How can emerging technologies shape industries for sustainable growth and future impact?

EY Reimagining Industry Futures Study 2025

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Contents

Introduction

The transformation of industries is at the heart of the transition to a digitally enabled world. New technology cycles are redefining the future of industries and are now being magnified still further by advances including the rollout of 5G stand-alone networks, the rapid rise of generative AI (GenAI), and the emergence of edge computing, which, taken together, promise new levels of cost efficiency, agility and innovation.

This complex and fast-evolving environment is also driving change in long-established relationships between enterprises and their information and communications technology (ICT) suppliers. Emerging technology providers are under pressure to keep their solutions relevant and attractive. And they're having to rethink their relationships with enterprise customers to keep pace with their rapidly changing needs.

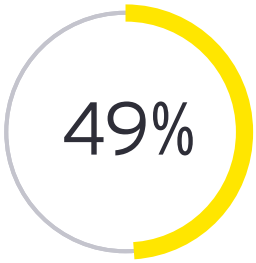
It's against this background that the EY Reimagining Industry Futures Study 2025 explores enterprises' behaviors, attitudes and intentions toward both new technologies and the companies that provide these products and services. This year's findings show that organizations across all sectors remain committed to investing in emerging technologies to transform their operations — but that issues around scalability and legacy integration are top of mind. Meanwhile, ICT vendors need to pay close attention to enterprises' increasing focus on security and growing demand for ecosystem orchestration.

You can read more about the survey approach, methodology and sample at the end of this report on page 39.

Executive summary

1. Investment in emerging technologies

Strong investment momentum in emerging technologies is being driven by 5G, the Internet of Things (IoT) and quantum computing. European and Asia-Pacific organizations' 5G investments are narrowing the gap with businesses in the Americas, while some sectors such as government and manufacturing have seen a strong year-on-year increase in investment exposure to 5G. Decisions about emerging technologies now stretch well beyond the IT function, highlighting the importance of new CXO interactions between enterprises and suppliers.



of CEOs are now involved in decisions on emerging technology strategy, including the choice of ICT vendors.

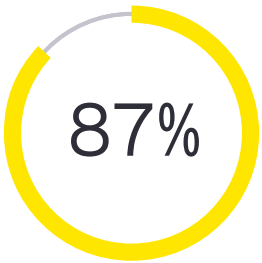
2. The scalability challenge

As businesses transition to new technologies, scalability, technology integration and data governance are top of mind. While the enterprise investment momentum in 5G and IoT is positive, live deployments of these technologies lag artificial intelligence (AI) and automation. Key deployment barriers include the complexity of integration and budget limitations, with six in 10 respondents believing they have too many point solutions. Upskilling and internal collaboration are viewed as catalysts for future deployments, with businesses also looking to suppliers to help them achieve scale.

of respondents believe their organization has too many point solutions.

3. Sustainability sentiments

Sustainability factors increasingly weigh on decisions about emerging technology investments, with organizations more sensitive than before to the potentially ambivalent role of new technologies in the decarbonization agenda. Data centers are an area of low environmental, social, and governance (ESG) awareness for businesses, who are eager to learn more. Three-quarters of businesses recognize the need to harmonize their sustainability and technology strategies, and this imperative also informs vendor selection.



of respondents cite sustainability as a major consideration when making investments in emerging technologies, up from 76% in 2023.

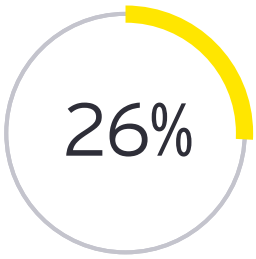
4. GenAI in the spotlight

As their attention turns to the productivity gains GenAI enables, businesses are taking a less risk-oriented view of this technology. Organizations are considering a range of GenAI use cases, with no standout preferences. Looking forward, 50% of businesses see cybersecurity and data protection as a leading GenAI challenge. Limited awareness of the supplier ecosystem (34%) and technology immaturity (30%) rank lower, despite the nascent stage of market.

of organizations rate cybersecurity and data protection concerns as a critical challenge informing their view of GenAI.

5. New directions in digital connectivity

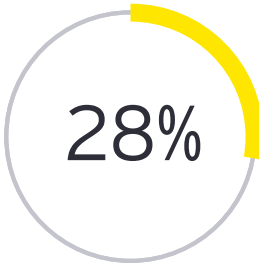
Integration between both 5G and IoT with legacy systems and other emerging technologies are the prominent objectives in the world of enterprise connectivity, while 5G use case preferences vary between industries. AI is seen as the most complementary technology to 5G and IoT, while there's less focus on edge computing than before, despite its critical role as an enabler of low latency AI. Businesses have some awareness of new wireless technologies and business models, including network-as-a-service – typically led by IT functions – but more education is needed, particularly for "older" concepts such as network slicing.



of businesses have high awareness of network slicing while 29% of have low or no awareness.

6. In-demand vendor attributes

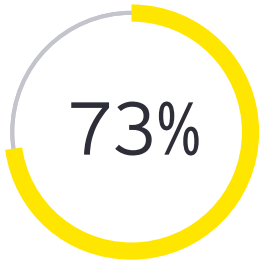
Security is seen as a top-three ICT vendor attribute, with sector understanding and professional service capabilities set to rise in importance. IT services, cloud vendors and telcos lead as perceived experts in different technology and advisory domains – with mobile operators at the front when it comes to private networks – although preferences are not marked, indicating fragmented customer mindshare. The ideal enterprise ICT supplier delivers business outcomes expertise and excellence in partner orchestration and scalable solutions.



of enterprises rank telcos as their preferred vendors of private mobile network capabilities, putting them just ahead of IT services providers on 25%.

7. Evolving vendor relationships

While enterprises are increasingly participating in collaborative ecosystems, they lack awareness of their key suppliers' partners and incomplete understanding of the changing supplier landscape is making vendor selection more complicated. That's particularly the case in digital connectivity, where businesses also believe 5G and IoT service portfolios are inadequate, with related AI capabilities conspicuous by their absence. Pressure on ICT providers to improve their positioning is growing, with one in three businesses planning to consolidate suppliers as they seek providers offering greater customer centricity. This is both a threat and an opportunity for service providers.



of organizations say they need a greater understanding of the changing supplier landscape.

1

Detailed survey findings

Investment in emerging technologies

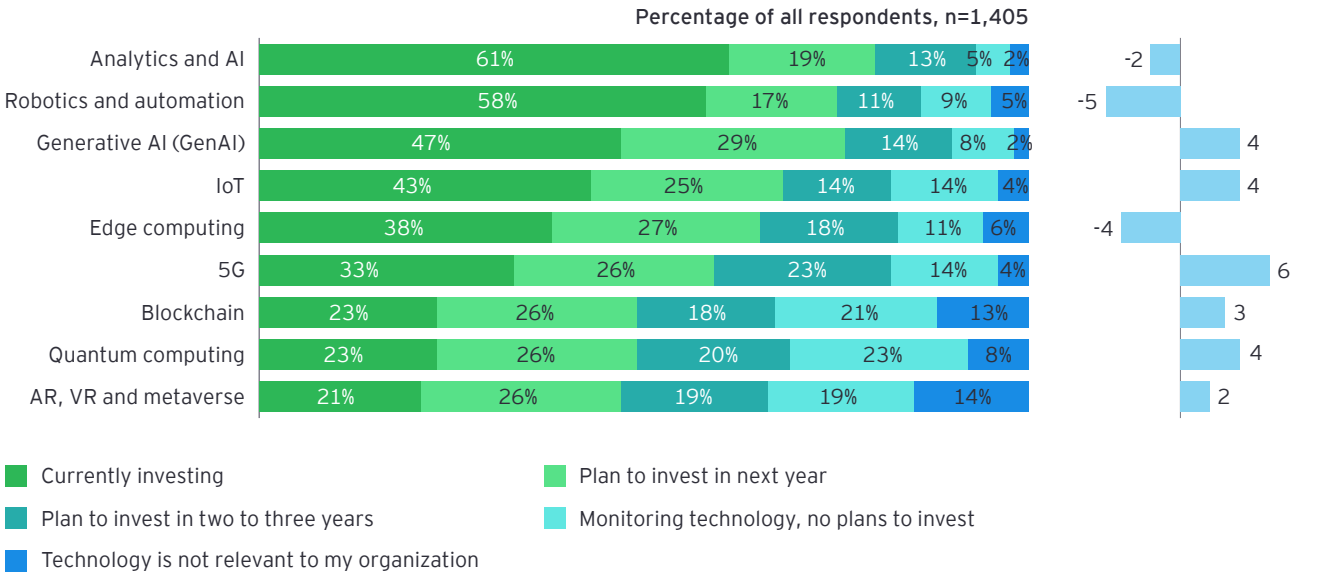
Investment momentum is healthy as technology decision-making extends across the C-suite

5G, IoT and quantum computing are driving the investment momentum in emerging technologies.

Enterprise investment in emerging technologies remains robust. Of the eight technologies our survey tracks, five are seeing higher levels of investment penetration, led by 5G, IoT and quantum computing. Levels of investment in GenAI are highest in Asia (49%), ahead of organizations in the Americas (48%) and Europe (44%). While investment in some technologies has tapered — notably automation (-5pp) and edge computing (-4pp) — the proportion of businesses that consider emerging technologies irrelevant for them has dropped across the board. The most notable decrease is for the metaverse. Last year, 18% considered it irrelevant, but this has dropped to 14% in 2025, a positive development. Automotive, energy, manufacturing and technology tend to lead in nearly all emerging technologies in terms of current investment, reflecting the importance of their digitization agendas and the growing importance of Industry 4.0 solutions.

Figure 1: Investment in emerging technologies

Which of the following emerging technologies is your organization investing in?

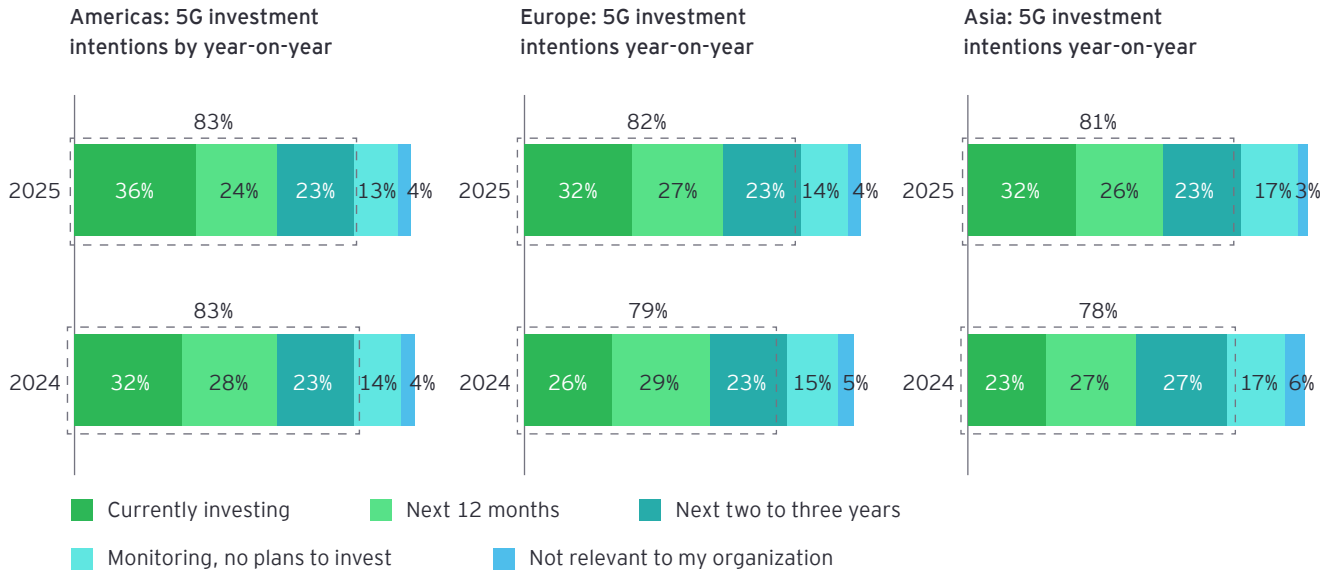


The Americas leads in 5G investment, but European and Asia-Pacific businesses are closing the gap as stand-alone networks trigger new demand.

