

Tech Pulse: March 2024

What the rise of AI means for IT professionals

IT pros express optimism about AI while navigating the changing reality of their roles and workplaces.



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Introduction

As AI is set to transform every industry, many IT leaders and IT departments are moving quickly to implement AI tools in their organizations. Yet despite the levels of productivity and innovation that AI can help them achieve, many feel uncertainty. Brad Smith, Vice Chair and President of Microsoft, described the mix of emotions these new tools have provoked:

“As people have used or heard about the power of OpenAI’s GPT-4 foundation model, they have often been surprised or even astounded. Many have been enthused or even excited. Some have been concerned or even frightened. What has become clear to almost everyone is something we noted four years ago—we are the first generation in the history of humanity to create machines that can make decisions that previously could only be made by people.”¹

In a survey conducted by Concentrix and sponsored by Microsoft, 1,982 IT professionals from around the world were asked a series of questions about their roles, cloud computing, and AI. While the survey found that IT pros remain confident about their skills, and are generally optimistic about the cloud and AI, there is also an undercurrent of uncertainty about how AI is going to affect jobs, careers, and workplaces. Common questions included:

Will AI replace me? Is it evolving too quickly? What will AI cost? How will we govern AI? How will AI change the cloud?

One important way to help IT pros navigate this uncertainty is through the guidance, training, and resources needed to build AI confidence and chart a path forward. But before we get there, let’s look at the survey findings in more detail.

¹ How Do We Best Govern AI? - Microsoft on the Issues, May 2023



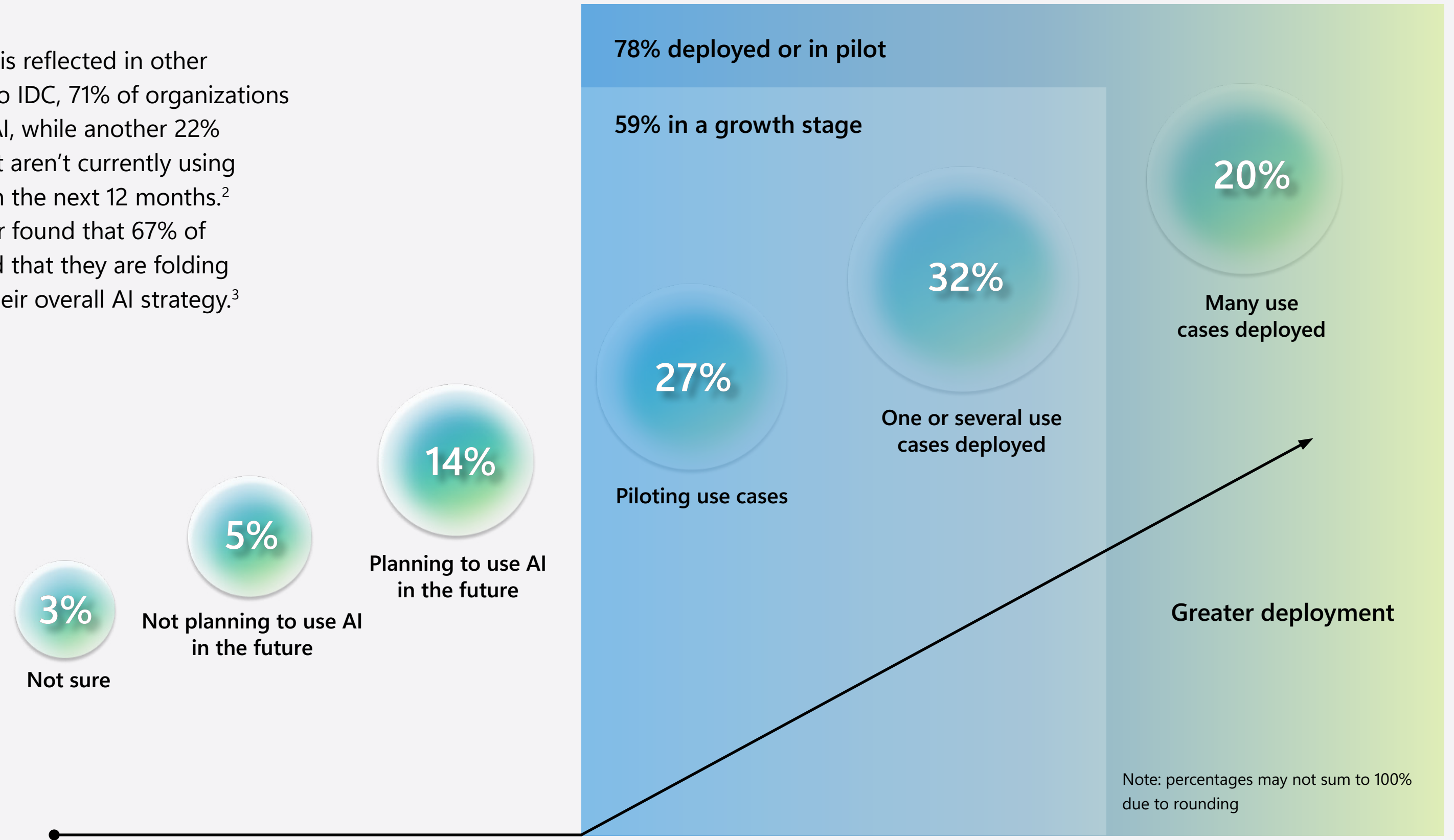
01 / AI optimism

All over the world, organizations of all sizes are implementing AI-powered tools to help them increase productivity and accelerate innovation. 78% of IT pros we surveyed say that their companies currently have AI deployed or in pilot. Meanwhile, another 14% aren't using AI yet, but plan to in the future. The extent to which companies are using AI varies. A significant percentage (59%) responded that they were in what we consider an accelerating or growth stage of AI—either piloting use cases (27%) or with one or several use cases (32%) or with one or several use cases

deployed (32%). Just 20% have AI deployed in many use cases.

This rapid evolution is reflected in other surveys. According to IDC, 71% of organizations are currently using AI, while another 22% of organizations that aren't currently using AI expect to do so in the next 12 months.² Meanwhile, Forrester found that 67% of enterprises indicated that they are folding generative AI into their overall AI strategy.³

Global AI deployment



“Expertise in AI is crucial in today’s business climate. AI is advancing fast and the companies that can exploit the advantages of AI will define the future of business success.”

IT professional

Software and high tech, US

² IDC Infographic, sponsored by Microsoft, The Business Opportunity of AI, doc #US51315823, November 2023

³ Forrester’s July 2023 Artificial Intelligence Pulse Survey

“We are in the early stages of introducing AI concepts to the business, so we have to balance costs and security requirements against the innovation process.”

IT professional

Healthcare and life sciences, UK



IT pros are confident in their skills

IT pros are the implementers, developers, data scientists, and decision makers who build, install, and maintain hardware and software within organizations. They're the doers, fixers, builders, and maintainers in the company that are counted on to innovate and to keep IT operations running smoothly.

When we asked them about their overall skills and experience, the results were notably positive. Most IT pros (85%) agree they have the skills they need to succeed in their role in the future, and a similar number (82%) are confident their current skillset will be valued in five years. When asked about their professional and technical skills, IT pros report high levels of proficiency across a range of professional and technical skills.

Most are confident they are proficient in the top five professional skills they feel they will need in the future, including leadership (77%), problem solving (83%), data analysis (74%), analytical and critical thinking (76%), and strategic thinking (76%). As the role of IT continues to evolve, a consensus among IT pros highlights the growing significance of strategy and soft skills. Specifically, 79% of IT pros acknowledge the increasing involvement of the IT department in business strategy, while an even higher percentage, 84%, recognize the rising demand for 'soft' professional skills alongside technical expertise in various IT roles.

