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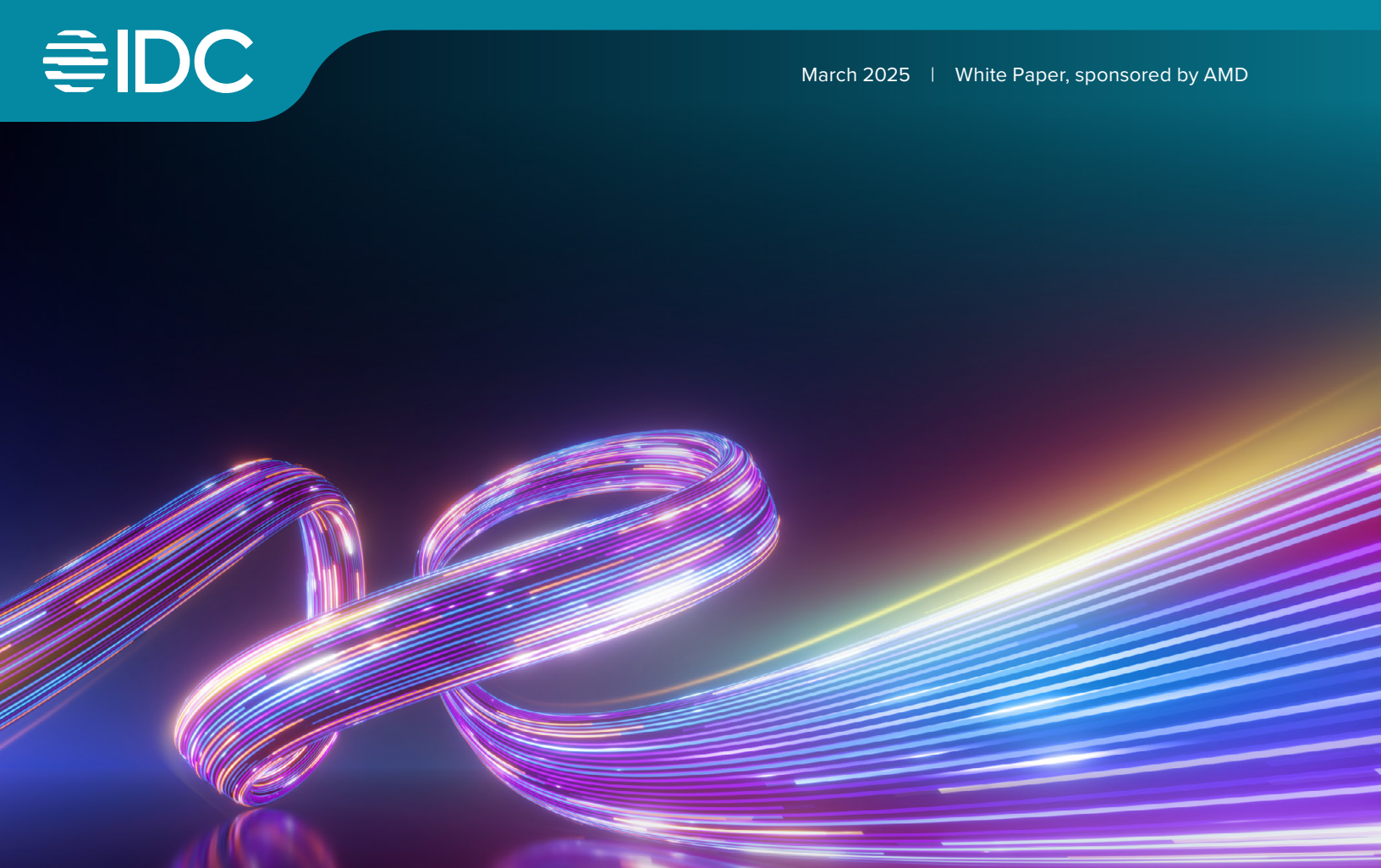

Accelerate Your Organization's AI Strategy by Deploying High-Performance AI PCs

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Introduction

Companies are adopting a hybrid approach to AI, combining cloud, on-premises, and edge computing capabilities. While the cloud provides scalable power for complex AI models, there's a growing demand to process AI workloads closer to the edge, where data is generated and real-time decisions are made.

