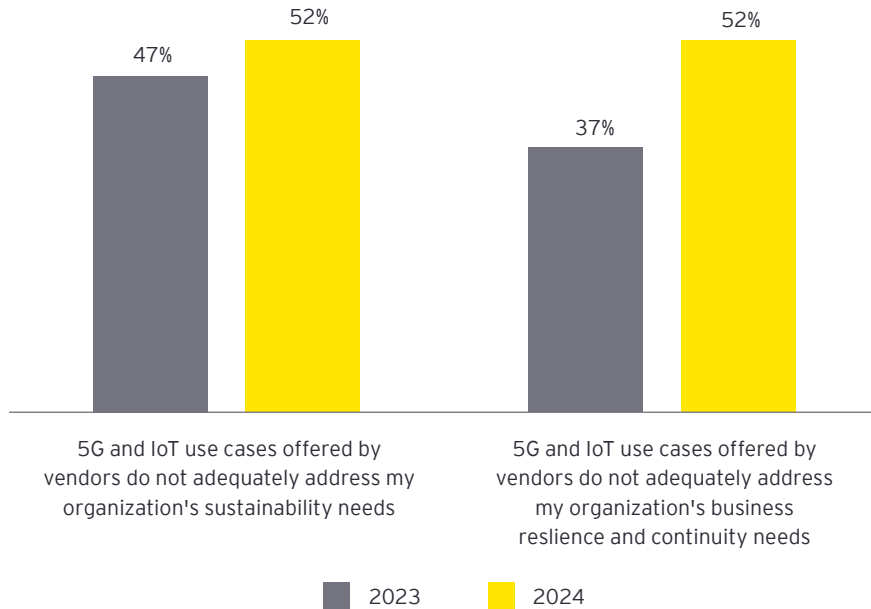


## Vendor IoT use cases fail to meet organizations' needs, with businesses seeking better use case formulation and articulation from their suppliers.

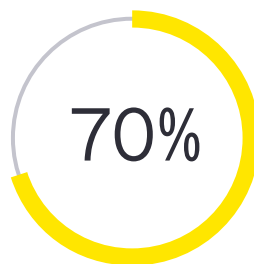
As organizations evaluate their own use case needs, they're also assessing the merits of the use case solutions offered by vendors, with 68% saying they rely on external support. Here the survey results point to rising dissatisfaction. Over half of businesses (52%) believe that vendors' use cases fail to meet their sustainability and business resilience needs – a concern compounded by more fundamental misgivings about suppliers' solution portfolios. Seven in 10 businesses believe that vendors should do more to articulate the business benefits of their use cases, with a similar proportion saying vendors need to be more selective in what they offer. This demand for better articulation and selectivity is particularly pronounced among Asia-Pacific enterprises (75% and 78%, respectively) and energy respondents (74% and 76%). The demand for selectivity is coupled with a need for specificity: 57% of respondents agree that use cases are often too generic to address their business needs.

Figure 27: Enterprise attitudes to vendor use case offerings

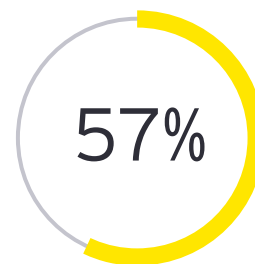
How much do you agree or disagree with the following statements in regard to 5G/IoT use cases and vendor interactions regarding them?



Respondents who believe vendors should do more to articulate the business benefits of the 5G and IoT use cases they offer.



Respondents who believe vendors should be more selective in the 5G and IoT use cases they present to their organization.