Top 5 professional skills needed in the future

Percent who are currently proficient
(“advanced or “expert”)



“AI will play an important role in human life in [the] coming future and it will impact our life positively.”

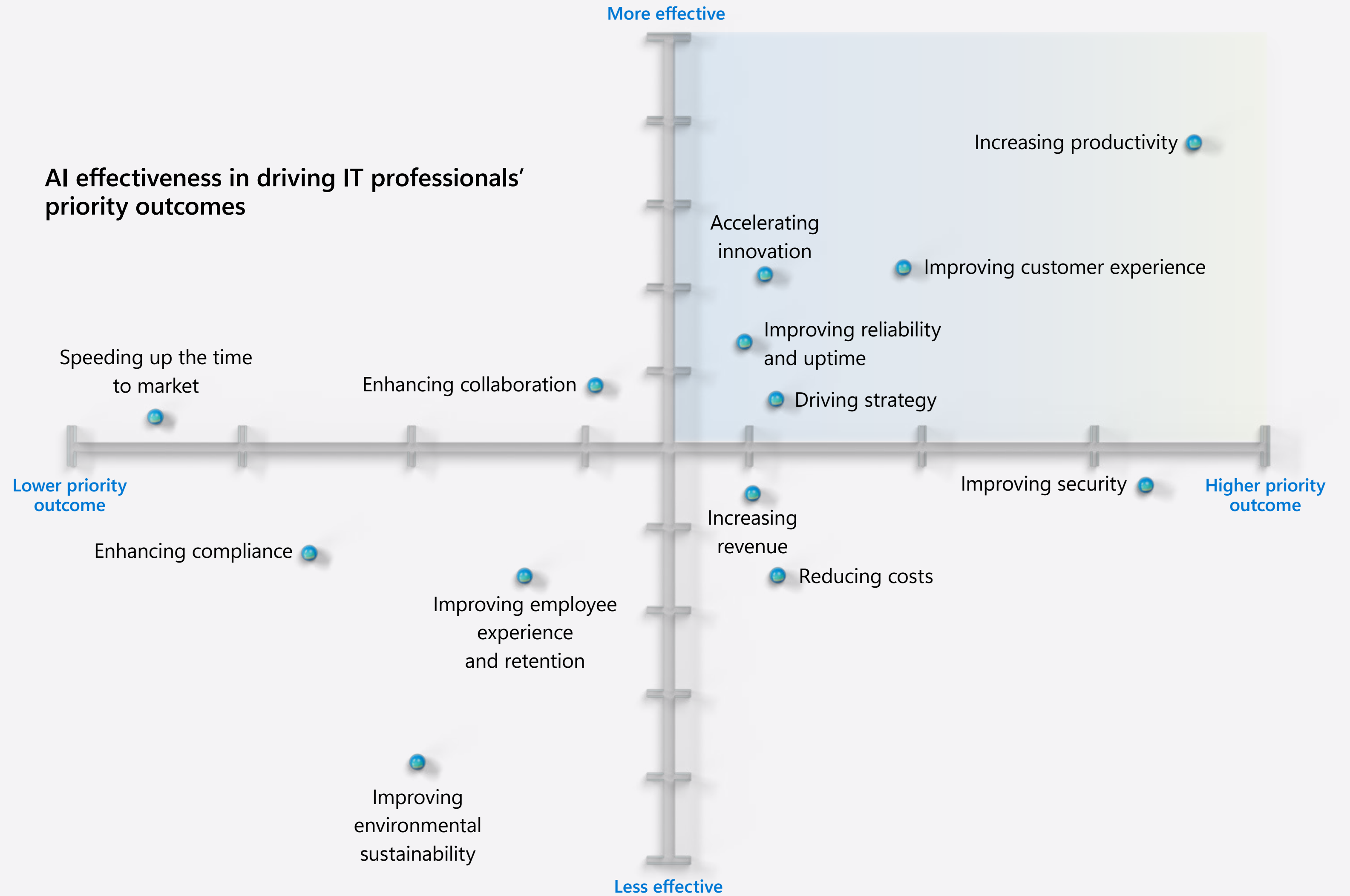
IT professional

Travel and hospitality, India



Seeing possibilities in AI

When asked about their feelings related to the emergence of AI, the adjective that rates highest is "excited," followed by "optimistic," "organized," and "supported". IT pros also say AI can be effective at driving key outcomes, including increasing productivity (82%), improving customer experience (80%), accelerating innovation (79%), improving reliability and uptime (78%) and enhancing collaboration (77%).



“I think this is such a critical time for AI to be in our society and I am excited about the possibilities.”

IT professional

Government, US



Expecting positive change

Overall, IT pros anticipate that AI will bring positive change for themselves and their companies. When asked about how AI will change their professional landscape, they have positive expectations. Most said that “AI will have a positive impact on my company” (75%), “AI will make my job easier” (75%), “AI will enable me to be more strategic” (74%), and “AI will have a positive impact on my role” (73%). In addition, 69% say they understand the resources required to deploy and manage AI solutions, while 66% agree their company has individuals with the right skillsets to succeed in AI.

“AI will help people to progress and work faster, effectively and effortlessly.”

IT professional

Software and high tech, India

IT professionals' expectations of AI



Embracing AI at work and at home

IT pros aren't just excited about AI at work. They're taking it home with them. A majority say they use AI in their role at work (68%) and in their personal time (66%). 79% of IT pros who use AI are using it multiple days a week, with almost a third using it daily.

"AI is very helpful for me and my company. It makes life easier."