Enter AI PCs — powerful, modern systems with specialized neural processing units (NPUs) designed to accelerate AI inferencing more efficiently at the edge. AI PCs combine with powerful CPUs and GPUs and are typically built as a single system on a chip, enabling local AI models and delivering numerous benefits, such as low latency, enhanced privacy and security features, and reduced cloud-related costs.

Though still in its early stages, the AI PC era is ramping up quickly. PC vendors are shipping AI PCs across various price points and capabilities. These include systems with NPUs capable of less than 40 trillion operations per second (TOPS) and NPUs capable of more than 40 TOPS. Microsoft and its partners market this second group of systems as Copilot+ PCs, which offer many unique OS-based AI features, including live captions, improved Windows search, Windows Studio Effects, and Recall.

Meanwhile, independent software vendors (ISVs) are optimizing their applications to leverage local AI processing, paving the way for innovative features that enhance enterprise productivity. For example, productivity tools could integrate local AI-powered writing assistance to generate drafts and suggest edits. Similarly, computer-aided design software could intelligently optimize 3D designs by identifying issues and proposing improvements without an internet connection.

IDC forecasts the rapid adoption of AI PCs in commercial settings as organizations transition from Windows 10 to Windows 11 and refine their AI strategies. These machines will be pivotal in scaling AI across enterprises, making it technologically and economically feasible to introduce AI to more employees.

As businesses continue building their AI strategies, AI PCs represent a key opportunity. These devices are essential tools for an AI-driven future, delivering improved performance, enhanced security, and innovative capabilities.

Methodology

To gain insight into how IT decision-makers (ITDMs) think about the role of the AI PC, IDC conducted an online survey in November 2024. The survey comprised 670 respondents — all managers or above who are responsible for or influence PC purchases.

We selected participants from companies with over 1,000 employees in the United States and over 500 employees in the United Kingdom, France, Germany, and Japan. We then categorized the respondents based on company size, with 155 from firms with 500–999 employees, 320 from companies with 1,000–4,999 employees, and 195 from organizations with 5,000 or more employees.

The study covered various industries, including design and manufacturing (251 respondents), financial services (243 respondents), and telecommunications (176 respondents). Geographic representation included 113 respondents from France, 122 respondents from Germany, 118 respondents from Japan, 123 respondents from the United Kingdom, and 194 respondents from the United States. This diverse sample offered valuable insights into PC purchasing trends across regions and industries.

Situation Overview

Current AI Adoption and Use Cases

Companies across industries embrace AI to enhance operations, improve decision-making, and drive innovation. In our survey, 95% of respondents reported that their organizations already use or test cloud-based AI for various use cases.

In manufacturing, AI optimizes production with predictive maintenance, identifies equipment issues before failures occur, and minimizes downtime. Retailers leverage AI-powered recommendation engines to analyze customer behavior and deliver personalized shopping experiences, boosting satisfaction and sales. Financial institutions utilize AI for fraud detection, analyzing real-time transactions to prevent unauthorized activities. In healthcare, AI models enhance diagnostic imaging, enable faster and more accurate disease detection, and improve patient outcomes.