The overall outlook for 5G investment over the next three years remains positive, reflecting enterprises' continued appetite for advanced network solutions. At the same time, many countries are preparing for 5G SA launches and the arrival of 5G Advanced, which will pave the way for more sophisticated enterprise 5G solutions offering ultra-low latency. Commercial rollouts of 5G SA have been prominent in key Asia-Pacific markets while Europe has the highest number of operators preparing to deploy 5G SA,[1] paving the way for these regions to strengthen their parity with the Americas in terms of enterprise 5G adoption.

[1] "Faster Speeds and the Promise of New Use Cases is Driving 5G SA Adoption," *GSMA Intelligence,* July 31, 2024.

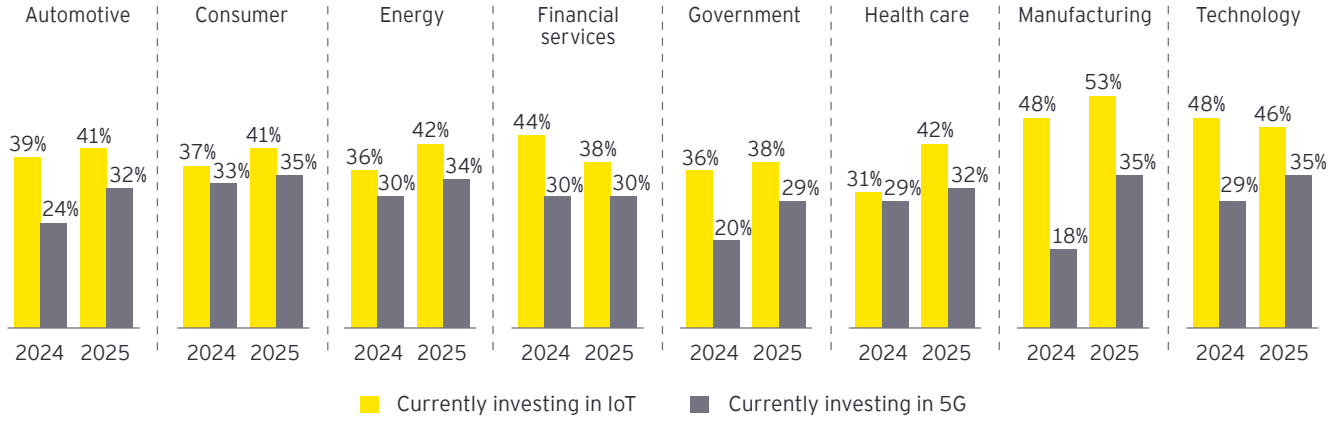
Figure 2: Current and future 5G investment



5G and IoT are growing in parallel — mutually reinforcing each other — with 5G growth particularly pronounced in manufacturing and the government sector.

All sectors have increased their investments in 5G and IoT year-on-year, except for financial services and technology, which have seen a slight decrease in IoT investment. Health care has seen the sharpest increase in IoT investment, with a rise of more than 10% year-on-year, followed by the energy sector with a 6% increase. Meanwhile, investment in 5G has increased by 9% among government organizations, and by 17% in manufacturing, substantially narrowing the gap with IoT solutions in both sectors. Both sectors are also significant investors in 5G private networks, with 42% of government and 37% of manufacturing organizations currently investing in private wireless.

Figure 3: Evolution of IoT and 5G investment levels by industry vertical

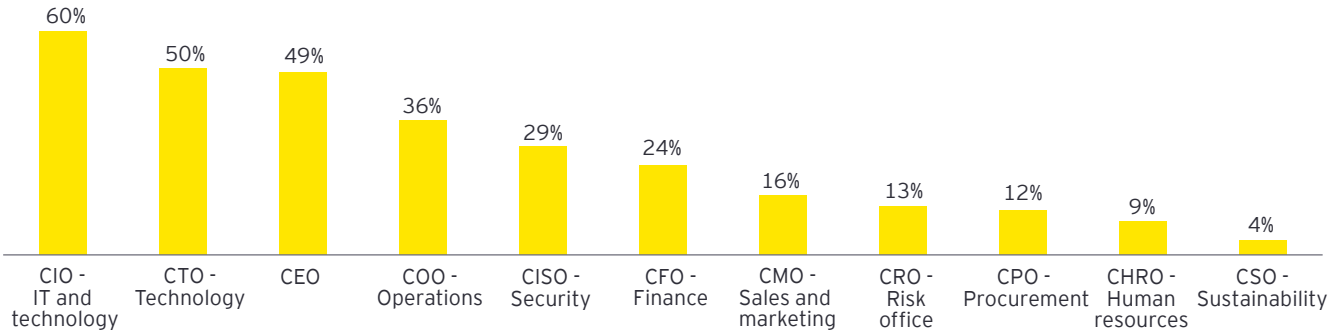


Emerging technology decision-making now extends well beyond the IT function, with CEOs and other CXOs often involved.

This year's survey reveals that decision-making responsibility for emerging technology is spreading across the C-suite. While CIOs (60%) and CTOs (50%) remain well-established as decision-makers, CEOs (49%) are now almost as prevalent when it comes to influencing emerging technology strategy, including the choice of ICT vendors. CEOs are most likely to be involved in emerging technology decisions in Asia (56%), while at the sector level, energy companies (56%) and consumer/retail businesses (54%) lead for CEO involvement. COOs also rank as a leading decision-maker in more than one-third of organizations, led by those in the Americas (41%), as well as manufacturing (40%) and automotive businesses (39%). While other roles generally play a less prominent role, one quarter of CFOs take a leading role in emerging technology decisions, rising to 38% of CFOs in financial services and 36% in health care. Ultimately, the distribution of decision-making shows that emerging technology strategy is much more than an IT-only concern. ICT providers need to recognize the growing importance of engaging with a range of leadership functions.

Figure 4: Leadership influence in emerging technology strategy

Who are the top three most important decision makers or influencers in your organization's emerging technology strategy, including choice of ICT vendors?



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Detailed survey findings

The scalability challenge

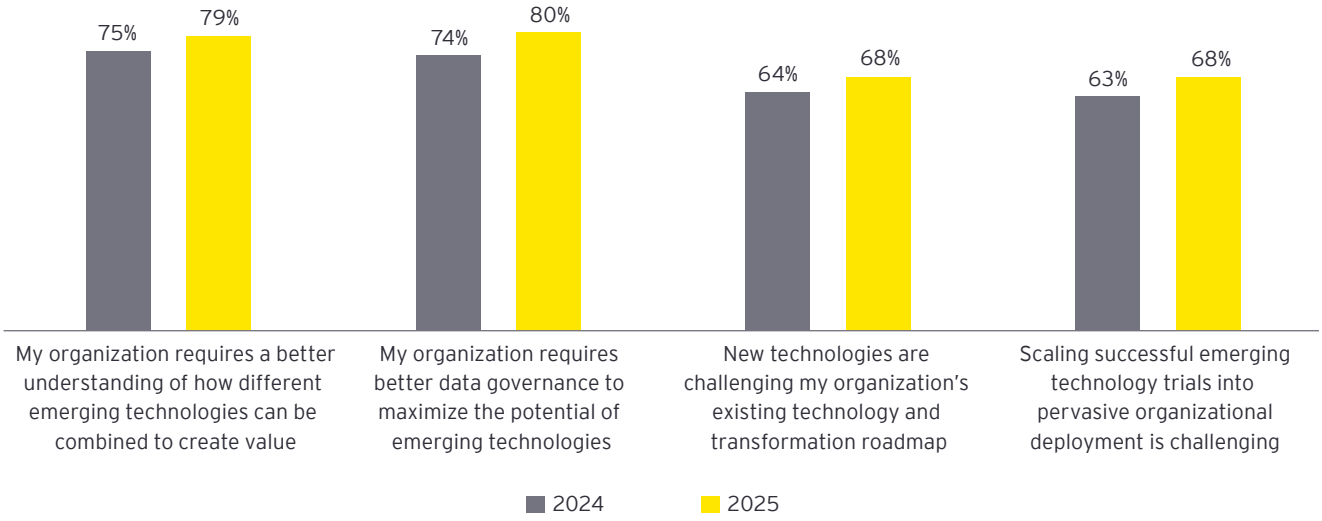
Businesses struggle to convert trials into scaled deployments

As businesses transition to emerging technologies, their concerns about integration, scaling and data governance are on the rise.

There are some clear challenges associated with organizations' current and planned investments in a growing range of emerging technologies. Three-quarters want a better understanding of how different technologies can be combined to enhance value creation. Meanwhile, robust data governance is also top of mind, as businesses look to mitigate the data privacy and security concerns prompted by a fast-changing technology stack. Additionally, while investment is growing, moving from technology trials to pervasive deployment is increasingly regarded as a problem for most enterprises: 68% agree it is challenging, up from 63% last year. Scalability challenges are most pronounced in government organizations (76%), with businesses in the Americas (75%) most susceptible from a regional perspective.

Figure 5: Enterprise challenges in the transition to emerging technologies

How much do you agree or disagree with the following statements in regard to emerging technologies?

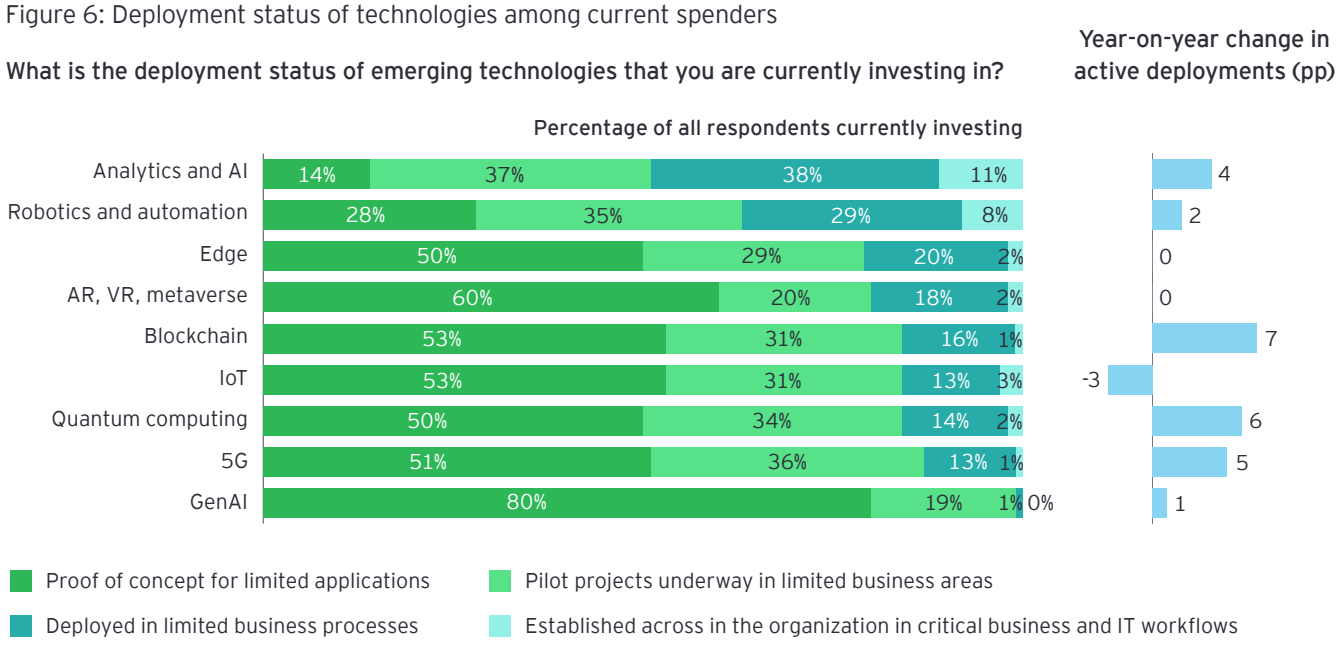


Most technologies lack traction in terms of active deployments.

While investment momentum is positive for most emerging technologies, the lion's share of this remains at proof-of-concept and pilot stages. Active technology deployments are highest in AI (49%) and automation (37%). Edge computing ranks third for active deployments, but its share remains flat at 22%, against a backdrop of lower investment penetration. Though 5G and IoT score well in terms of overall investment momentum, less than one in five companies investing is actively deploying these technologies. Given that IoT is one of the "oldest" emerging technologies we track, this finding underlines a scalability challenge, exacerbated by the declining share of live IoT deployments year-on-year.