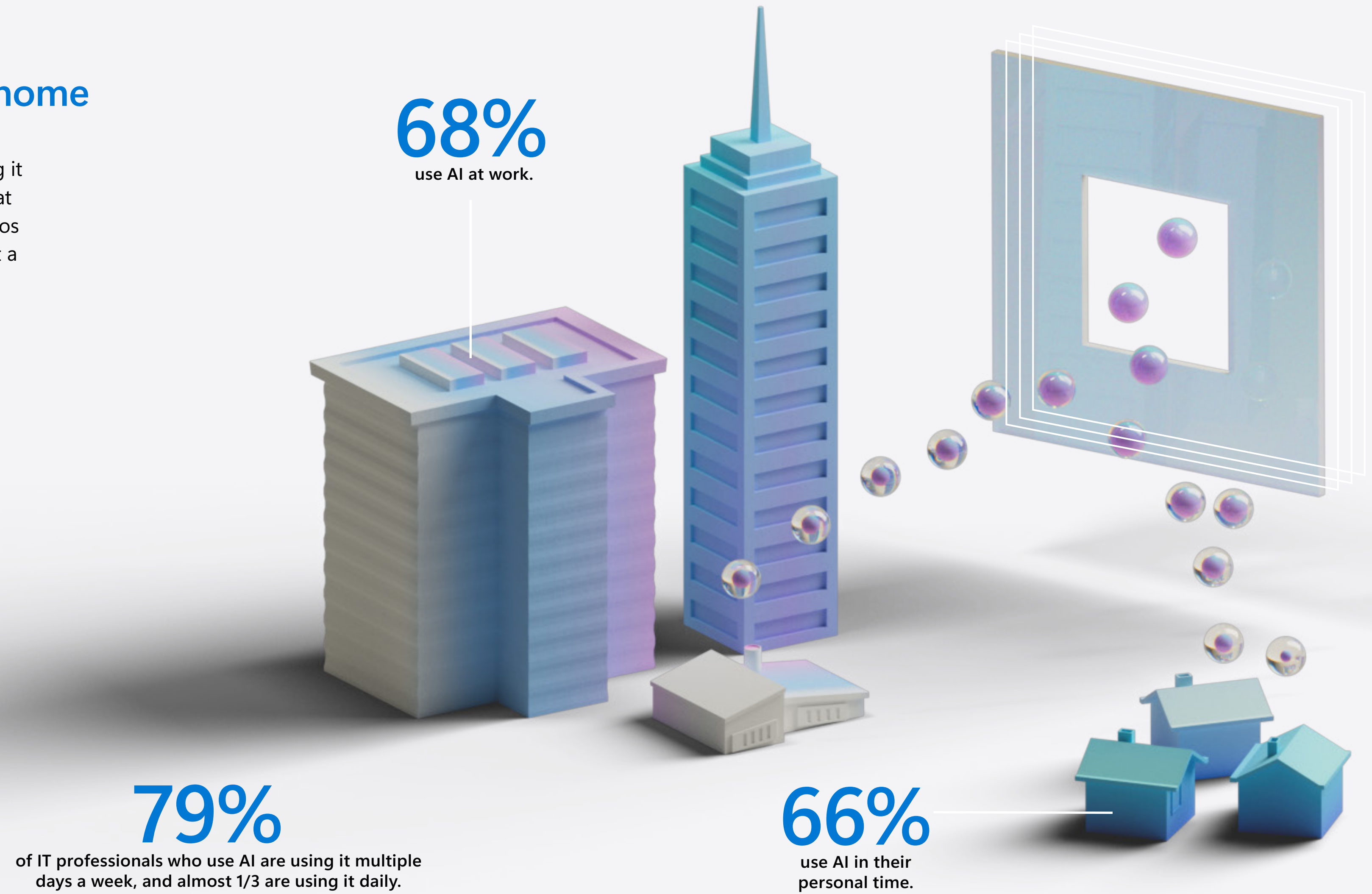
IT professional

Software and high tech, India

"AI is the future of business."

IT professional

Software and high tech, US



02 / AI uncertainty



Yes, IT pros feel confident about their skills. And yes, they expressed optimism about AI. But when we looked closer, we found something else—an undercurrent of uncertainty about AI that extends across a number of different areas.

Will AI replace me?

A significant percentage of IT pros feel unprepared for AI, with many worried that they're going to lose their jobs and be replaced by AI.

Will I get the training I need?

IT pros think their roles are going to change significantly and they're worried they won't have the training they need to stay relevant.

Is AI evolving too quickly?

Many IT pros believe that AI is developing at a pace their companies can't keep up with. They also have doubts about AI's abilities to handle critical tasks.

What are the costs of AI?

IT pros are unsure about whether AI will generate a positive ROI while others believe AI may divert resources from other IT priorities.

How will we govern AI?

IT pros are uncertain about how AI governance will be implemented in their company.

Will AI change how IT pros use the cloud?

IT pros know that the emergence of AI means that change and uncertainty is coming to cloud computing as well.

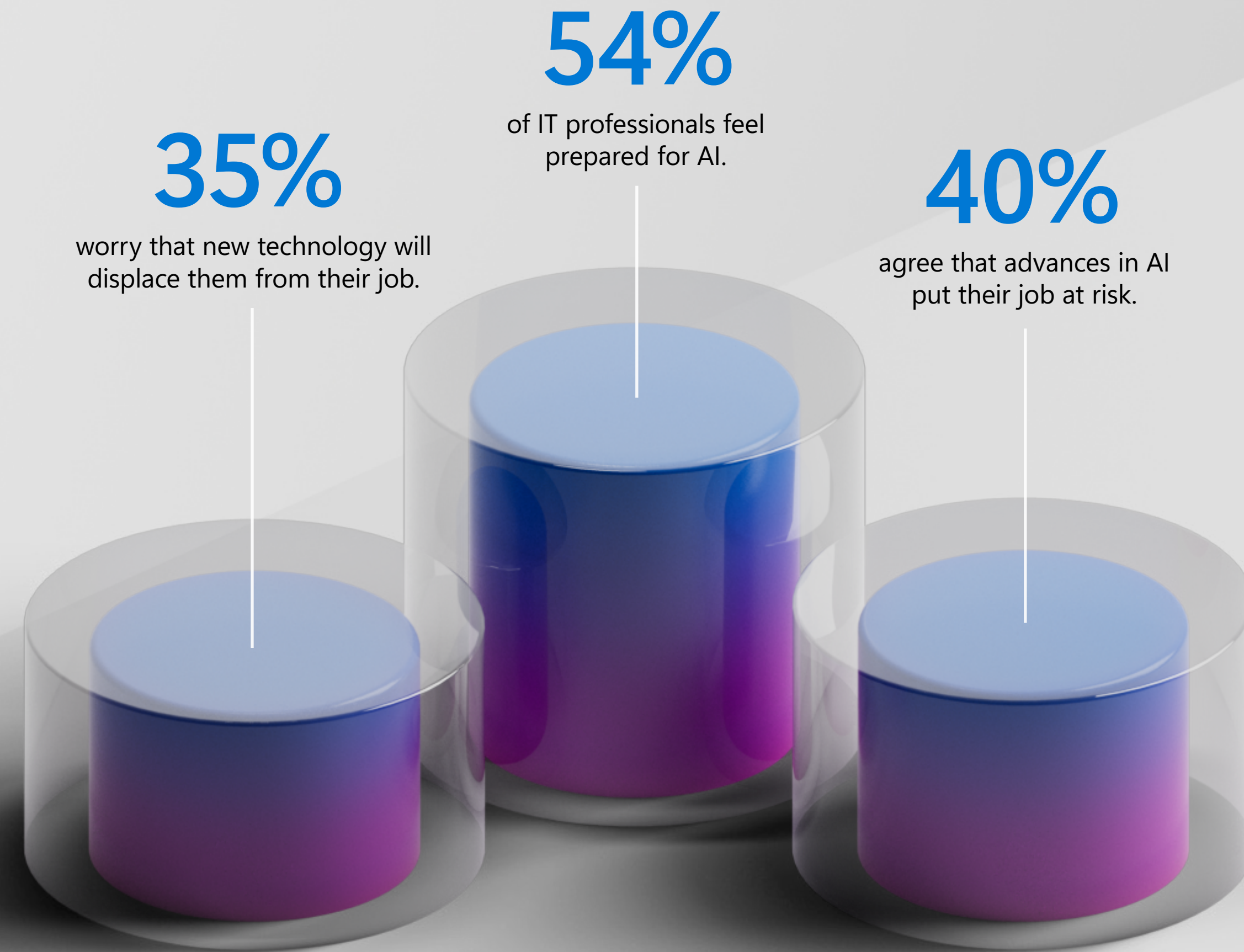
Let's take a look at what IT pros are concerned about in more detail.



Will AI replace me?

Despite their enthusiasm about AI's potential, IT pros expect AI will have significant impacts on their role – and even put it at risk. Only 54% of IT pros feel prepared for AI. In fact, **1 in 3 IT pros worries about technology replacing them and 40% agree that advances in AI put their job at risk.** When looking specifically at IT decision makers, that number increases to 46%.

These numbers align with statistics from other recent studies, including Forrester's Artificial Intelligence Pulse Survey, where nearly half (49%) of AI decision makers said they are concerned about displacement of human jobs by generative AI usage at their organization.⁴



“We need to be able to use AI ethically to avoid replacing human creativity.”

IT professional

Software and high tech, Canada

⁴ Prepare Frontline B2B Marketers for Their AI Future, Forrester, December 8, 2023

Will I get the training I need?