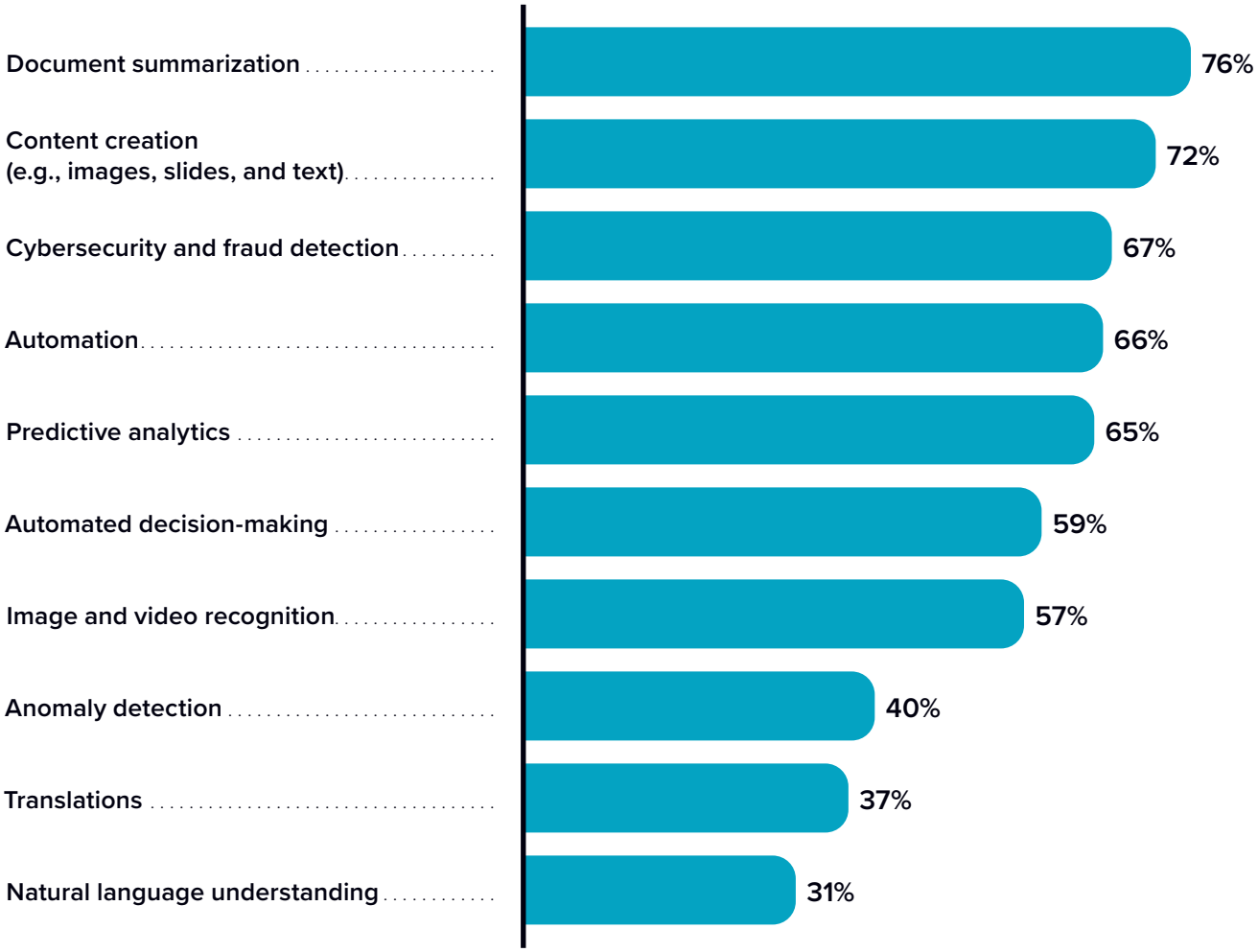
Respondents indicated that, on average, 43% of their employees already use AI, highlighting the technology's growing integration into everyday workflows. This widespread adoption delivers various benefits, including increased efficiency, improved decision-making, and enhanced organizational innovation. The top current use cases of cloud-based AI among the respondents' companies include document summarization, content creation, and cybersecurity (see **Figure 1,** next page).

FIGURE 1

Current Use of Cloud-Based AI Tools

How are your organization's employees using AI today?