From a vertical industry perspective, the most advanced sector for IoT deployment is automotive (21% active deployments) while active deployments of 5G are most prevalent in energy (20%). While live deployments of GenAI remain low (1%), government (29%), energy (23%) and retail (also 23%) companies have the highest share of pilot projects.

Figure 6: Deployment status of technologies among current spenders

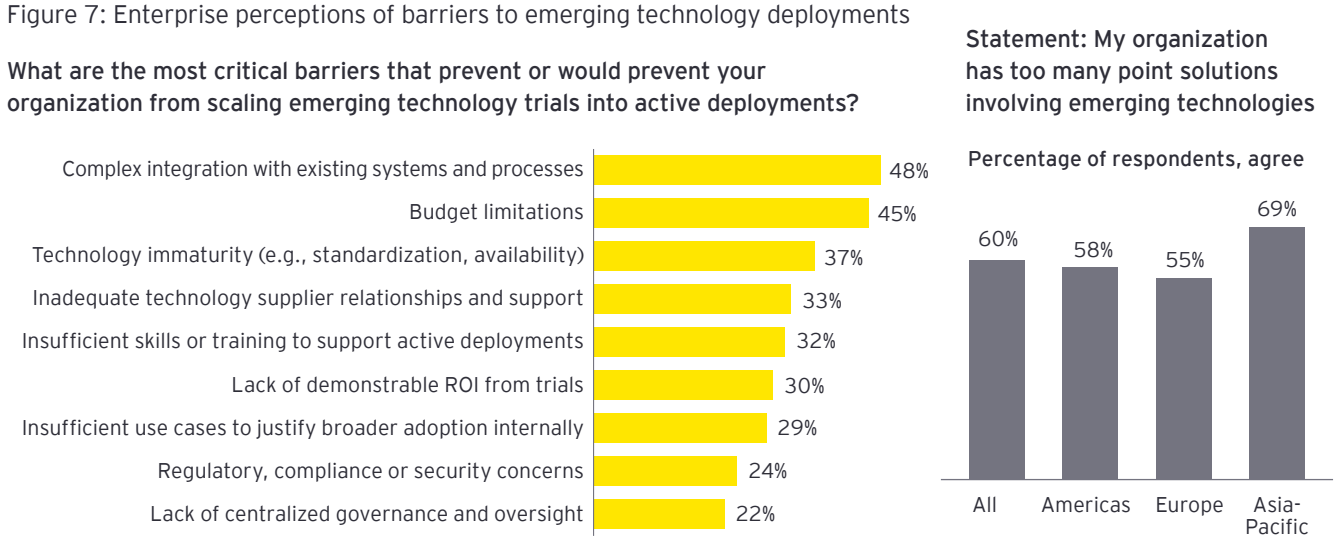


Integration complexity and budget limitations are barriers to scale, while most businesses have too many point solutions.

Enterprises identify several barriers to scaling their trials to active deployments and fully leveraging the benefits of emerging technologies. The top two barriers are seen as being the complexity of integrating emerging technologies with existing systems (48%) and budgetary constraints (46%). Many organizations' continued reliance on legacy systems and the persistence of organizational silos make it difficult to integrate new technologies. Consumer (54%) and automotive organizations (51%) rank highest for technology integration pain points, while government organizations (56%) are the most likely to cite budget limitations.

Looking across the regions, enterprises in Asia-Pacific lead for perceived integration challenges (53%) and inadequate vendor support (36%) but are the least likely to cite ROI concerns (25%). Enterprises in the Americas are more likely to point to insufficient skills as a barrier (37%) and European businesses are the most susceptible to budget limitations (50%). Meanwhile, six in 10 businesses believe they have too many point solutions involving emerging technologies. This overabundance exacerbates integration challenges while also complicating the path to organization-wide deployments.

Figure 7: Enterprise perceptions of barriers to emerging technology deployments

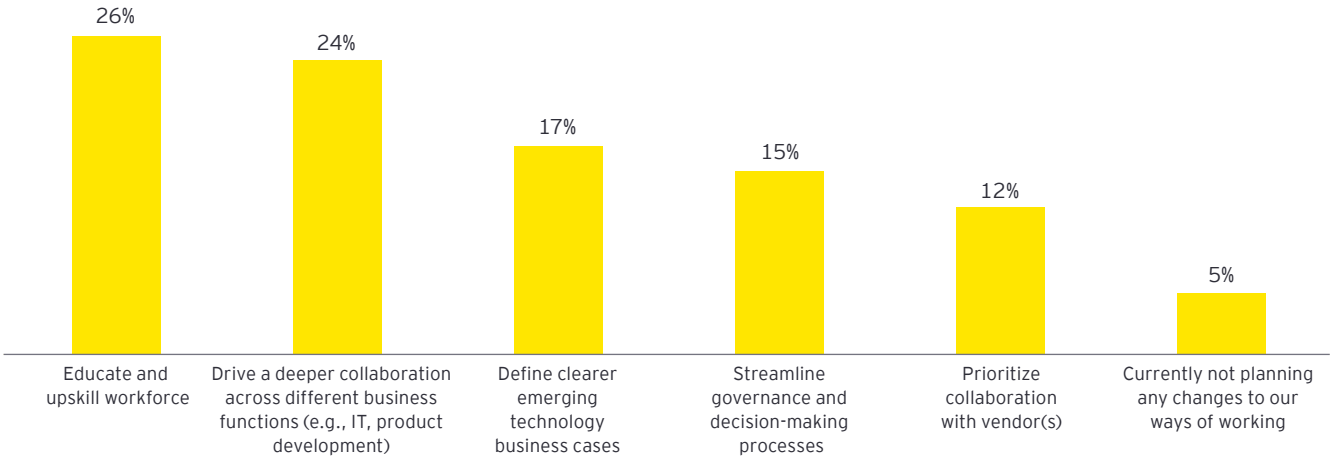


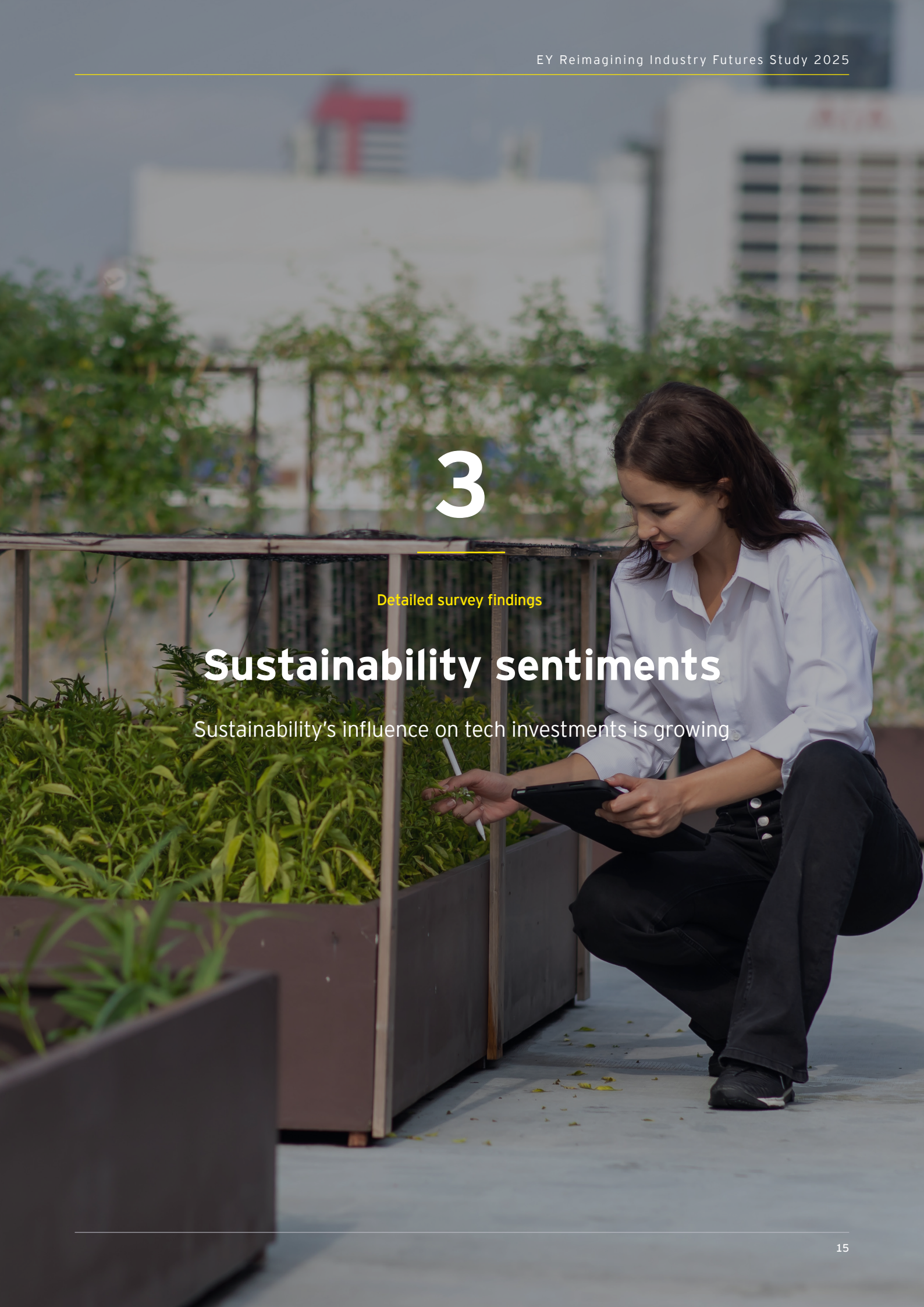
Upskilling and internal collaboration hold the key to faster deployments — with some businesses looking for supplier support too.

The two most important changes that organizations can make to accelerate deployments are employee upskilling and deeper collaboration across business functions. However, the nature of key interventions varies for each sector. For example, some industries face more entrenched departmental silos that hinder internal collaboration, which in turn delays resource allocation and decision-making. The energy and technology sectors identify deeper collaboration as their top action to accelerate scale, scoring 28% and 33% respectively. Meanwhile, government respondents are more likely to point to streamlined governance and decision-making as a key action (23%). On a country level, education and employee upskilling is highly ranked by German respondents (36%), while deeper collaboration between business functions leads as an action among Chinese businesses (31%). Elsewhere, Indian (20%) and Japanese (18%) businesses are most likely to prioritize collaboration with suppliers.

Figure 8: Strategic changes to accelerate deployments

Which of the following will be the most important change your organization will make to accelerate emerging technology deployments over the next 12 months?





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Detailed survey findings

Sustainability sentiments

Sustainability's influence on tech investments is growing

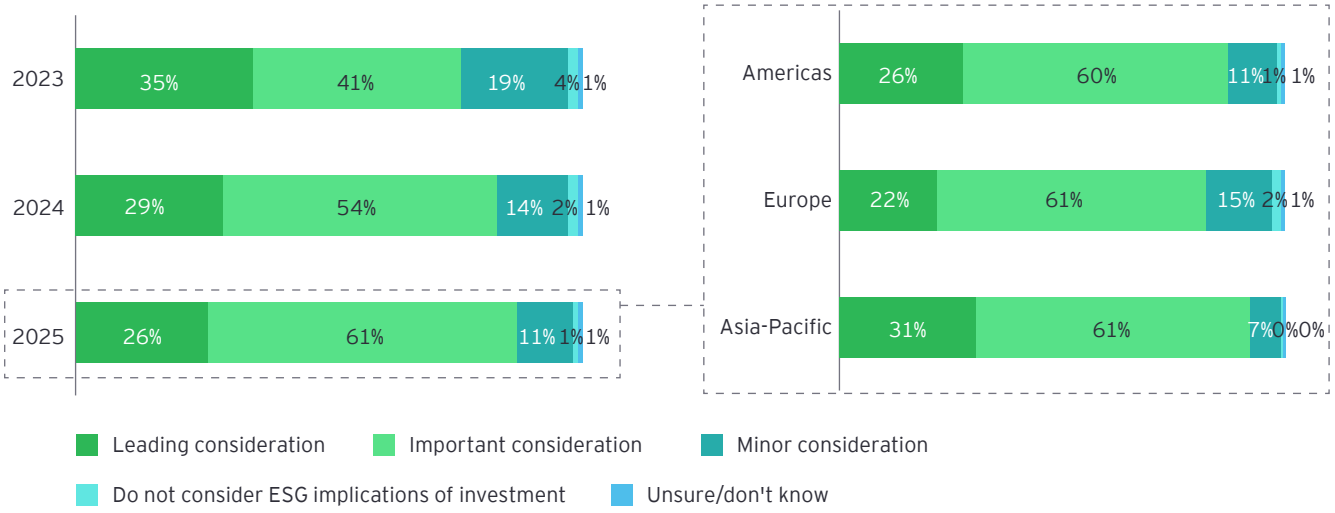
Sustainability continues to grow as a technology investment consideration.