Our research also revealed that although IT pros consider AI and machine learning to be the most important technical skill they will need in the future, it's among the skills they feel least proficient in. While a majority of IT pros in the survey feel they are proficient in cybersecurity (59%), the cloud (67%), data management (69%) and information security (66%), just 48% of IT pros responded that they feel proficient in AI and machine learning.

“Our team won't be able to complete their task[s] if they don't have support and training when required.”

IT professional

Software and high tech, Canada

Top 5 technical skills needed in the future

Percent who are currently proficient
(“advanced” or “expert”)



Sizable skill gaps.

5 most important AI provider characteristics

Training from AI providers was a high priority for IT pros. They listed quality support and training as one of the five most important AI provider characteristics, along with a high degree of AI model accuracy, a commitment to security and privacy, being a technology leader, and transparency regarding the AI model.

“We are a global manufacturer with few employees even trained on the basics of AI. So, we need to have the tools to train and implement these technologies into our daily production.”

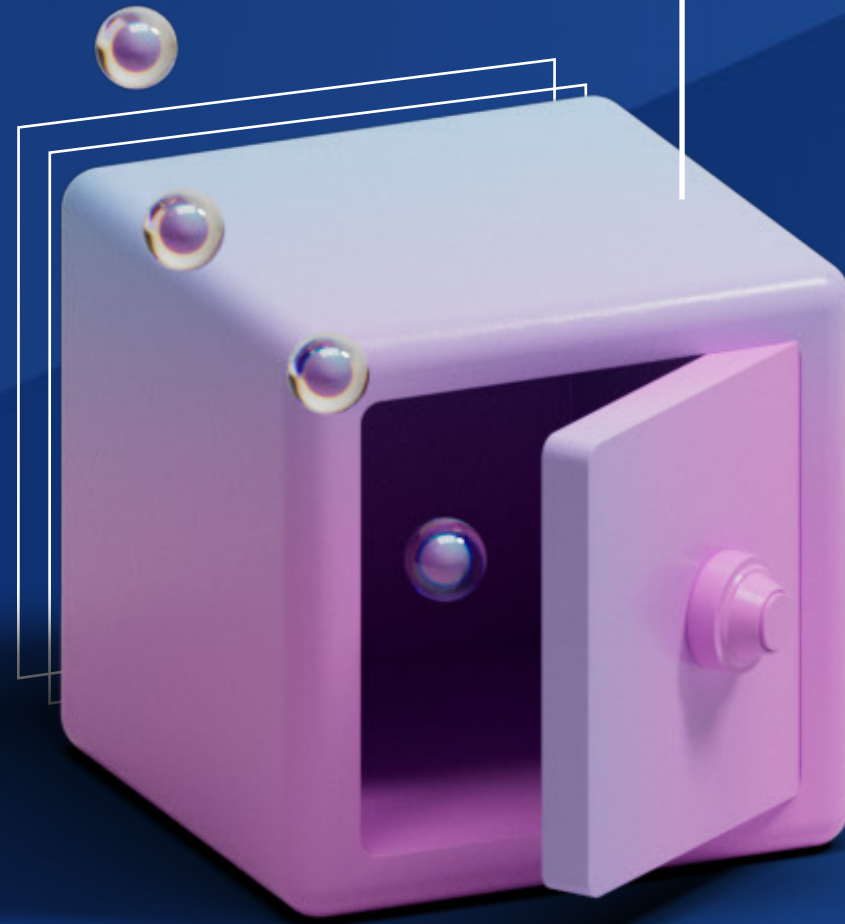
IT professional

Government, US

#1
high degree of AI model accuracy



#2
commitment to security and privacy



#3
a leader in technology



#4
quality support and training



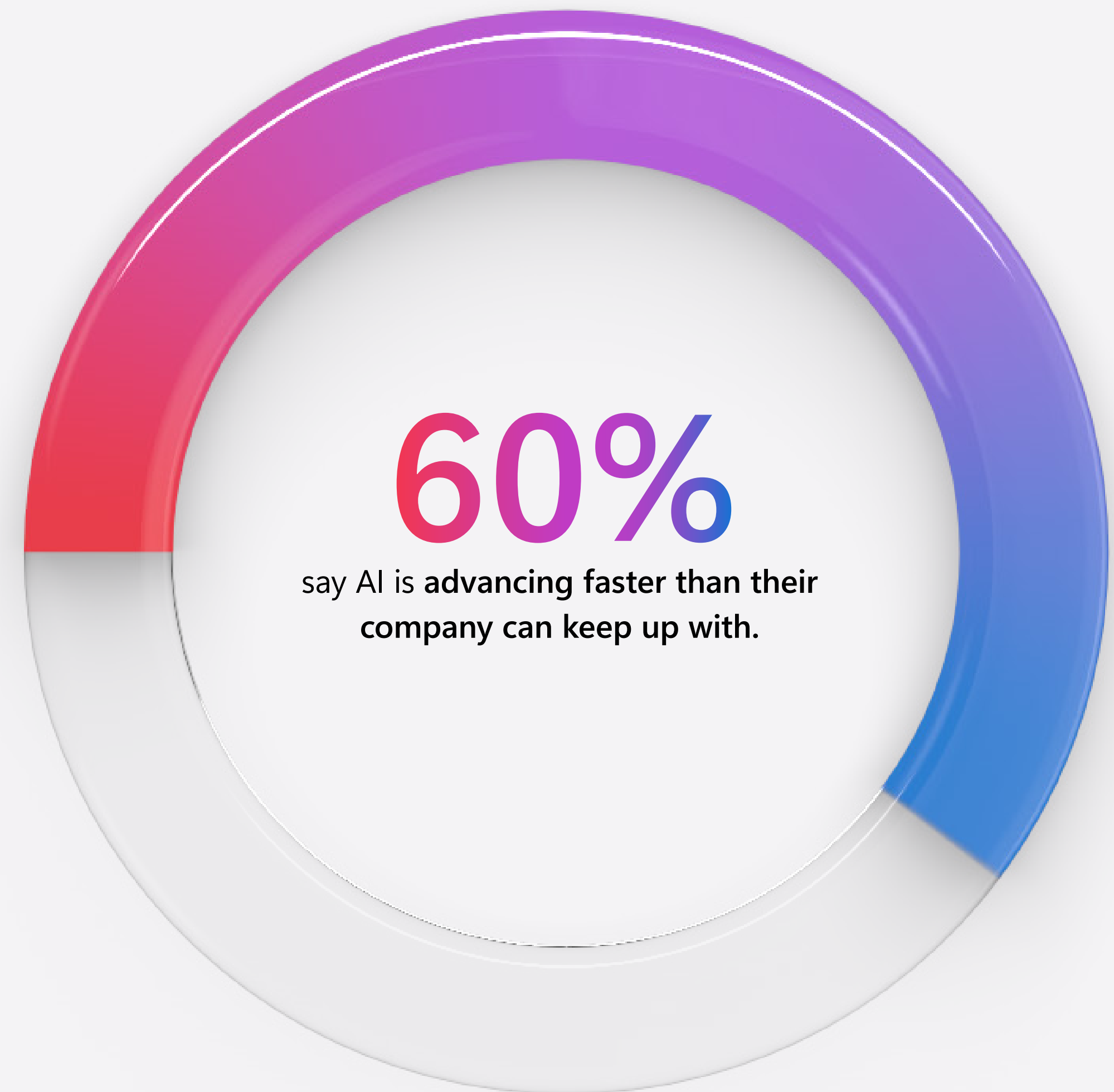
#5
transparency regarding the AI model



Is AI evolving too quickly?

IT professionals also express uncertainty about how AI may affect their company. Some worry that their companies may get distracted by the novelty of AI and not think critically about how to best incorporate it into their businesses.