(Percentage of respondents)



n = 636; Source: IDC's *Worldwide AMD AI PC Survey,* November 2024

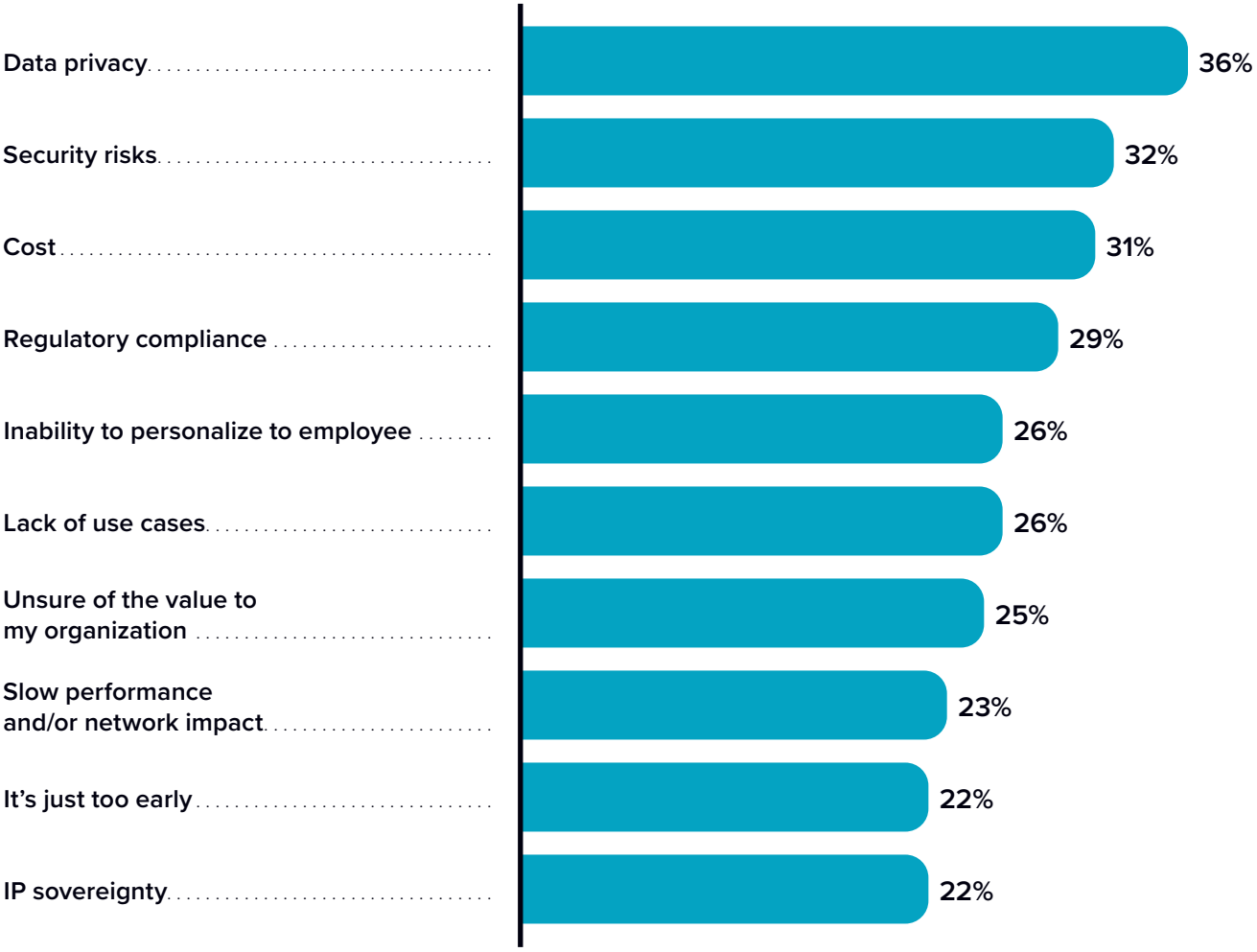
Looking ahead, 97% of respondents said that they expect to deploy AI to more employees in the future. This reflects a broader trend toward democratizing AI capabilities, ensuring that teams across functions and levels can benefit from its transformative potential. As AI tools become more accessible and tailored to specific job functions, they will further enhance productivity, collaboration, and innovation across industries.