Sustainability is becoming an important driver of emerging technology decisions. The proportion of businesses citing sustainability as a leading or important consideration for investment decisions has risen from 76% in 2023 to 87% in 2025. Breaking down these sentiments by region, Asia-Pacific businesses notably outscore the others, with 93% citing ESG as a leading or important consideration. Meanwhile, among global industries, automotive (91%) and manufacturing (91%) are most open to ESG as an investment consideration. That said, the proportion of businesses citing it as a leading consideration has dropped to 26% from 35% in 2023; some businesses will need to take steps to ensure that ESG considerations do not drop over time.

Figure 9: ESG considerations in emerging tech investment

How do environmental, social, and governance (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



Organizations are becoming more conscious of potential risks posed by new technologies.

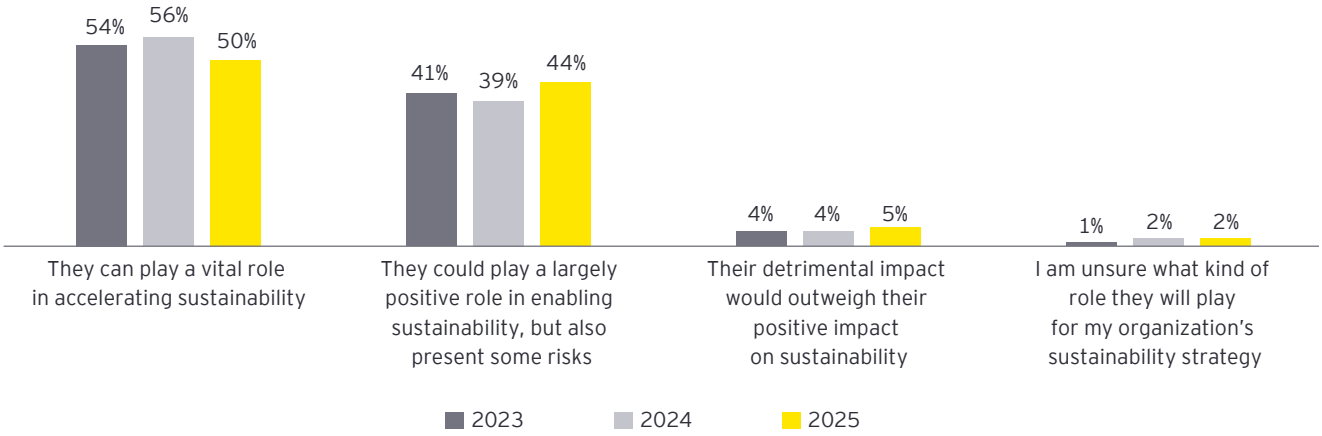
Enterprises clearly recognize the positive role of emerging technologies in improving sustainability, with half seeing their vital role in accelerating sustainability, whether that's through enabling reduced energy consumption directly or providing better tools to measure environmental impact. Despite this, a growing proportion of enterprises — 44%, up from 39% last year — believe that emerging technologies still pose risks. This reflects ambivalent news about emerging technologies and their environmental impact, such as ChatGPT queries requiring 10 times more electricity than a web search.[2] Nevertheless, other reports suggest that AI technologies could help mitigate between 5% and 10% of global greenhouse gas (GHG) emissions by 2030[3] through more effective identification and monitoring of inefficiencies. In light of these mixed signals, businesses are taking an increasingly nuanced view of emerging technologies' role in decarbonization.

[2]"Carbon Emissions from AI and Crypto Are Surging and Tax Policy Can Help," *IMF Blog*, August 15, 2024 - https://www.imf.org/en/Blogs/Articles/2023/07/05/crypto-poses-significant-tax-problems-and-they-could-get-worse
[3]"AI and energy: Will AI help reduce emissions or increase demand? Here's what to know," *World Economic Forum*, July 22, 2024 - https://www.weforum.org/stories/2024/07/generative-ai-energy-emissions/

Figure 10: 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=1636



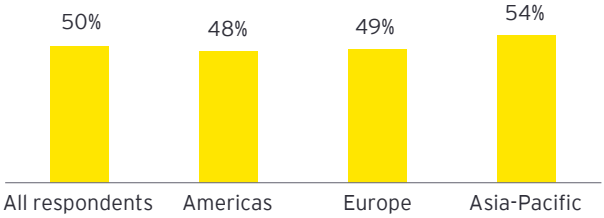
Data center usage is a sustainability blind spot: Half of organizations lack awareness of their energy demands.

Businesses are keen to focus on sustainability as they invest in emerging technologies, but they still have some knowledge gaps to address — with exactly half (50%) believing they lack awareness of their data centers' emissions profiles. This comes at a time when data center GHG emissions — significantly bolstered by AI — are set to double by 2030, putting technology giants under pressure.[4] The prospect of increases in tech companies' scope 3 emissions is already forcing closer collaboration between data center operators and cloud providers.[5] Looking ahead, businesses across sectors recognize the need to pay more attention to IT infrastructure from an ESG perspective, with 73% of them agreeing that data centers require greater consideration as part of their sustainability plans.

Figure 11: View of data center energy demands and the impact on sustainability strategy

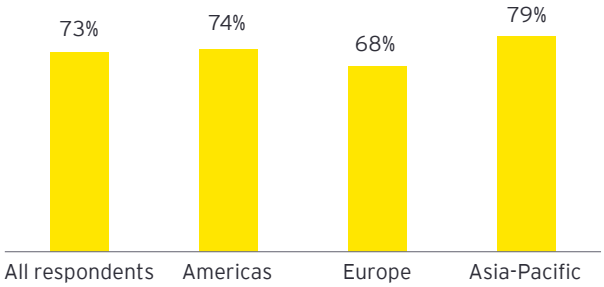
Statement: My organization lacks awareness of the amount of energy consumed by data centers

Percentage of all respondents agree



Statement: Data centers require greater consideration as part of my organization's sustainability agenda

Percentage of all respondents agree



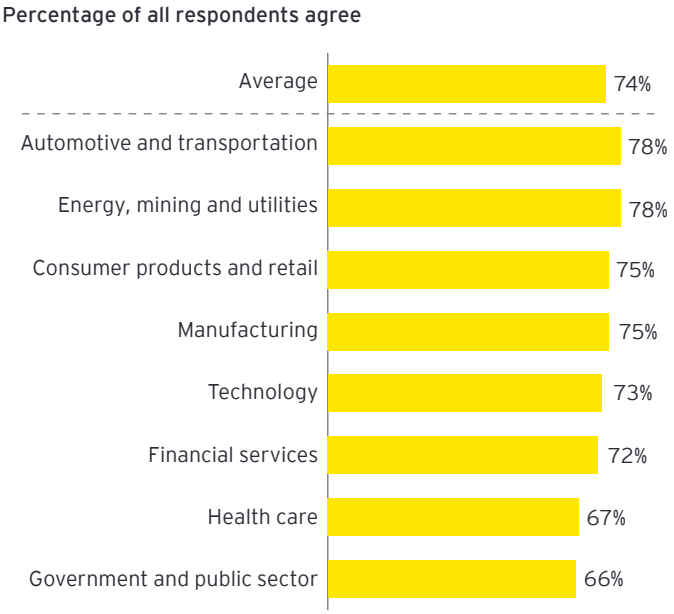
[4] "Data Centers: Rapid Growth Will Test U.S. Tech Sector's Decarbonization Ambitions," *S&P Global*, October 30, 2024 — https://www.spglobal.com/ratings/en/research/articles/241204-data-centers-can-infrastructure-developments-keep-up-with-the-increasing-demand-13341846
[5] "AWS, Digital Realty, Google, Meta, Microsoft and Schneider Electric Call for Supplier Action to Help Decarbonize Digital Infrastructure," *Infrastructure Masons*, July 16, 2024 — https://climateaccord.org/press-releases/call-for-supplier-action-to-help-decarbonize-digital-infrastructure/

Aligning sustainability and technology strategies is essential, with knock-on implications for vendor selection.

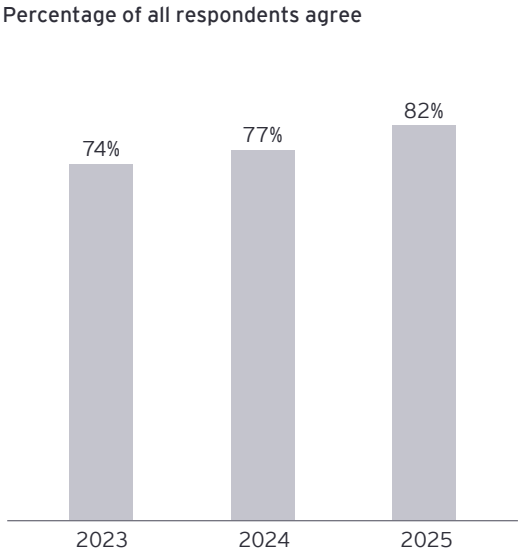
Businesses are increasingly mindful of the need to align their sustainability and technology strategies. This determination is driven by both the high importance of ESG in emerging technology investment decisions and an increasing emphasis on the positive sustainability outcomes that emerging technologies can deliver. This year, 82% of businesses say sustainable principles inform their choice of ICT provider — up from 77% last year — with manufacturing, energy and automotive organizations leading the way. However, recognition of the interrelationship between technology and sustainability is not necessarily reflected in C-suite interactions: Only 4% of organizations currently involve their sustainability leaders (such as Chief Sustainability Officers) as a leading contributor to emerging technology strategy and associated vendor decisions.

Figure 12: Enterprise perceptions of emerging technologies and sustainability

Statement: My organization's sustainability and technology strategies require greater harmonization



Statement: Sustainabile principles inform my organization's choice of technology providers



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Detailed survey findings

GenAI in the spotlight

Productivity gains and cybersecurity are top of mind

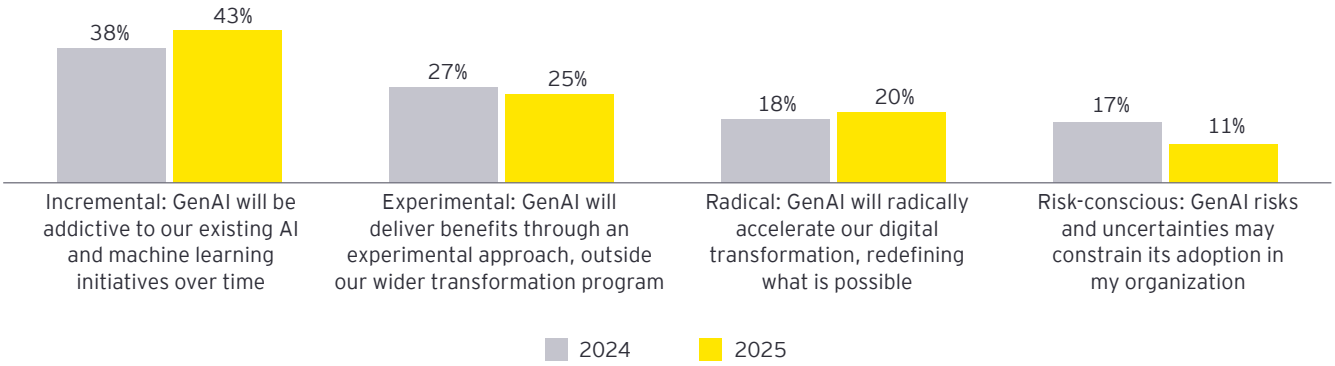
Incremental approaches to GenAI adoption are gaining ground.

Organizations are gaining a clearer perspective on GenAI's impact thanks to its broader implementation across various business areas and continued enterprise investment in the technology. Asked about GenAI's expected impacts, the single biggest group of organizations (43%) believe it will be additive to their existing AI initiatives over time, while the proportion professing themselves to be "risk-conscious" has dropped to 11% from 17% in 2024. This risk-centered mindset is most pronounced in the health care (15%) and government (14%) sectors, both highly regulated industries with greater sensitivity to concerns around data ethics and accountability. Looking across countries, Chinese organizations are the least risk-conscious (3%), in stark contrast to Japanese enterprises (37%).