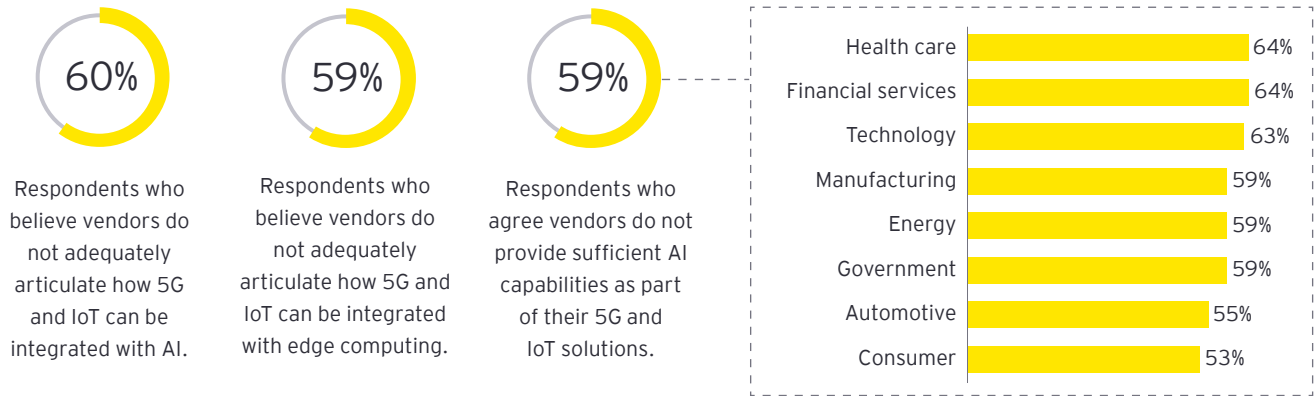
Respondents who agree that the 5G and IoT use cases offered by vendors are often too generic to address their immediate business objectives.

### Enterprises are dissatisfied with vendors' advice on how to combine different emerging technologies.

Combining and integrating different emerging technologies are priorities for businesses but technology vendors are falling short of expectations. Six in 10 businesses don't think that vendors explain how 5G and IoT can be integrated with both edge computing and AI. Answering such questions is critical for enterprises: 77% believe that integrating 5G and edge cloud will help them maximize their digital transformation. And it's not just better articulation of the benefits of combining emerging technologies that enterprises are seeking: 59% don't believe that sufficient AI capabilities are included within vendors' solutions.

Figure 28: Enterprise attitudes to vendors' emerging technology portfolios

How much do you agree or disagree with the following statements in regard to 5G/IoT use cases and vendor interactions regarding them?

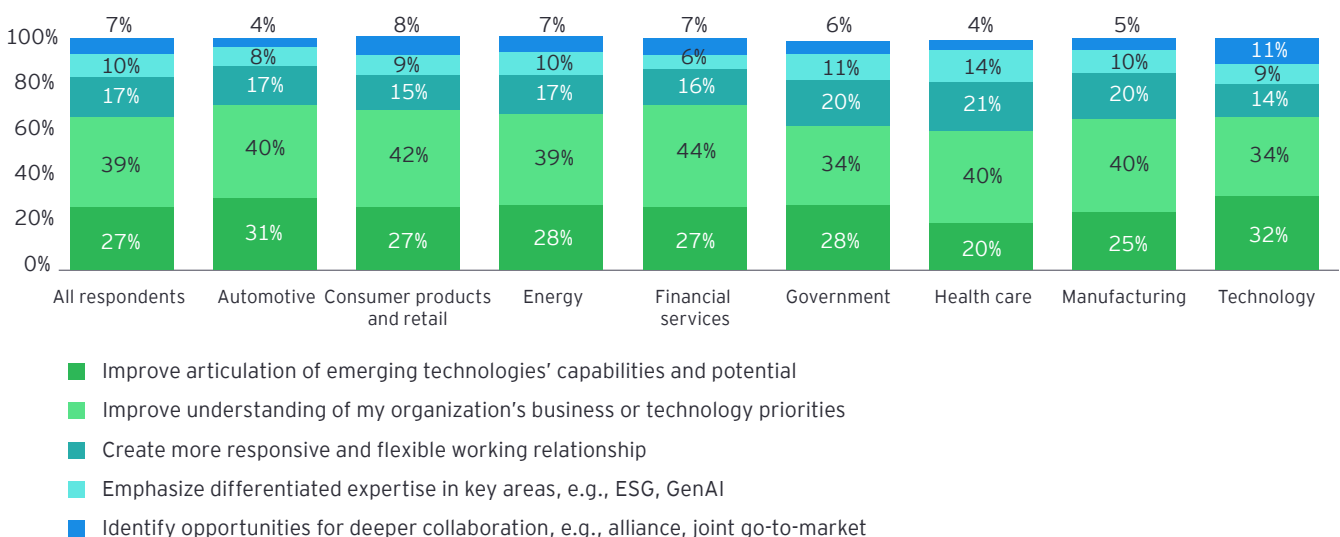


### Better understanding of customer needs and better articulation of technology capabilities are the key improvements businesses want to see.