Notably, a majority of IT pros (60%) say AI is advancing faster than their company can keep up with. 48% also express doubts about whether AI can handle critical tasks.



"Responsible AI is the most important because we as humans must remain in control of the technology."

IT professional

Software and high tech, US

What are the costs of AI?

IT pros also want their organizations to think critically about balancing the costs and benefits of AI, and **many are unsure about whether AI would generate a positive ROI**. A majority of IT pros in the survey agree that the costs of implementing AI are higher than the potential cost savings (52%).

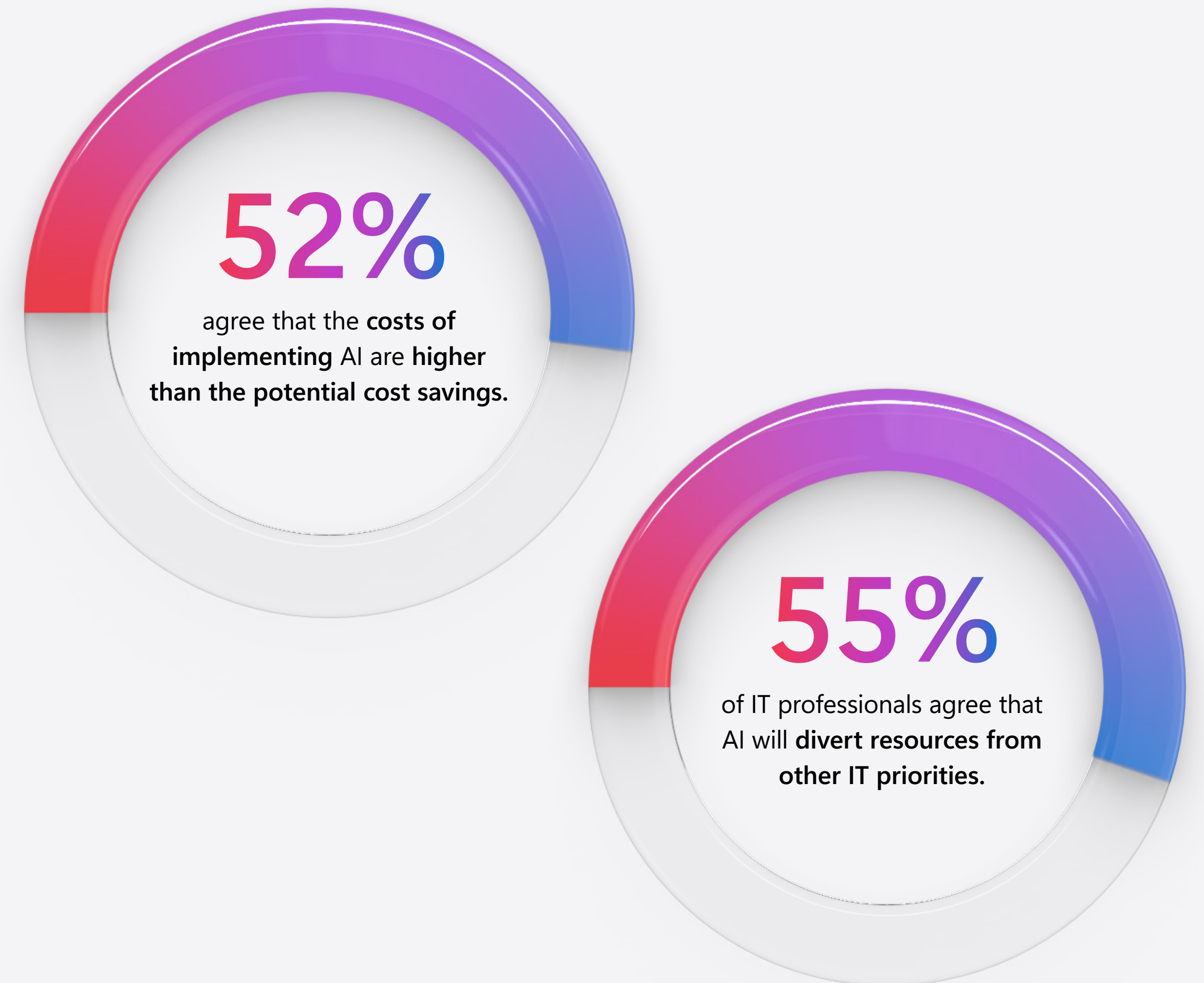
IT pros also have concerns about their companies prioritizing AI over other critical areas in the IT department. 55% of IT pros agree that AI will divert resources from other IT priorities. An IDC study corroborated this idea, finding that 43% of organizations plan to reduce spending in other areas of the business to reallocate spending towards AI within 24 months.²

All of these points suggest that IT pros are warning their organizations to be conscious about their AI integration strategy, ensuring that AI initiatives are strategically balanced against priorities in other critical areas.

"I need it but also have to be able to afford it."

IT professional

Software and high tech, US



² IDC Infographic, sponsored by Microsoft, The Business Opportunity of AI, doc #US51315823, November 2023



“We need models that function well, do the job, don’t cost a kidney and scale to production capabilities. Otherwise, there is little point.”

IT professional

Software and high tech, US

How will we govern AI?

Our research indicates that the process of developing AI governance—the system of rules, processes, and frameworks that ensure that AI usage aligns with organizational principles, legal requirements, and social and ethical standards—is still a work in progress for many organizations.

There is no clear consensus among IT pros on what processes and governance need to be in place to support the use of AI. While 99% of IT pros whose companies are using AI reported that their organization is implementing governance for AI, rapid advancements in AI are outpacing these efforts.

More than half report having a dedicated IT team to manage AI (57%), but less than half have an AI adoption strategy (48%), an AI security risk policy (45%), AI reskilling and upskilling opportunities (42%), or monitoring and auditing to ensure alignment with AI policies (42%). Even fewer reported having an AI ethical risk policy (40%) or an AI center of excellence, committee, or governance team (38%).

IT pros feel their companies need more support with governance than they can achieve on their own. 63% say AI service providers should have primary responsibility for AI governance.

“[Our] top AI worry is the governance behind it, so it’s best to stay one step ahead when piloting to deploy.”

IT professional

Consulting or professional services, UK

Current governance in place for AI



AI safety and security are also on the minds of the IT pros we surveyed. Data safety and privacy (56%) and security (54%) top the list of things IT pros are concerned about as it relates to AI within their company, and “commitment to security and privacy” ranked among the top five most important AI provider characteristics.

IT professionals’ top concerns about AI





“I want a provider that can guarantee a very high level of security to be safe from intrusion and data theft and loss.”

IT professional

Software and high tech, UK

Will AI change how IT pros use the cloud?

When cloud computing was first introduced, many companies were hesitant to move away from their on-premises infrastructure, nervous about the potential risks it would create, and worried about the cost of ongoing cloud consumption. Today, it's hard to imagine a world without the innovations and agility enabled by cloud adoption. Now, as organizations evaluate how to take advantage of AI, operating in the cloud will become critical to their modernization strategy. Our survey found that most IT pros are confident in their company's cloud strategy (89%) and are realizing both technical and financial value.