Figure 13: The perceived impact of GenAI on organizations

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

Percentage of respondents



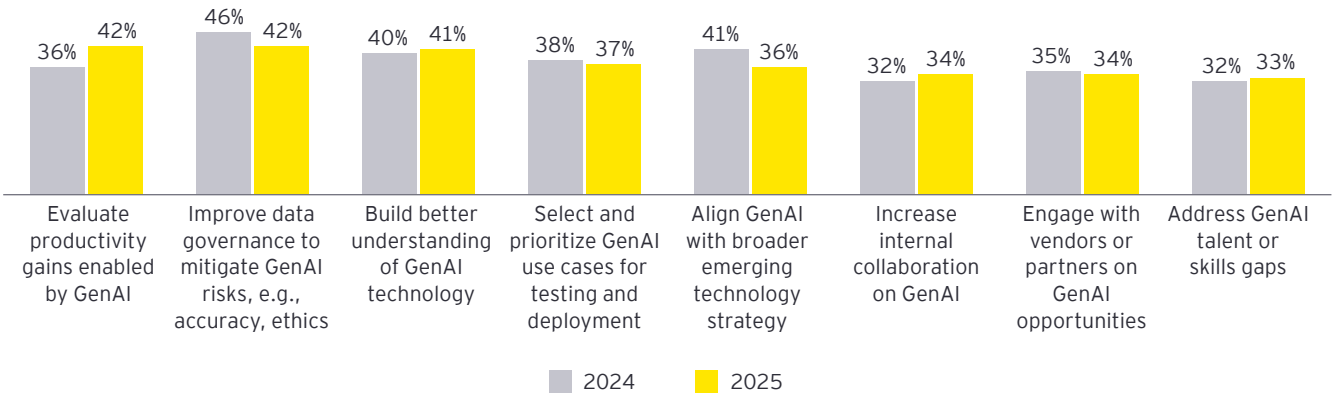
Assessing GenAI's productivity gains has moved into focus.

As GenAI progresses from trials to implementation, priorities concerning this technology are shifting in tandem. Future priorities are led by the need to improve data governance to combat risks around data accuracy and ethics, cited by 46% of businesses, and by the need to evaluate productivity gains. Data governance scores highest among manufacturers (46%), while capturing productivity gains ranks top among our respondents in the consumer (48%) and energy (47%) sectors. As ICT providers consider AI-as-a-service (AIaaS) for enterprise customers, they should ensure they can communicate business outcomes that speak to these needs. Meanwhile, increasing internal collaboration is cited by 34% of organizations, now ranking on par with better engagement with external suppliers.

Figure 14: Future GenAI priorities for industries

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

Percentage of respondents with GenAI investment intentions



Various GenAI use cases are in play for enterprises, led by software development, customer service and employee training or collaboration.

Across all sectors, the most favored GenAI use cases are software development, customer service and employee training or collaboration. However, there are significant variations at the industry level, with financial services, health care and manufacturing respondents each rating predictive or real-time operations and supply chain management as top-five GenAI use cases. This suggests an important role for GenAI in applications traditionally viewed as priority IoT domains. GenAI's potential to support efficiency and sustainability is also top of mind among energy and financial services organizations. Legal and financial services rank lower as a domain where GenAI can play a role for most sectors, except for technology companies.

Figure 15: Top five GenAI applications by sector

Which are or will be the most significant GenAI application scenarios for your organization?

	Automotive	Consumer	Energy	Financial services	Government	Health care	Manufacturing	Technology
Software development and testing	1	2	1	2	2		2	1
Customer sales and service support	4	1	3				1	
Employee training and collaboration	2	3			5	1	4	4
Product and service design			4					3
Content creation and management	5	4		3	4			2
Predictive or real time operations	3			1		4	5	
Security and fraud management		5			3			
Personalized products and services			5		1	3		
Supply chain management				5		5	3	
Energy efficiency and sustainability			2	4				
Critical infrastructure monitoring						2		
Legal and financial services								5

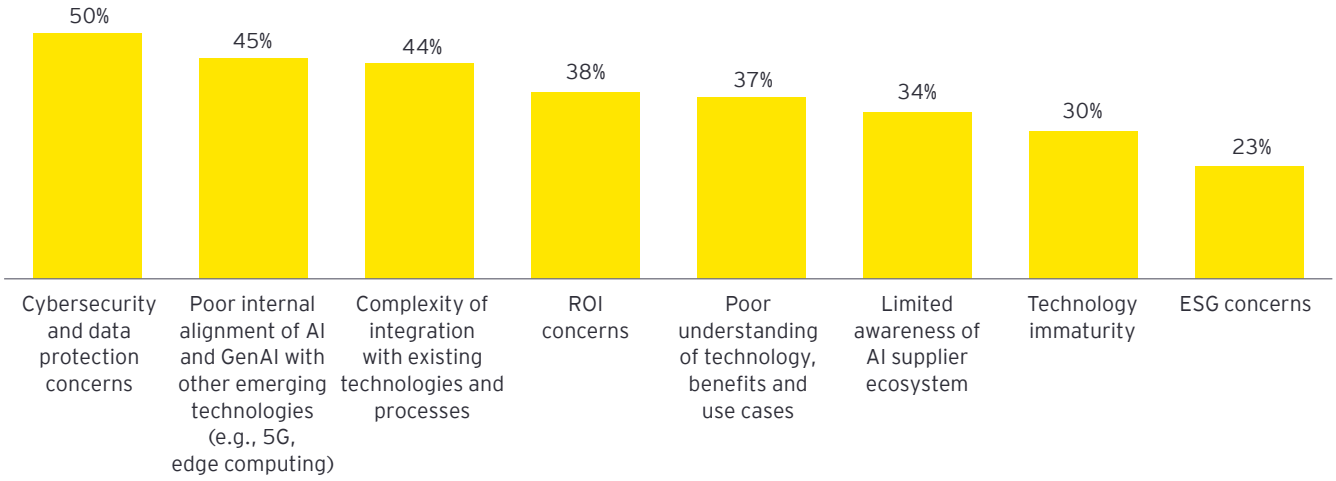
Use case rank 1 2 3 4 5

Cybersecurity and technology alignment concerns are key obstacles to GenAI adoption.

Despite the promising outlook for GenAI and the high level of enterprise acceptance, there are several challenges to address before the promise can be converted into active deployments. Although there is less enterprise focus on GenAI risks compared with last year, cybersecurity vulnerabilities (50%) still lead as challenges organizations face, with government organizations (64%) most likely to cite this. Another critical issue is poor internal alignment of AI and GenAI with other emerging technologies (45%) as well as their integration with existing systems (44%). Poor internal alignment with other technologies is most prevalent in retail (52%).

Figure 16: GenAI challenges for enterprises

Which are the most critical challenges informing your organization's view of GenAI?



5

Detailed survey findings

New directions in digital connectivity

Use case needs vary by vertical as new mobile technologies and business models come to the fore

5G and IoT use case needs vary widely by vertical industry, underlining that service providers should adopt sector-focused strategies.

When asked about their preferred 5G and IoT use cases, businesses cite a wide range of applications. Across all sectors, systems and process optimization (40%) leads as an IoT application, while remote working, training and collaboration (38%) leads as a 5G-based IoT use case. However, there is considerable variation between sectors on preferred 5G use cases. Remote training and collaboration lead the way among energy and financial services respondents, while critical infrastructure and control ranks highest for automotive and manufacturing respondents, and systems optimization is the dominant 5G use case for consumer and government organizations. At a time when 25% of telcos are prioritizing cross-vertical IoT solutions – often in favor of vertical-specific solutions – they must be careful not to lose sight of how important it is to engage enterprises in sector-specific dialogue.

Figure 17: Top five 5G-IoT applications by sector

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

	Automotive	Consumer	Energy	Financial services	Government	Health care	Manufacturing	Technology
Customer insights/feedback	5				5			
Personalized services		2			4	3		2
Supply chain management	4					5	5	
Critical infrastructure control	1			2	3		1	
Predictive operations	3		3	4		4		1
Systems/process optimization		1	2	3	1		3	4
VR and AR		5	5					
Remote working/collaboration	2	4	1	1		2	2	5
Energy efficiency/sustainability		3	4	5	2		4	3
Industrial automation						1		

Use case rank 1 2 3 4 5

AI is viewed as a clear complement to digital connectivity – but edge computing is declining in perceived importance.

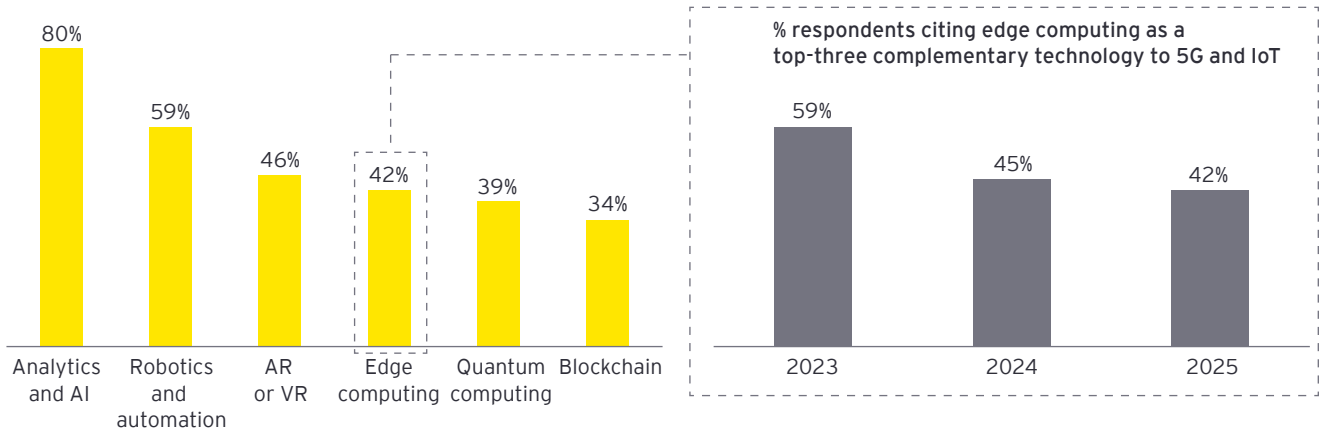
Enterprises are aware that integrating 5G with other emerging technologies will enhance process automation through improved business insights and decision-making. As a result, most respondents recognize AI and automation as highly complementary to their 5G and IoT initiatives. However, edge computing's positive relationship to other emerging technologies is less clear than before, with only 42% of businesses deeming it complementary to digital connectivity. Given edge computing's symbiotic relationship with both 5G and AI as a low latency enabler, businesses cannot afford to view it in isolation from other emerging technologies.

Preferences for emerging technologies also vary among sectors: For example, technology respondents are the most responsive to AI (86%); automotive respondents are most likely to cite automation (66%); energy and utility sector respondents are most likely to cite AR or VR (53%); and consumer goods and retail companies score highest for edge computing (45%).

Figure 18: Complementary emerging technologies for 5G and IoT

Which of the following emerging technologies are most complementary to your organization's 5G and IoT strategy?

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



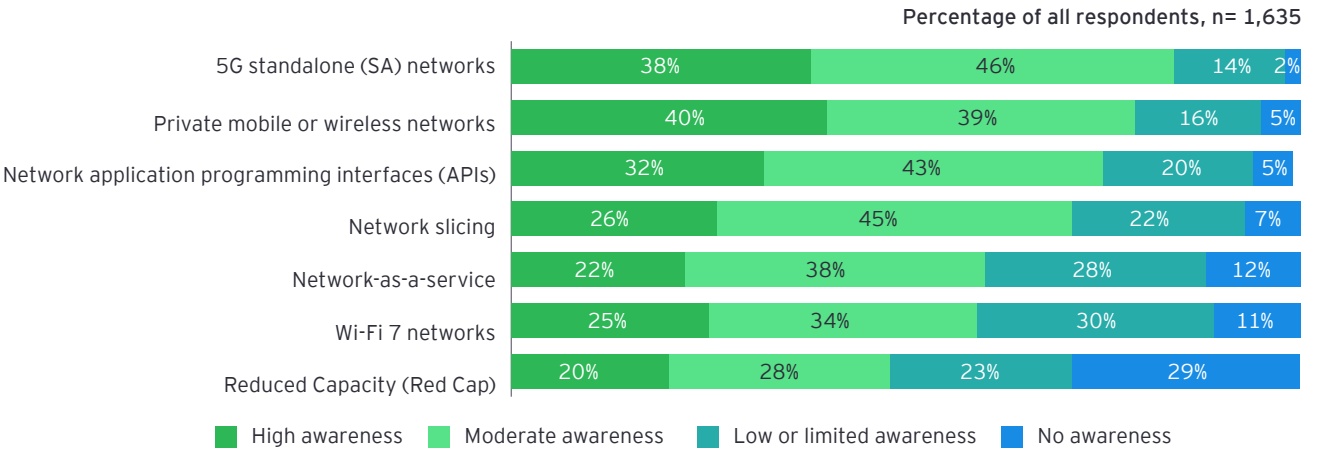
Businesses have some awareness of the latest mobile technology and business model variants — but more education is essential.