Two of the principal pain points with vendors that enterprises highlight in this year's research – use cases that are not fit for purpose, and limited advice on how different emerging technologies can be leveraged in combination – are reflected in the key improvements businesses are seeking from their ICT suppliers. Top of the list is an improved understanding of their organization's business or technology priorities (39%), followed by better articulation of emerging technologies' capabilities and potential (27%). Ultimately, these findings point to the need for a more meaningful dialogue between suppliers and their customers. With this in place, enterprises are more likely to consider the merits of differentiated expertise or deeper relationships through alliances.

Figure 29: Enterprise attitudes to ICT vendor relationships

What is the most important improvement ICT suppliers should make to improve their relationship with your organization?



# Next steps for emerging technology providers

Drawing on our research and domain expertise, we've identified four key actions that we believe ICT providers should take to capture the full potential of enterprise demand.

## 1.

### **Drive better knowledge exchange with your customers.**

Enterprises want vendors to help them better understand emerging technologies and the evolving supplier landscape, particularly as new technologies such as GenAI reconfigure value creation scenarios and supplier ecosystems. So you should strive proactively to learn more about your customers' business and technology needs – from industry-specific use cases through to changing transformation priorities – to help make your offerings as relevant as possible.

## 2.

### **Prioritize scalable solutions that blend the right technologies.**

Customers are looking to build more predictable outcomes into their long-term technology roadmaps. To help them do this, you need to focus on developing and promoting your ability to scale trials into organization-wide deployments. It's also important to evaluate the optimal adjacencies between emerging technologies, such as AI, 5G and edge computing, within your portfolio of solutions and be able to clearly articulate the added value derived from combining different technologies.

## 3.

### **Elevate your security, sustainability and risk mitigation credentials.**

As the weighting attributed to ESG criteria in technology investment and vendor selection decisions continues to increase, you need to respond by doubling-down on the sustainability credentials of your solutions. You should also highlight your strengths in – and approach to – data management and security, particularly as disruptive new technologies challenge your customers' existing data governance and technology transformation frameworks.

## 4.

### **Demonstrate your ability to orchestrate partner ecosystems.**

Businesses are increasingly prioritizing vendors that can orchestrate other suppliers. In light of this shift, it's vital to revisit your existing partnership strategy and ensure it remains fit for purpose. Doing this is especially important as enterprises' needs trend toward combinations of frontier technologies, and as new competencies in AI and ESG come to the fore. At the same time, you should show customers that you can lead partner ecosystems with both purpose and flexibility, thus helping them build greater confidence in ecosystem-led innovation.

# About this study

The EY Reimagining Industry Futures Study 2024 is based on an online survey of 1,405 enterprises conducted in November 2023, the fifth wave of this annual survey. The questionnaire was comprised of multiple-choice questions and agreement statements, with respondents drawn from multiple industry verticals and geographies. Only respondents who self-selected as “moderately knowledgeable” and above about their organization’s IoT and 5G initiatives feature in the survey results.

The questions explored enterprise behaviors, attitudes and intentions toward emerging technologies, including AI, IoT and 5G-based IoT. Specific themes include:

- ▶ Enterprise emerging technology spending intentions and adoption
- ▶ Sustainability benefits of emerging technologies
- ▶ Enterprise AI, IoT and 5G-IoT use cases, priorities and challenges
- ▶ Enterprise perceptions of ICT supplier capabilities and competencies
- ▶ Enterprises’ engagement with their supplier ecosystems

## Survey respondents broken down by location and primary industry

Figure 30: Location of respondents

Where are you located?