Although ITDMs clearly see the benefits of rolling AI out to more employees, they recognize the roadblocks to doing this. Some key challenges respondents identified are concerns about data privacy, security, and costs (see **Figure 2**).

FIGURE 2

Key Challenges to Broadly Deploying Cloud-Based AI

What prevents your organization from deploying cloud-based AI or GenAI applications and services to more employees today?
(Percentage of respondents)



n = 636; Source: IDC's *Worldwide AMD AI PC Survey*, November 2024

The Dawn of the AI PC Era

The good news is that adopting AI PCs can effectively address many of these challenges. Designed to run AI workloads locally, they can eliminate the need for constant cloud connectivity. Processing AI tasks on the device can significantly reduce the risks of transmitting sensitive data over the internet, ensuring greater privacy and compliance with stringent regulations in industries such as healthcare and finance. By leveraging the local device's computing power instead of an expensive cloud-based service, organizations can better predict and contain costs.

For example, in financial services, where safeguarding customer data is critical, AI PCs could run fraud detection algorithms locally, preventing sensitive information from leaving the organization's network. Similarly, in healthcare, doctors might use AI PCs to analyze patient records and medical images onsite, minimizing the risk of breaches and maintaining compliance with data protection laws, such as HIPAA.

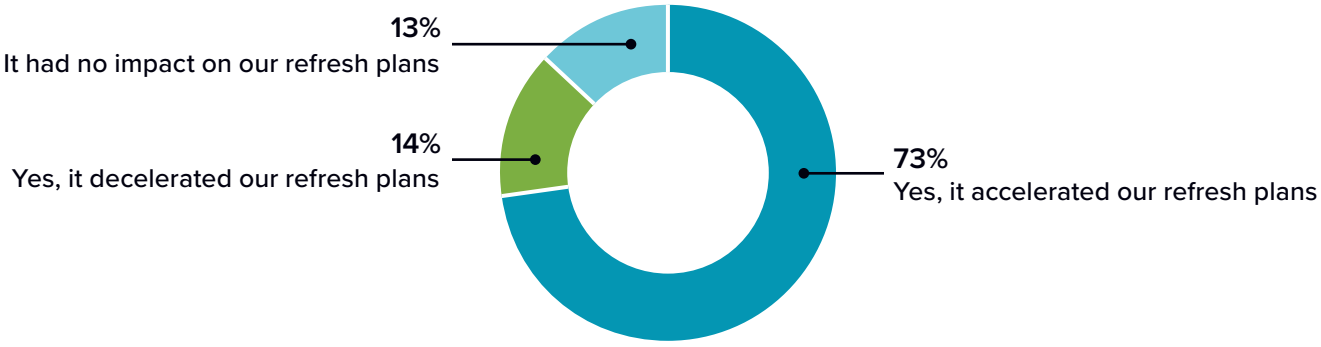
Many of these use cases are future scenarios that depend on ISVs embracing AI PC functionality in their apps and companies adopting AI PCs into their installed base. The former is happening at scale as ISVs rush to enable local AI features in their new and existing apps. Adding AI PCs to the installed base will also see a massive increase this year as companies move to new Windows 11 PCs to address Microsoft's Windows 10 end of service in October 2025.

Our survey revealed that in late 2024, about 58% of the installed bases at respondents' companies were still running Windows 10, with 60% of respondents at these companies saying they would replace those aging systems with new Windows 11 PCs (versus upgrading the old systems to the new OS). Notably, 73% of respondents said that the release of AI PCs has accelerated their PC refresh plans (see **Figure 3,** next page).