As enterprises continue to assess the optimal use cases for 5G, the reality for ICT providers is that the next phase of successful 5G monetization will depend on a new wave of mobile infrastructure, deployment scenarios and business models. Deployment of 5G SA networks is increasing in various regions of the world — with 151 operators now investing in the technology[6] — and 84% of enterprises globally have high or moderate awareness of it, ahead of private networks at 79%. The level of familiarity with network application programming interfaces (APIs) is also promising, at 75%.

However, knowledge of network slicing (71% with high or moderate awareness) is less encouraging, given it has been communicated as a unique selling point of 5G for some years. Other concepts and technologies, such as network-as-a-service, Wi-Fi 7 technology and 5G Red Cap rank lower in terms of awareness, with 40% or more of respondents claiming low or no awareness of each of these. Better education from service providers is essential, especially given that 92% of telco CEOs see network-as-a-service business models as a critical future growth driver for their organization.

Figure 19: Enterprise awareness of new mobile technologies and business models

How do you rate your organization's awareness of technology and business model variants relating to wireless technologies?



[6] "GSA, 5G in 2024: the year in review," *Global mobile Suppliers Association (GSA),* December 3, 2024 - https://gsacom.com/paper/gsa-2024-a-year-in-review/

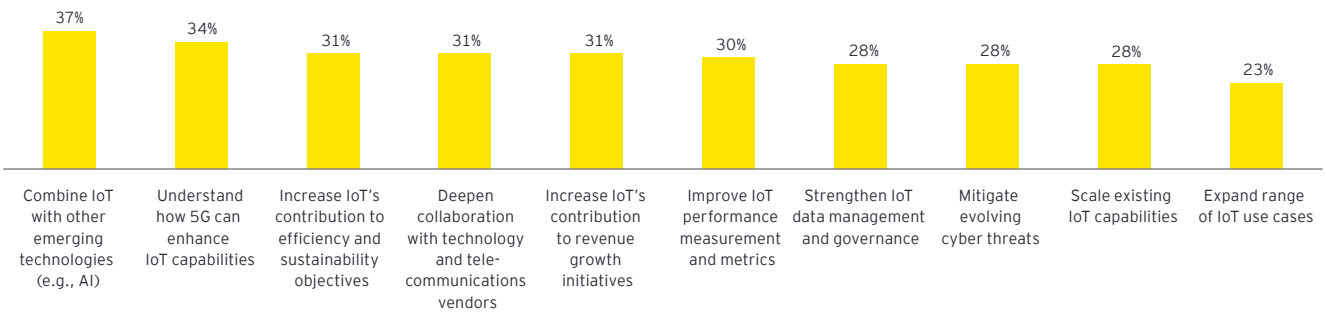
Combining IoT with other technologies leads as a future priority, while IoT's contribution to revenue growth and mitigating cyber threats is a growing focus.

As enterprises plan their IoT programs, bringing IoT together with other emerging technologies such as AI remains their most important priority, cited by 37% of organizations this year. As 5G availability and quality improves, understanding how 5G can enhance IoT capabilities is the second-highest priority (34%), with respondents from the manufacturing sector over-indexing here at a time when their exposure to 5G is on the rise. Increasing IoT's contribution to revenue growth is a further top-five priority in 2025, cited by 31% of respondents, up from 28% in 2024. In addition, mitigation of evolving cyber threats affecting IoT has also risen as a concern, cited by 28% of respondents, up from 24% last year. An analysis by sector shows that government (36%) and financial services (35%) organizations are most sensitive to this as a priority, at a time when IoT malware attacks are rising significantly.[7]

Figure 20: Future IoT priorities for enterprises

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

Percentage of respondents, n=1329 (enterprises currently investing or planning to invest in IoT)



[7] "IoT Device Traffic Up 18% as Malware Attacks Surge 400%," *Infosecurity Magazine*, November 24, 2024 - https://www.infosecurity-magazine.com/news/iot-device-traffic-malware-attacks/

6

Detailed survey findings

Desired vendor attributes

Business outcomes and ecosystems expertise are in demand

Security is an essential vendor attribute sought by enterprises — who also increasingly value suppliers' understanding of their broader needs.

As was the case last year, security capabilities and credentials rank strongly as current and future attributes that businesses seek in their ICT suppliers. Security as a current attribute is most highly valued by government and automotive respondents. And although speed is the leading current attribute, it ranks further back as a future attribute. However, one trait that is becoming more prominent year-on-year is vendor understanding of enterprises' broader business or industry needs. This now ranks third as a current attribute and leads as a future attribute. Professional services capabilities are also increasingly in focus; among retailers, this ranks at the top as a future attribute.

Figure 21: Top five in-demand vendor attributes, now and in the future

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

2024	2025	
2	1	Speed of deployment and execution
1	2	Security capabilities and credentials
6	3	Understanding of broader business or industry needs
7	4	Professional services capabilities
5	5	Competitive pricing or pricing model

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

2024	2025	
9	1	Understanding of broader business or industry needs
2	2	Security capabilities and credentials
6	3	Professional services capabilities
3	4	Ability to co-create new products and services
4	5	Sustainability capabilities and credentials

The contest for customer mindshare is split between different types of ICT providers.

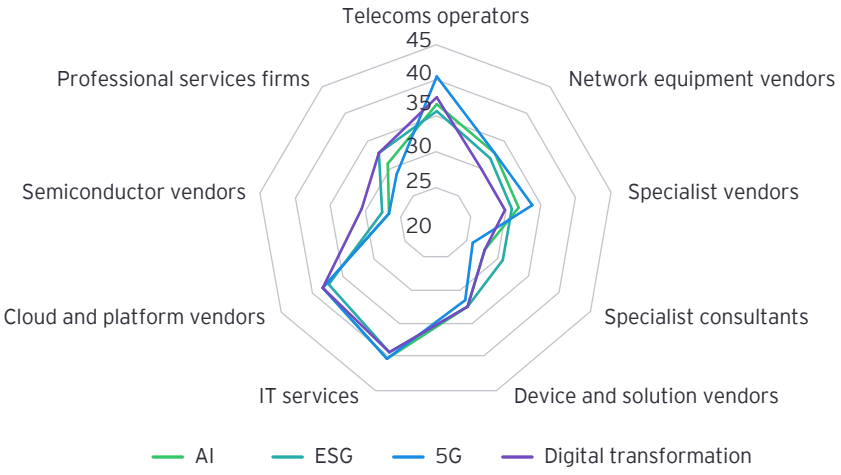
Building and sustaining expertise in emerging technologies and digital transformation is vital for ICT providers as they look to build more meaningful relationships with enterprise customers. However, enterprises are split on which types of service provider they trust most as technology and business transformation experts. Telcos, IT services providers and cloud providers rank as top-three experts in AI, ESG, digital transformation and 5G capabilities, with IT services ranking slightly ahead in all domains except for 5G, where telcos lead.

At a regional level, there are interesting variations in perceptions of expertise, with Asia-Pacific enterprises most likely to favor hyper-scalers as digital transformation experts (43%) and European businesses have most trust in IT services providers as 5G experts (40%). And an analysis of the responses by sector also reveals some interesting differences. For example, IT services providers are most likely to be perceived as digital transformation experts by government (47%) and automotive (45%) respondents. However, energy respondents (43%) view telcos as the most trusted transformation experts.

Figure 22: Enterprise perceptions of ICT supplier expertise

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

% all respondents

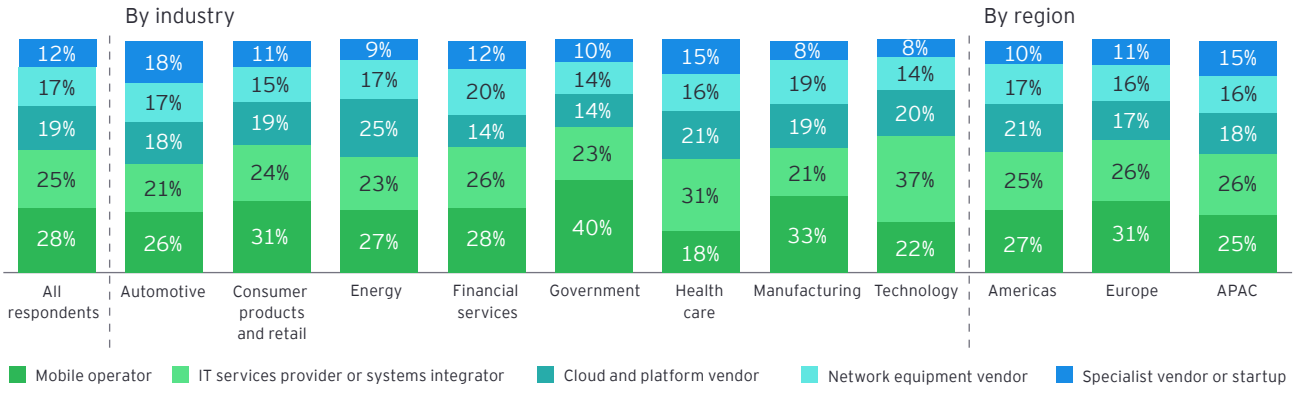


Telcos and IT service providers lead as private network providers, although preferences vary by sector.

Telcos (28%) and IT providers (25%) rank ahead of other types of ICT suppliers as preferred vendors of private mobile network capabilities. However, network equipment vendors — who were among the first suppliers to provide private networks to enterprises — rank fourth (17%) behind hyper-scalers, many of whom only began offering solutions in the past two years. The preferences voiced by some key industry verticals underline the strong position telcos enjoy in this market: Manufacturing is the leading sector for private network deployments worldwide — accounting for 20% of trials and commercial deployments[8] — and 33% of respondents in this sector prefer mobile operators. Meanwhile, use cases in smart cities and defense account for more than one in 10 deployments worldwide, and 40% of government respondents prefer telcos. That said, technology businesses (37%) and health care organizations (31%) show more preference for IT services providers.

Figure 23: Preferred vendor for private networks

Which of the following would be your preferred type of vendor for private mobile network deployment?



[8] "Private Mobile Networks: Summary Report," *GSA*, September 2024 https://gsacom.com/paper/private-mobile-networks-september-2024; EY Analysis.

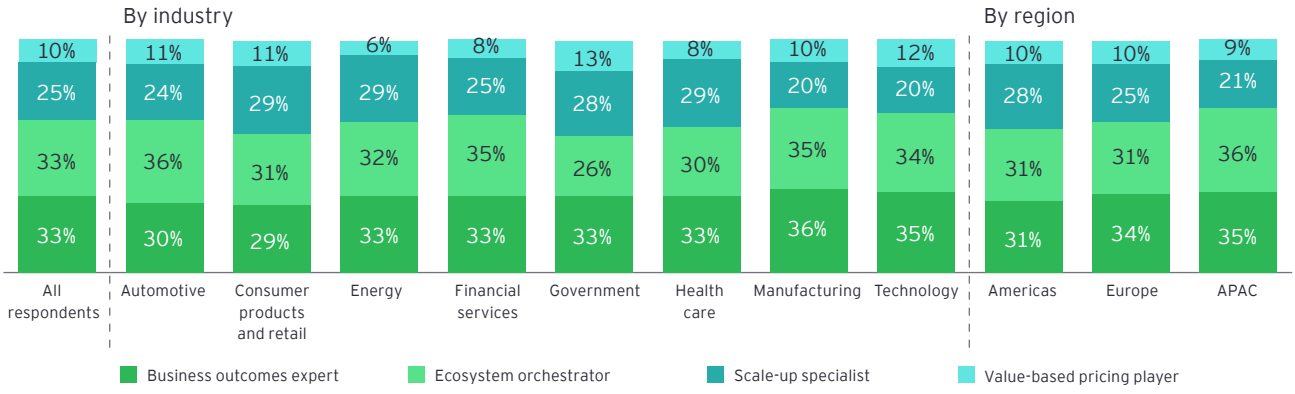
The ideal ICT supplier delivers business outcomes expertise combined with excellence in orchestrating partners.