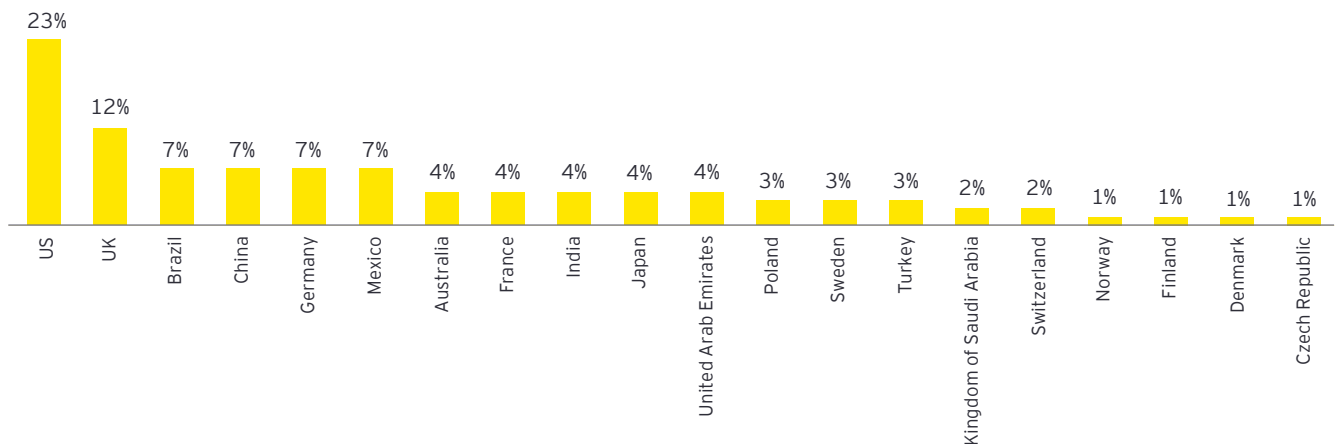
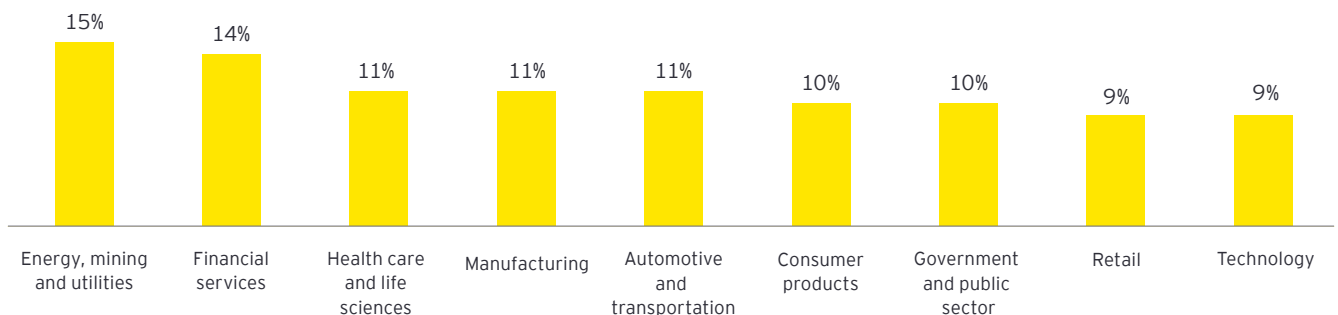


Figure 31: Primary industry of respondents

Which of the following best reflects the primary industry of your organization?



## EY contacts



### Tom Loozen

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Tom leads an integrated team of telecommunications professionals working in more than 150 countries and is responsible for driving the industry growth strategy through innovative solutions across consulting, tax, assurance and strategy and transactions. Combining the strength of the broad range of EY services, he leads strategic conversations to address clients' most complex business challenges, shaping and delivering unique value propositions.



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Adrian leads the development of insights covering the technology, media and telecommunications sectors as part of the EY Knowledge team. An experienced commentator on industry dynamics and organizational strategy, he is passionate about how new forms of connectivity can positively shape the digital society.



### Ian Beer

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Ian has almost 30 years' experience advising clients headquartered all around the world. Ian has developed a strong global network and brand, which enables him to bring the best of the EY organization to clients across all areas of corporate, employment and indirect tax.

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EYG no. 001063-24Gbl  
2312-4390174  
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