FIGURE 3

Impact of AI PC Launch on Refresh Plans

Has the market introduction of AI PCs impacted your organization's plans around its PC refresh?
(Percentage of respondents)



n = 636; Source: IDC's *Worldwide AMD AI PC Survey,* November 2024

The Benefits of AI PCs

Although AI PCs remain relatively new to the market and new Copilot+ systems are just beginning to ship in volume, survey respondents indicated a strong awareness and understanding of the new PC category and the expected benefits. AI PCs' top 3 most compelling features to respondents are the ability to drive more personalized experiences for employees (77%), the ability to help maintain data privacy (75%), and an increased capacity to prevent security risks (74%).

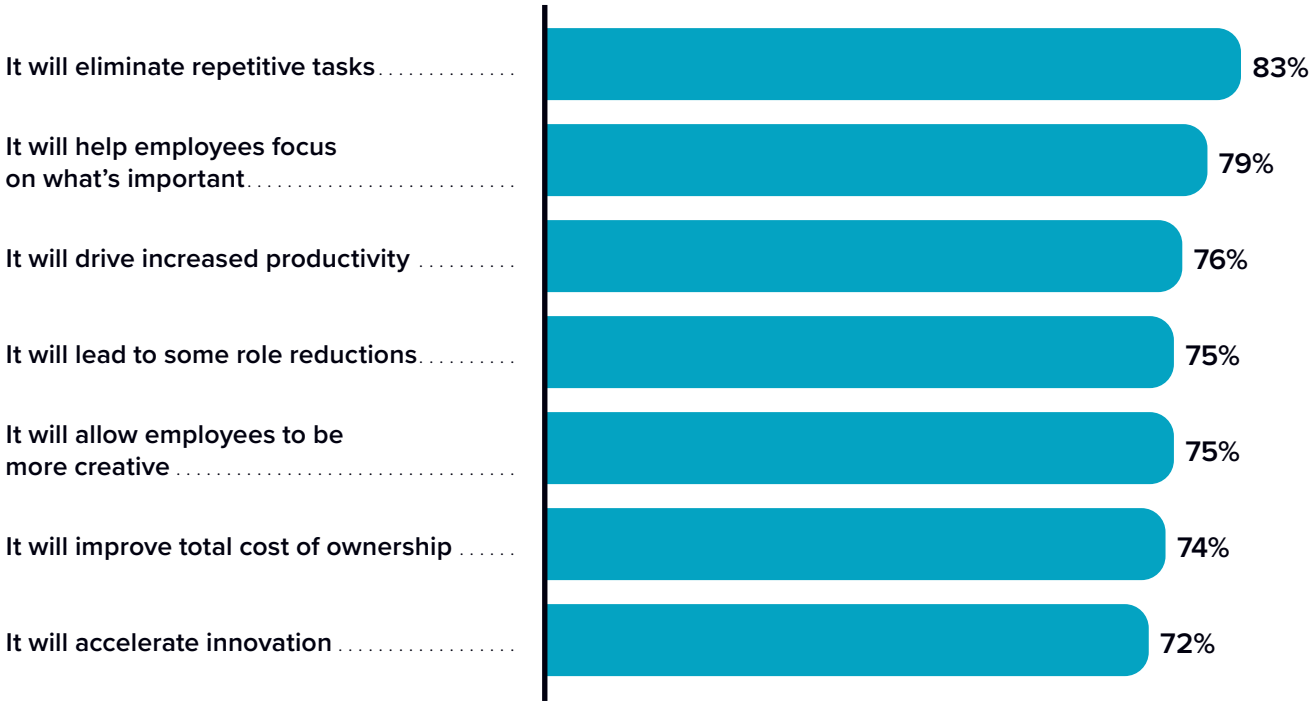
These top 3 features highlight AI PCs' transformative potential in the modern workplace. For example, in the future, they could provide real-time recommendations for project management, offer personalized training modules based on skill gaps, or adapt user interfaces to individual preferences. Organizations could significantly reduce data exposure risks by leveraging on-device AI capabilities, such as running diagnostic models or fraud detection algorithms without cloud dependency. AI PCs also show promise as a first line of defense against cyberthreats, with the potential to identify and neutralize potential vulnerabilities in real time, offering proactive protection against malware, phishing attempts, and unauthorized access.