No single type of vendor dominates in terms of trust or preference: Even the least-favored vendors for 5G and AI are still well-regarded by more than one in four enterprises. In light of this, it's vital that ICT suppliers think deeply about the defining qualities that can help them thrive in a congested supplier landscape. When organizations are asked to cite the characteristics of their ideal vendor, some key competencies emerge: The ability to provide measurable business outcomes ranks first, alongside the ability to provide access to a robust partner ecosystem (both on 33%). The ability to scale and integrate different technologies and platforms is also important, cited by one in four.

These distinctive attributes all underline enterprise demands that emerge elsewhere in the survey. Indeed, businesses will prioritize suppliers who fit this paradigm, with 75% of organizations prepared to focus on vendors who deliver business outcomes as partners and 71% willing to prioritize vendors who can effectively orchestrate other suppliers and partners.

Figure 24: Enterprise perceptions of the ideal ICT vendor

Which of the following best describes your organization's view of the ideal emerging technologies vendor?



7

Detailed survey findings

Evolving vendor relationships

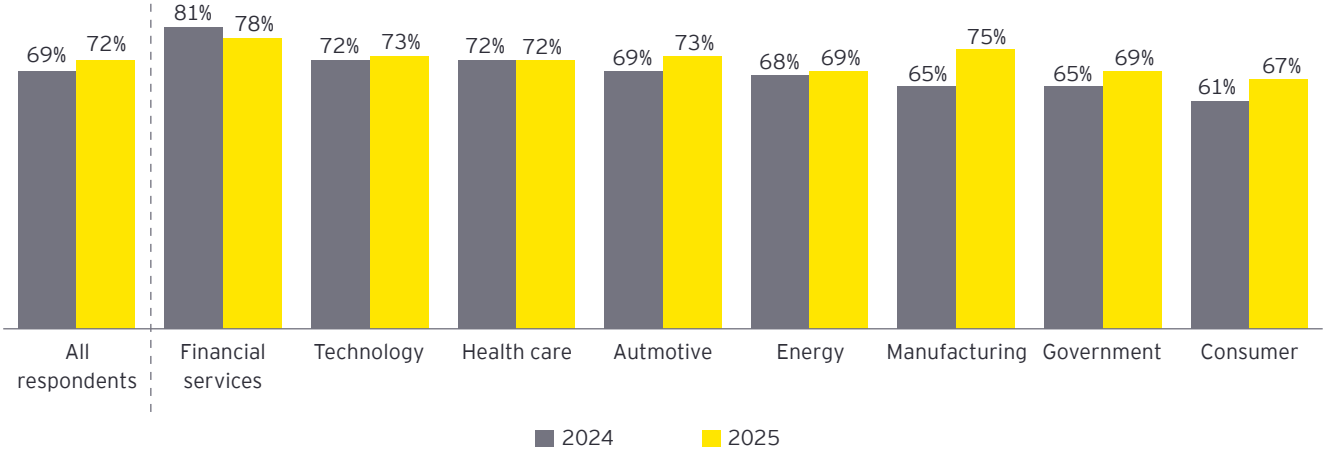
The supplier landscape and value proposition are under scrutiny

Participation in collaborative ecosystems is growing, especially among manufacturers.

As businesses consider how best to gain access to new technologies, collaborative ecosystems are increasingly finding favor. Almost three-quarters (72%) of enterprises collaborate with other organizations as part of an ecosystem, up from 69% in 2024, with Asia-Pacific organizations (77%) the most receptive to this approach. At the industry level, financial services businesses (78%) are the leading ecosystem participants, while manufacturers rank second, with 75% engaging in collaborative ecosystems, up sharply from 65% in 2024 and 55% in 2023. Access to new skills leads as a rationale for ecosystem participation (45%), with government (51%) and automotive (49%) respondents most likely to cite this attribute. The prospect of vertical partnerships with businesses outside their sector ranks second (39%), with health care companies (44%) the most likely to highlight this.

Figure 25: Enterprise participation and drivers in ecosystem collaboration

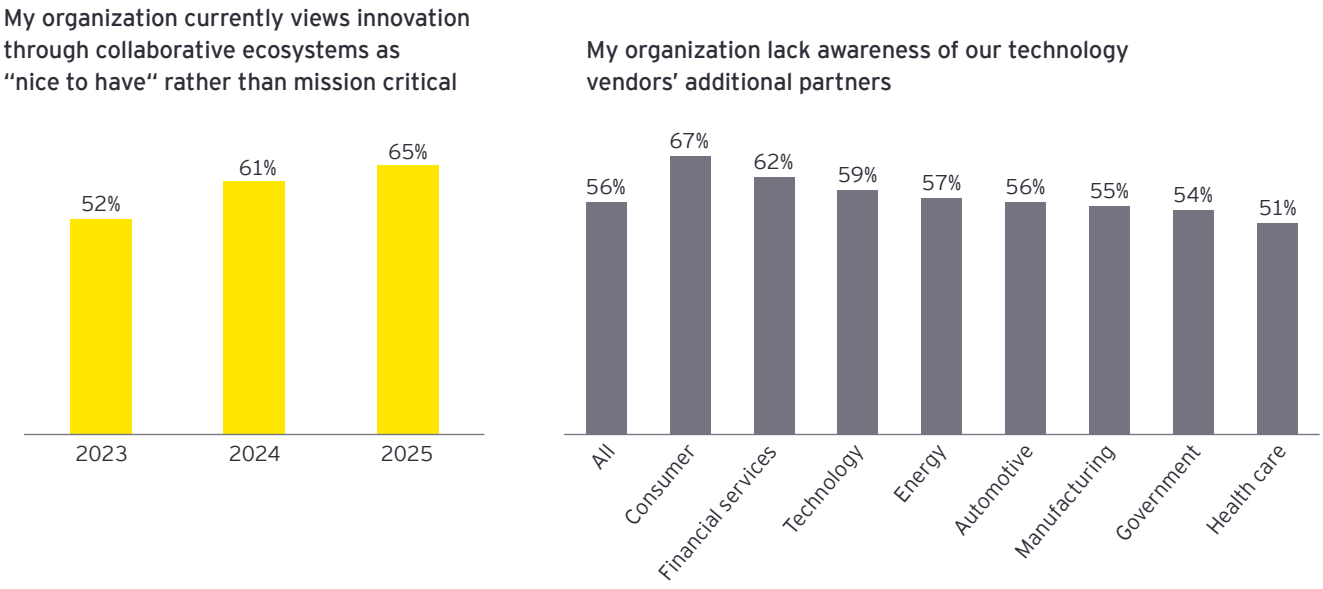
Does your organization collaborate with other organizations as part of an ecosystem?



However, enterprises are failing to take full advantage of ecosystems.

Although most businesses are receptive to external collaboration — 75% say open innovation principles are widely accepted in their organization, up from 71% in 2024 — there are signs that most still find it hard to realize the full benefits of ecosystems. Almost two-thirds of respondents (65%) believe their organizations view ecosystem collaboration as "nice to have" rather than mission-critical, a sentiment that's rising year-on-year. Meanwhile, ICT providers are not communicating their ecosystem capabilities, since 56% of businesses lack awareness of their technology suppliers' additional partners. This combination of low prioritization and low awareness potentially reduces the positive outcomes of ecosystem collaboration, despite growing levels of enterprise participation.

Figure 26: Enterprise attitudes to collaborative ecosystems



Businesses also lack understanding of the supplier landscape more broadly. This complicates vendor selection, particularly in digital connectivity.

Both enterprises and their ICT suppliers need to focus more on ecosystem collaboration to raise their levels of participation — and in turn boost the value they can create. But businesses say they face more fundamental challenges as they engage with vendors. A growing proportion (73%) voice a need to understand the changing supplier landscape better, led by Asia-Pacific businesses (78%). This reflects a supplier environment in which established vendors continue to diversify their service portfolios while newcomers with specific capabilities are also entering the market, adding to competitive intensity. The result is that enterprises feel they struggle to make effective choices when selecting suppliers.

Interestingly, this challenge appears to be diminishing with regard to vendors providing GenAI solutions: 42% of enterprises claim they are struggling to identify the right vendor, down from 50% last year. But choosing suppliers is increasingly a challenge in digital connectivity, and specifically in 5G, where 64% of organizations — up from 58% last year — struggle to identify the best supplier, led by manufacturing organizations (69%). While 5G has been commercially available for five years, the growing range of service provider and deployment options — including private wireless — has the potential to confuse businesses.

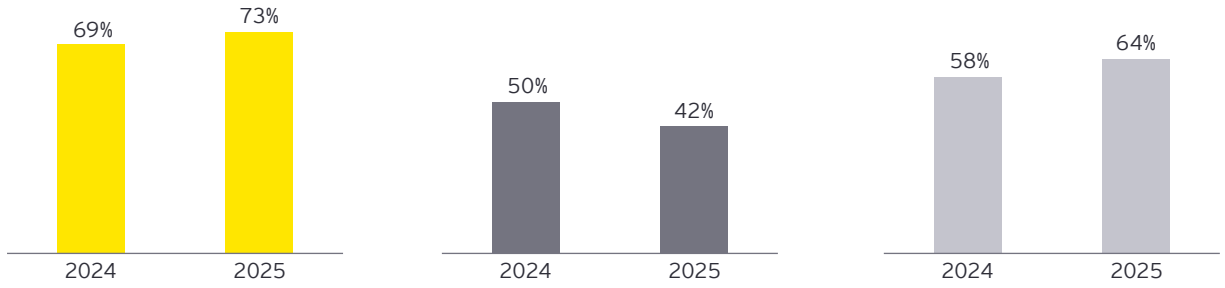
Figure 27: Enterprise attitudes to supplier selection

My organization requires greater understanding of the changing supplier landscape

My organization is struggling to identify the right type of vendor to support our GenAI needs

My organization is struggling to identify the right type of vendor to address our 5G strategy

Percentage of respondents, agree



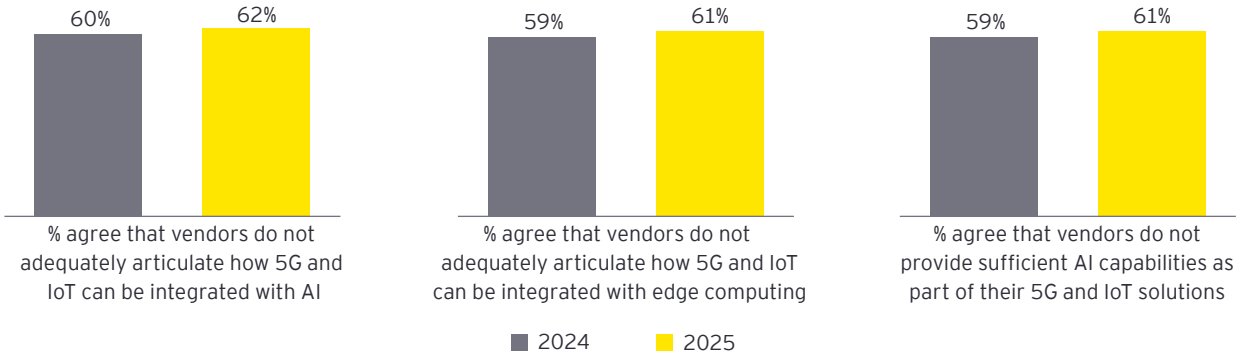
Poor presentation and articulation of 5G and IoT — and how they can be combined with other technologies — is a growing source of frustration.

It's not just a fast-changing supplier landscape that's making it difficult for organizations to assess digital connectivity expertise. Four in five businesses are looking for a better understanding of how to combine different emerging technologies to create value. But when enterprises assess the available 5G and IoT service portfolios, they do not feel that emerging technologies' adjacencies are well addressed. More than six in 10 believe that vendors don't provide sufficient AI capabilities as part of their 5G and IoT solutions (61%). A similar proportion also feel that vendors do not clarify how digital connectivity can be combined with AI (62%) or edge computing (61%). This underlines how enterprises see new forms of connectivity and computing as fundamentally complementary — and want service providers to do more to help them realize their combined benefits.