82%

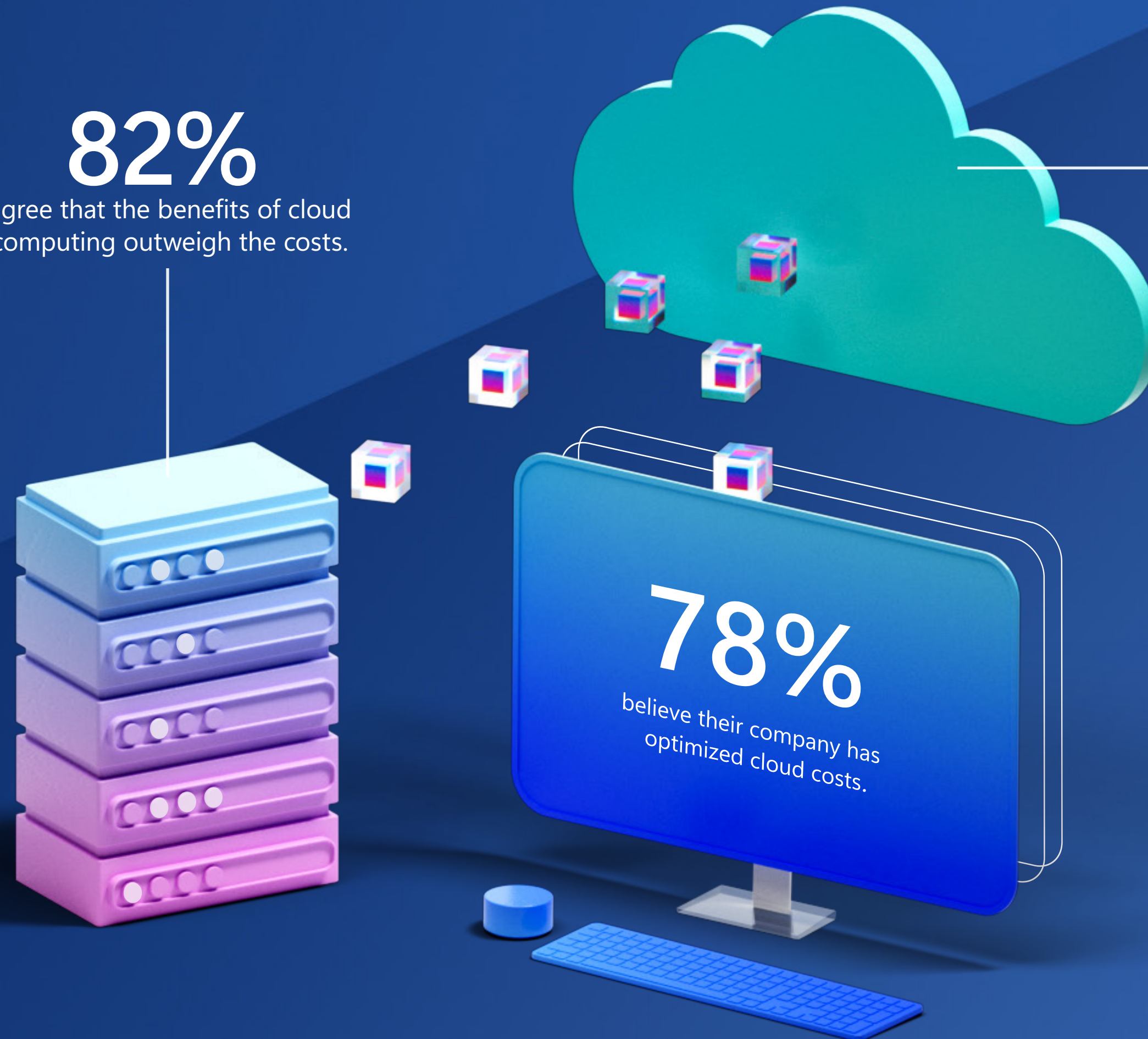
agree that the benefits of cloud computing outweigh the costs.

77%

agree that their company has achieved its expected return on cloud investments.

78%

believe their company has optimized cloud costs.

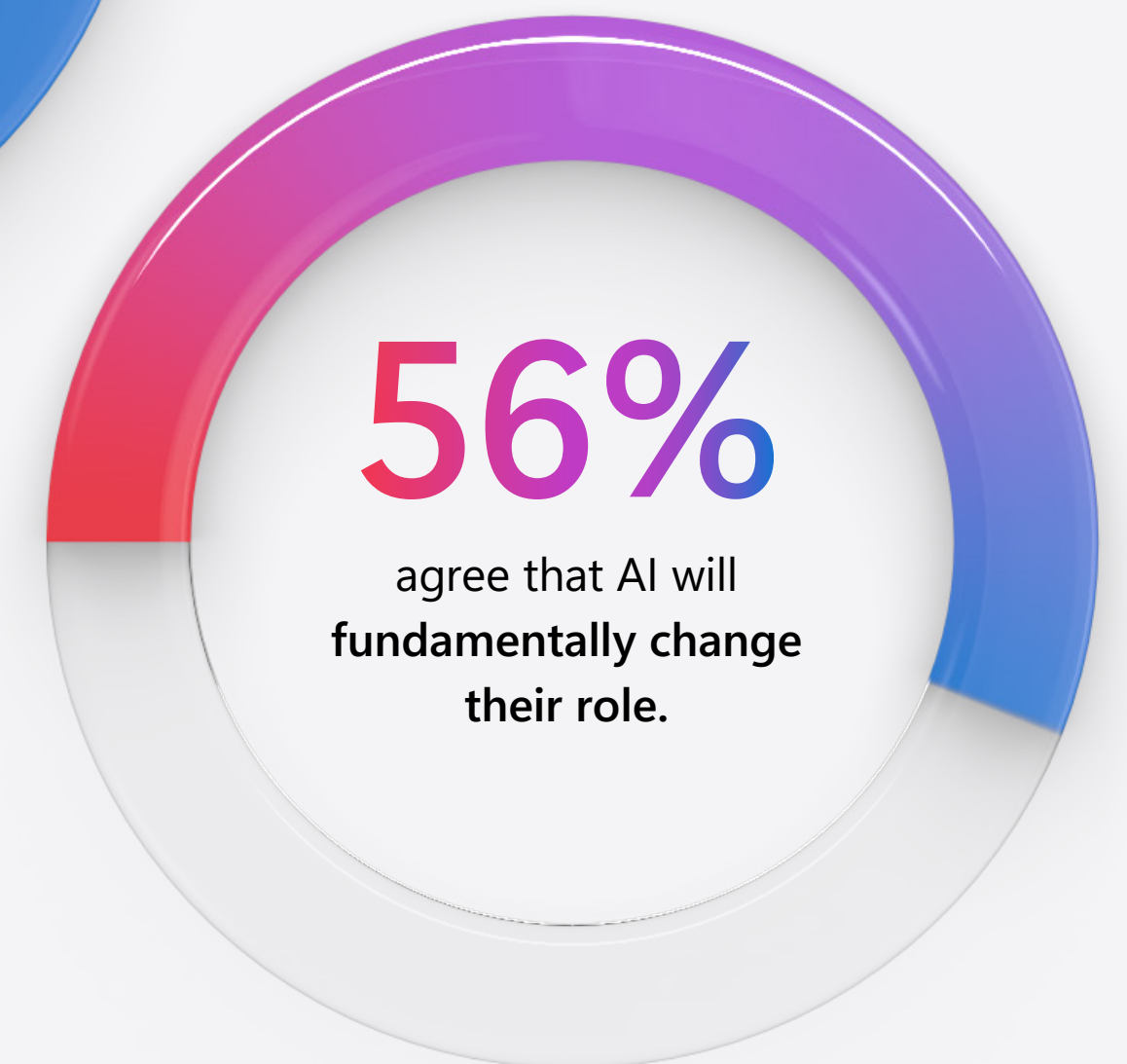
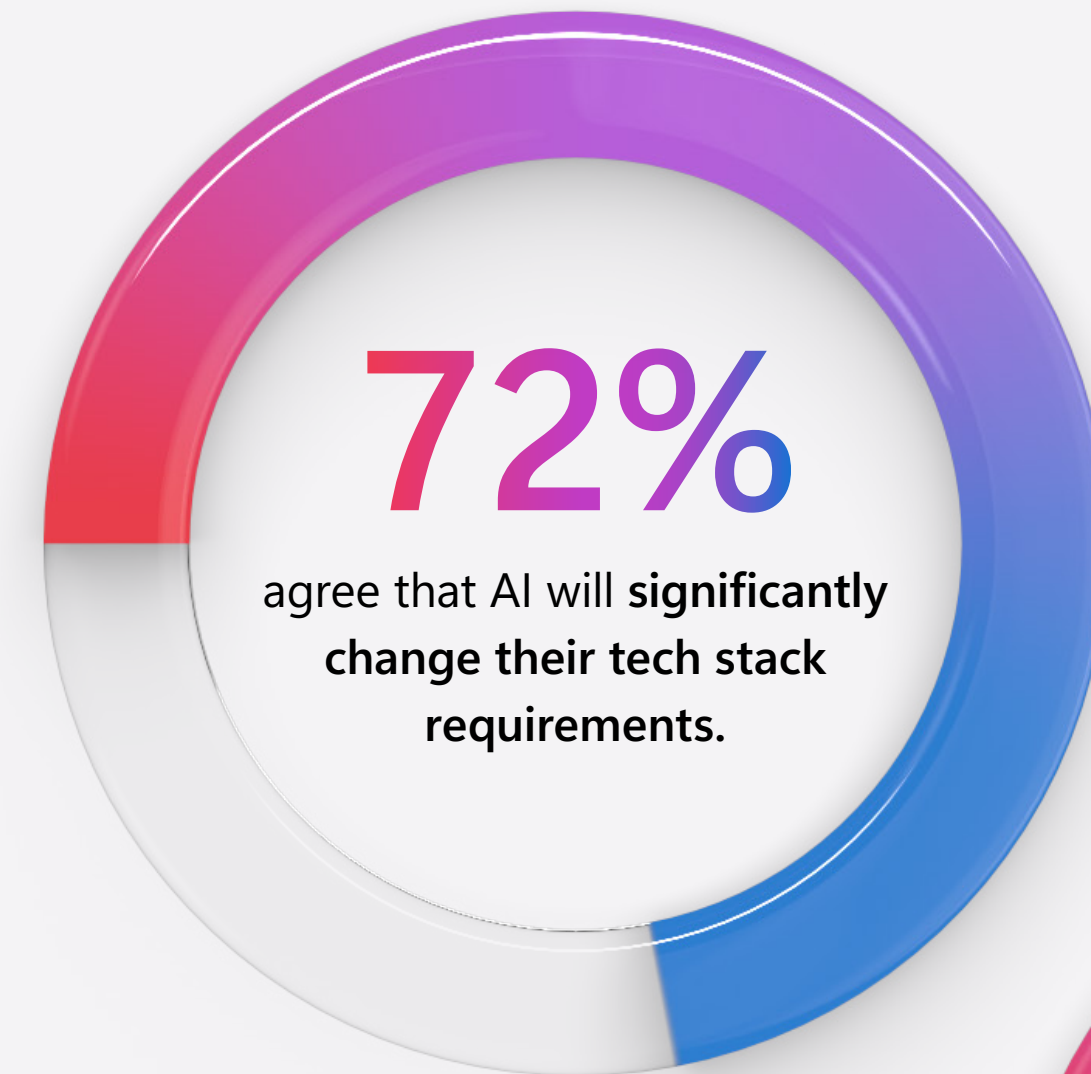