When IDC asked respondents to predict how AI PCs might impact their employees, an overwhelming majority (82%) said they expect these new systems to have a somewhat or very positive impact on employees. Regarding the impact of AI PCs on their organizations, the highest percentage of respondents said they expect these new systems to help eliminate repetitive tasks, empower employees to focus on what's important, and drive increased productivity (see **Figure 4,** next page).

FIGURE 4

Top Expected Impacts of AI PCs

To what extent do you agree that AI PCs will have the following impact on your organization?
(Percentage of respondents)



n = 636; Source: IDC's *Worldwide AMD AI PC Survey,* November 2024

AI PCs can potentially eliminate repetitive tasks by automating meeting scheduling, email management, and document data extraction. By handling routine tasks, they should free employees to concentrate on more strategic responsibilities. They will also empower employees with tools to work smarter and faster. For example, AI PCs might quickly process and analyze large data sets locally, delivering actionable insights that accelerate innovation cycles. Even simple tools, such as AI-powered document summarization, enable employees to review lengthy reports and quickly focus on key takeaways. By integrating AI directly into employees' daily workflows and enabling teams to concentrate on creative and impactful tasks, these PCs can enhance efficiency and improve job satisfaction.

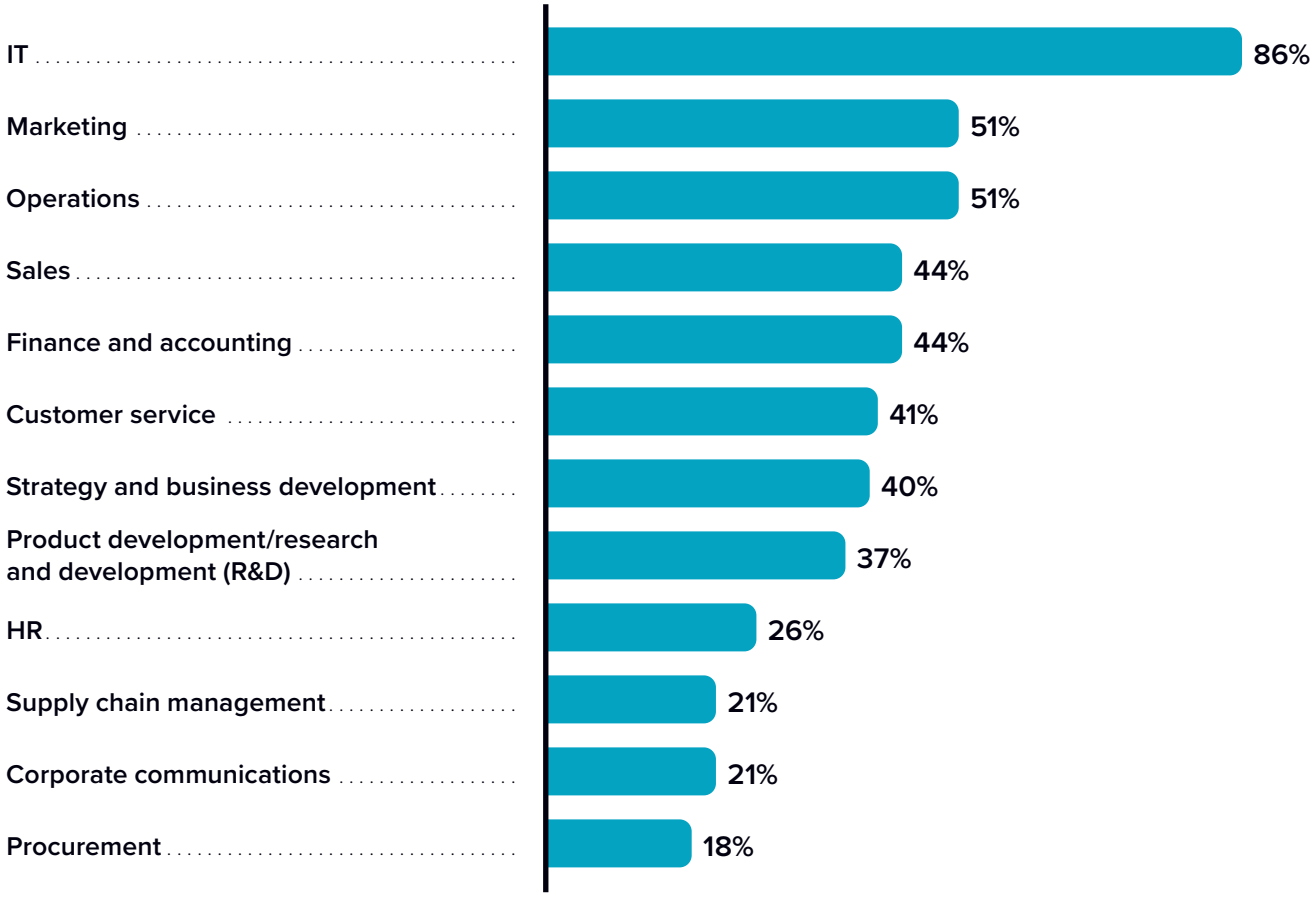
While it's becoming increasingly clear that AI PCs will benefit employees across the organization, survey respondents pointed to IT, marketing, and operations as the departments where they expect to deploy AI PCs first.