Figure 28: Enterprise attitudes to vendor service portfolios

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

Percentage of respondents, agree

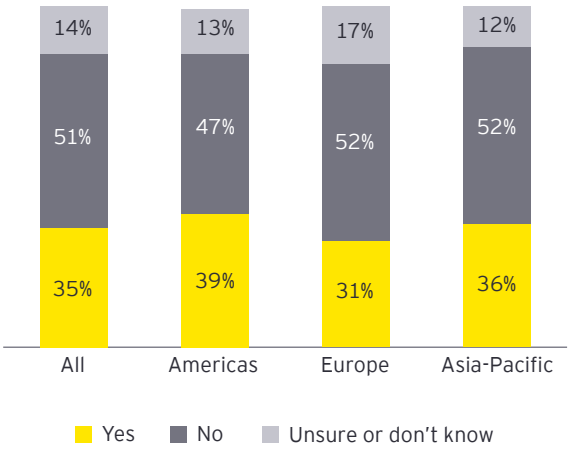


Appetite for supplier consolidation means service providers must improve their mindshare with customers.

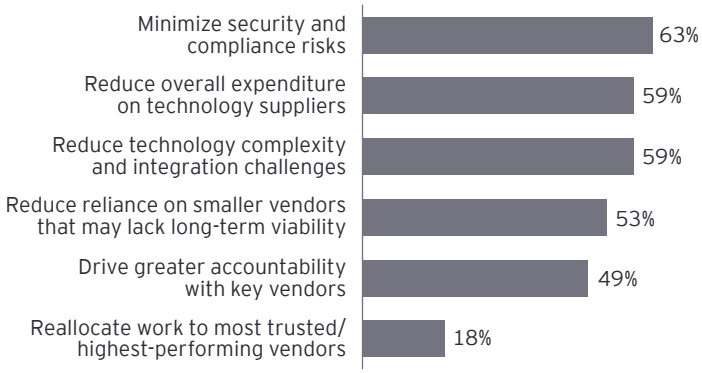
Beyond being a source of frustration, enterprises' challenges around supplier awareness and satisfaction with service portfolios could ultimately feed into decisions to consolidate their vendor base. More than a third (35%) of businesses are planning to reduce their pool of suppliers, led by those in the Americas (39%). At the industry level, manufacturing (43%) and financial services organizations (42%) over-index on this intention. The top three rationales for consolidation are containing security and compliance risks (63%), cost savings (59%), and minimizing technology complexity (also 59%). This consolidation drive favors more established suppliers, with half of respondents also anxious about the financial viability of smaller suppliers. In light of this, ICT suppliers should recognize that differential capabilities — from sector-specific expertise through to partner relationships and security credentials — are essential tools to ensure they remain in pole position with their customers.

Figure 29: Enterprise attitudes to vendor consolidation

Is your organization planning to consolidate ICT vendors in the next 12 months?



What are the main factors driving your organization's plans to consolidate ICT vendors?

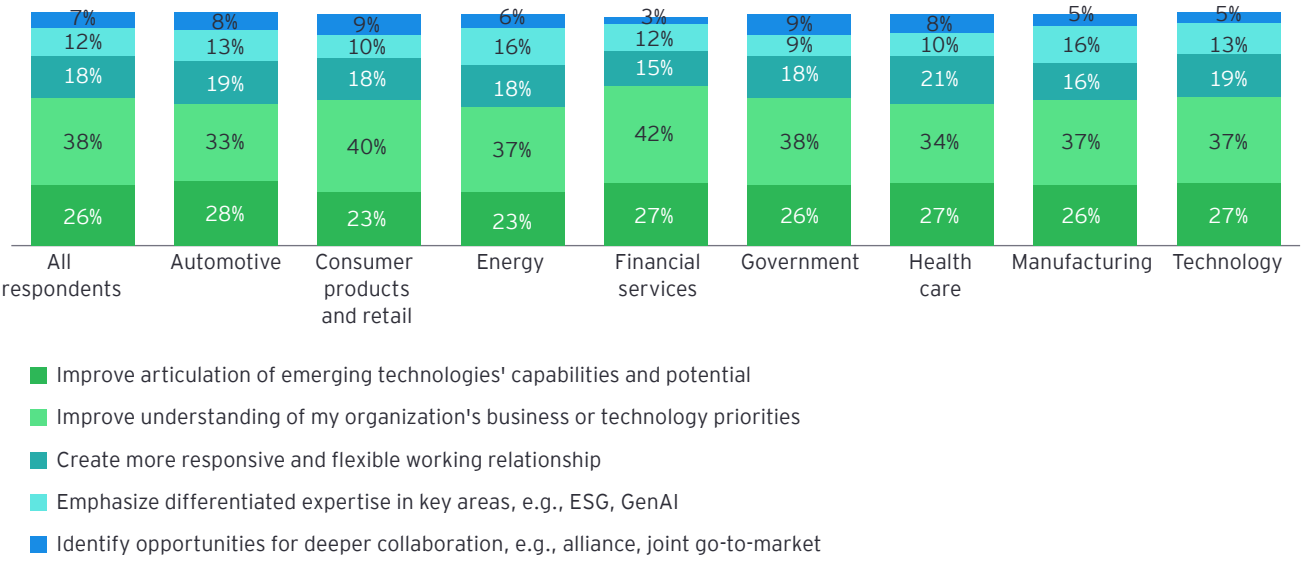


Greater customer centricity and better articulation of new technologies are the keys to driving growth.

ICT providers are under growing pressure to develop closer relationships with B2B customers, particularly as new technology cycles, widening supplier landscapes and intensifying pressures on budgets add new dimensions to the traditional supplier/buyer dynamics. As enterprises lean more heavily on their technology and connectivity providers, they have key catalysts in mind that could help to enhance these relationships. In our respondents' view, the most important improvement that ICT suppliers can make is to improve their understanding of their customers (38%), with better articulation of new technologies ranking second (26%). While sentiments across sectors are broadly in line with 2024, there are some significant fluctuations within various verticals. For example, automotive, energy and manufacturing respondents are proportionately more likely to cite differentiated expertise in ESG and GenAI (14% on average) compared with last year (9% on average), while health care respondents are much more likely to highlight improved articulation of emerging technology capabilities (27%) compared with the previous year (20%).

Figure 30: Enterprises' most desired changes by ICT suppliers to improve the relationship

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



Next steps for ICT providers

While enterprises' investment in emerging technologies is continuing to rise, they're finding it hard to progress from trials to deployment — and confused by a complex and varied vendor marketplace. To strengthen their offer to business customers, ICT suppliers should take the following steps:

1.

Define yourself by the quality of your business outcomes

Enterprises value business outcomes above technology performance and cost benefits alone. So, as a supplier, take care to quantify the positive business outcomes your solutions deliver, while showing an understanding of the sector, sub-sector and the key performance indicators your customers value most. This may include sharing examples of how you have leveraged new technologies to improve your own systems, processes and performance, helping to position you as a business partner, not just a technology enabler.

2.

Engage with a broader range of enterprise buyers and influencers

A range of leadership perspectives now inform digital infrastructure ambitions, with implications for vendor selection as well. Build the right relationships with changing buyer groups as new demands relating to security or productivity complement long-standing customer needs around growth and efficiency. The ability to pre-empt and respond to a more composite set of customer demands should also feed into your solution development, maximizing the relevance of your offerings to different parts of the business.

3.

Educate customers about new business models and technology combinations

While organizations are increasing their use of frontier technologies, many are still unaware of the benefits of new technology variants — from Wi-Fi 7 through to network slicing. Demystify these new capabilities by highlighting their potential to unlock additional value. At the same time, recognize customers' holistic view of various frontier technologies and how they interact with each other. By articulating the combined impact of connectivity, computing and AI, you can help enterprise customers unlock a new wave of benefits that take advantage of a range of hardware and software investments.

4. Prioritize scalability, security and sustainability in your value proposition

Enterprises highlight several needs that inform their choice of suppliers. Security is an essential vendor attribute, while more than two-thirds of organizations recognize that converting technology trials into pervasive organizational deployments is challenging. Sustainability is also an evolving concern, with businesses alert to the potentially ambivalent impact of emerging technologies on their ESG agenda. Your value proposition and engagement with enterprises should speak to these informing principles.

5. Focus on key verticals and ecosystem partners

Enterprises see ecosystem collaboration as a route to access new skills and capabilities, but lack understanding of changing supplier ecosystems, with many under pressure to consolidate vendors. In response, prioritize your ecosystem strategy and double down on key partners, adjusting your operating model and go-to-market strategy accordingly. Isolate and regularly revisit the verticals you wish to serve, while ensuring you differentiate clearly between your sector-agnostic and vertical-specific capabilities.

About this study

The EY Reimagining Industry Futures Study 2025, the sixth wave of this annual survey, is based on an online survey of 1,635 enterprises conducted in November 2024. 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 emerging technology initiatives feature in the survey results.

The questions explored enterprise behaviors, attitudes and intentions toward emerging technologies, including artificial intelligence (AI), the Internet of Things (IoT) and 5G-based IoT. Themes examined in the study include:

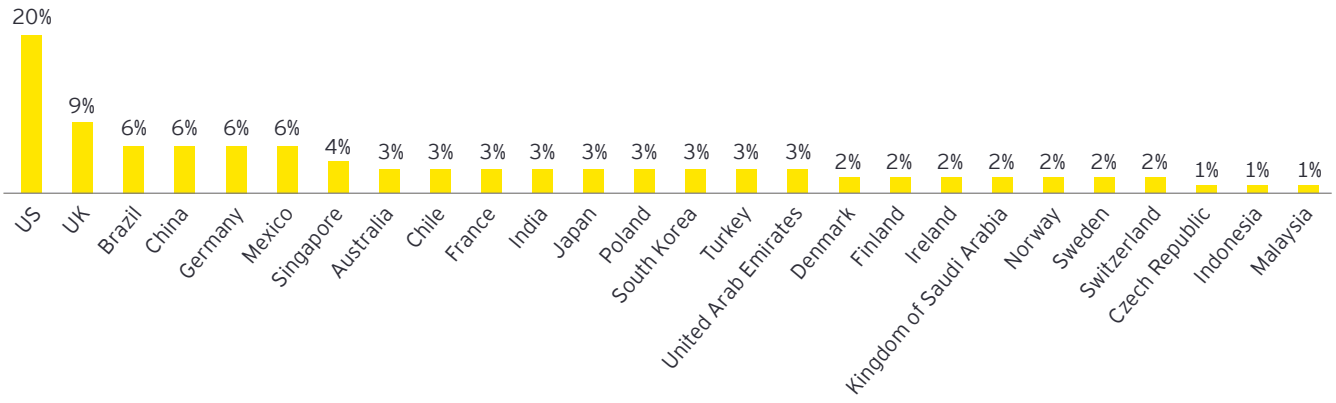
- Enterprise emerging technology spending intentions and adoption
- Sustainability benefits of emerging technologies
- Enterprise AI and 5G-IoT use cases, priorities and challenges
- Enterprise perceptions of ICT supplier capabilities and competencies
- Enterprise engagement with supplier ecosystems.

The survey findings have been supplemented by additional insights and recommendations from EY industry professionals to shed new light on both the current and future state of enterprise relationships with the world of emerging technologies and ICT vendors.

Survey respondents broken down by location and primary industry

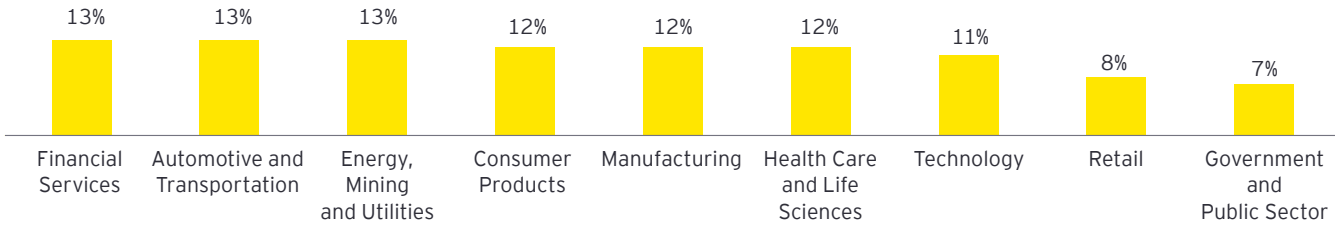
Location of respondents

Where are you located?



Primary industry of respondents

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



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