To be successful with AI, even companies that started in the cloud will have new questions to consider when it comes to their future cloud strategy. The emergence of AI is already changing many aspects of cloud computing, which will result in a period of disruption and uncertainty, and cloud-savvy IT pros know they need to evolve. In fact, **72% of respondents agreed that AI will fundamentally change their tech stacks, and 56% agreed that AI will fundamentally change their role.**

Cloud governance is one of the key IT pro responsibilities that will likely go through significant change. While 86% of respondents said their company has sufficient cloud policies in place, far fewer have established AI policies to manage ethical risks (40%) or security risks (45%). Cloud governance policies may need to be updated frequently to keep up with the pace of AI adoption, since most organizations will need

to take advantage of the power of the cloud to develop and run intelligent AI applications.

With AI integration and a changing tech stack, IT pros will need to figure out how to proactively address the uncertainties and changes that impact cloud computing, including adapting to new security paradigms, managing the evolving skill requirements for AI-driven tasks, and optimizing cloud resources amidst dynamic shifts in workload patterns, all while ensuring compliance with emerging regulations and effectively navigating the evolving landscape of AI-optimized cloud services.





03 / Build AI confidence

AI is a new and emerging technology that is developing at a rapid pace.

Here are three ways you can help your IT teams navigate uncertainty and build AI confidence.



1 Get clear.

Get clear about what your organization can do with AI

While the possibilities are expanding exponentially, here are three common applications of AI that IT pros can focus on when communicating with business leaders about company priorities.

Enrich employee experiences

Employees are dealing with an increasing volume of digital debt and administrative burdens that slow down productivity. To address this challenge, AI is being used to bring together unstructured data like social media, product details and customer engagement to better tailor communications, enable more intelligent insights and solve problems faster.

Reshape business processes

Companies have pockets of valuable information scattered throughout their organization that can be difficult for employees to locate and use holistically. By finding and making connections across this information, AI can surface integrated insights that help predict and accelerate workloads.

Bend the curve on innovation

By putting AI directly in the hands of developers, organizations can operate with agility and accelerate innovation. Teams can take advantage of AI to help scale production and accelerate time to market while being able to focus on higher-value activities.

Get clear on training

Help your IT teams get the skills and experience they need to support your AI vision. Investing in skilling up your teams will accelerate AI innovation because they're already familiar with your organization's IT infrastructure, they know your security and governance policies, and they understand your business priorities. There are many ways IT pros can get started on an AI learning path, including:

- Learning about [the seven pillars of modern AI development](#).
- Taking a [training course for AI engineers](#).
- Taking an [AI learning assessment](#) to get curated and personalized guidance based on existing knowledge.

Get clear about governance

Work with your IT teams to establish AI governance policies and evaluate whether other policies will need to evolve. [Governing AI: A Blueprint for the Future](#) is a good report to start with, as it offers a five-point blueprint to address several current and emerging AI issues through public policy, law, and regulation.





2 Get real.

It's time to let go of shiny object syndrome. IT pros can use AI to solve real problems. Helping your IT team engage with AI on a purposeful implementation can increase their AI confidence. If possible, start with the low-hanging fruit—something that is quick and easy to implement that yields a significant ROI.

Here are four ways IT pros can use AI to solve real problems:

Decipher and document existing administrative scripts

Many organizations have administrative scripts that have been in place for a long time, and people new to the company are reluctant to touch them because they don't understand the ramifications. AI development tools can interpret code and provide explanations about what scripts are designed to do. These explanations can be added as comments in the code so that the next person that has to interact with the script has a clearer idea of what the script is intended to accomplish.

Update existing scripts

Older scripts can be updated and revised to include new features that might not have been available when the original script was written. But sometimes IT pros aren't sure what can be updated without disrupting service. An IT pro can interrogate an AI copilot to determine how a script might be modernized and improved without breaking its existing functionality.

Diagnose the cause of a problem

Instead of conducting a painstaking web search in order to determine the cause of a technical issue, IT pros can use generative AI, which can be trained from official documentation and validate support information to provide accurate assessments of IT problems.

Suggest procedures to resolve an issue

Solutions to unusual problems are often not covered in mainstream documentation. Generative AI can suggest procedures that can be used to resolve issues and provide meaningful explanations as to what each step in the procedure accomplishes.



3 Get inspired.

One great way to help IT pros work through uncertainty around AI is to help them get inspired by how other companies are already innovating with AI today.

Here are three examples of companies that are using AI to solve challenges faced by the energy industry, improve the speed of automated mapping, and improve the quality of doctor-patient visits:

OriGen uses AI models to accelerate reservoir simulations by 1,000 times

Software developer OriGen is addressing issues faced by the energy industry with proprietary AI models that have accelerated the pace of creating a single energy reservoir simulation by 1,000 times, reducing the time from days and hours down to milliseconds.

[→ Read the full story](#)

Impact Observatory improves automated mapping speed using AI

Impact Observatory is working to transform land use and land cover (LULC) maps, which are critical for a sustainable future. Using AI-driven algorithms and datasets, the technology startup has improved its speed, scale and accuracy of LULC maps. The company can now generate an updated map in less than a week versus years using previous data collection and production resources.

[→ Read the full story](#)

Nuance uses AI to help doctors document care faster so they can spend more time with their patients

Nuance has created a fast and highly scalable AI-based clinical solution that automatically turns doctor-patient conversations into accurate medical notes, which benefits both parties. Patients experience a more engaging, personal visit and doctors report significant time savings and less stress, which helps minimize burnout.

[→ Read the full story](#)

Take the next steps on your AI transformation journey

Setting up IT pros for success is a critical step for organizations that want to accelerate innovation in the era of AI. IT leaders can help IT pros address their uncertainty and get clear about training opportunities, governance, and what AI can do for their organization. Then they can dive in and get to work. Because when IT pros can move out of AI uncertainty and into using AI to help them do what they do best—solve problems for their company—they can chart a successful path forward on their organization's AI journey.



Explore how [Microsoft Azure](#) is redefining cloud infrastructure to prepare every business for AI by providing the world-class technology for AI workloads and doing so sustainably and responsibly.

Get [strategic guidance and insights](#) on AI innovation, tailored for business leaders.

Learn how [businesses](#) are balancing performance, efficiency, and cost with Azure AI.

Appendix



Methodology

Research for this study was conducted by means of a quantitative survey fielded between September and October 2023.

Responses came from 1,982 IT professionals in 10 countries across a range of industries. Respondents were required to have worked at companies with a minimum of 500 employees and to have progressed in their careers past an entry-level position.

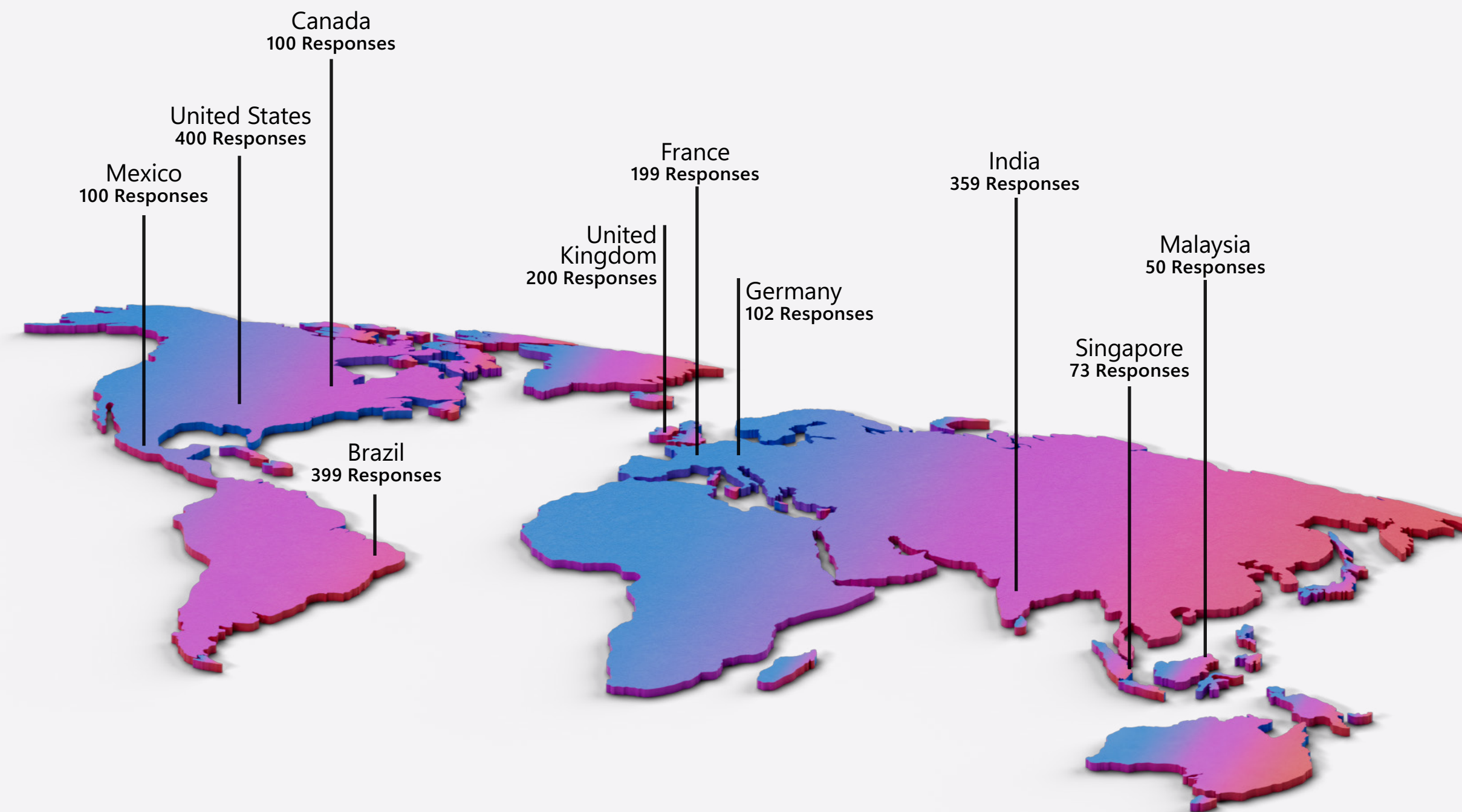
To ensure the dataset gave sufficient representation to all voices, the data was weighted at a country level to 60% Decision Makers and 40% Implementers. Audience classification was determined via a series of questions about purchase influence and budget control.

The survey included specific questions related to the cloud and AI. Of the 1,982 total respondents, 1,299 had at least some familiarity with cloud use at their company and answered questions about it. 1,430 had at least some familiarity with AI use at their company and answered questions about it.

Gender	Responses
Female	34%
Male	66%

Age	Responses
18-24	2%
25-34	33%
35-49	44%
50-64	18%
65+	3%

Industry	Responses
Software and high tech	34%
Manufacturing	13%
Financial services and insurance	11%
Retail and consumer goods	6%
Government	5%
Healthcare and life sciences	5%
Education	4%
Telecommunications	3%
Transportation and warehousing	3%
Consulting or professional services	3%
Construction	3%
All other	9%



Position Level	Responses
Associate, Junior Manager, or other title below Manager level	17%
Manager or Senior Manager	41%
Director or Senior Director	22%
Vice President or Senior Vice President	4%
C Suite or top Executive	13%
Other	2%

References

- ¹ How Do We Best Govern AI? - Microsoft on the Issues, May 2023
- ² IDC Infographic, sponsored by Microsoft, The Business Opportunity of AI, doc #US51315823, November 2023
- ³ Forrester's July 2023 Artificial Intelligence Pulse Survey
- ⁴ Prepare Frontline B2B Marketers for Their AI Future, Forrester, December 8, 2023