In IT, AI PCs could streamline troubleshooting and enhance system security. By automating routine maintenance tasks, IT teams can focus on strategic initiatives, such as infrastructure optimization and innovation. In marketing, AI PCs could help teams craft data-driven campaigns, predict trends, and recommend adjustments to improve engagement. This would allow teams to allocate resources more effectively and achieve higher ROI. In operations, AI PCs could improve efficiency and decision-making by predicting demand fluctuations and recommending adjustments to inventory levels. **Figure 5** shows more details about the departments expected to receive AI PCs early.

FIGURE 5

Top Departments Expected to Receive AI PCs First

Are there specific departments where you expect to deploy AI PCs first?
(Percentage of respondents)



n = 636; Source: IDC's *Worldwide AMD AI PC Survey,* November 2024

While companies are still waiting for AI-enabled apps to ship to the market, respondents are confident that they will soon be able to measure the benefits of AI PC deployment. An impressive 87% of respondents said they are prepared to measure the ROI of deploying AI PCs. Moreover, more than half of respondents said they will pay up to a 10% premium to acquire PCs with a capability of over 40 TOPS (Copilot+ PCs) in the future. This confidence in a future AI PC ROI resulted in **82% of survey respondents saying they plan to acquire some AI PCs between now and the end of 2025.**

Challenges/Opportunities

AI adoption, including AI PCs, brings a mix of excitement and uncertainty. Although its potential to enhance productivity, improve decision-making, and drive innovation is clear, concerns about costs, privacy challenges, and security risks can create hesitation.

To address this, organizations should work closely with their hardware and silicon vendors to fully understand available technologies and how they align with business goals. These partnerships can help demystify AI PCs, enabling companies to identify on-device AI processing that addresses their unique challenges and delivers measurable value.

This approach provides two significant opportunities. First, companies must engage with their primary ISVs to understand their application road maps. ISVs constantly innovate, integrating AI capabilities into software applications to enhance functionality and improve user experiences. Organizations can strategically deploy AI PCs to maximize the benefits of new AI-driven features by staying informed about these advancements.

Second, collaborating with hardware and silicon partners to understand PC and server road maps offers the chance to optimize deployment strategies across datacenters and edge environments. Hardware synergies can help organizations balance performance and cost while ensuring compatibility and scalability. For example, deploying AI PCs at the edge for localized processing while utilizing server systems for large-scale data analysis can create an efficient, integrated AI ecosystem. By aligning strategies with technology road maps, businesses can unlock AI PCs' full potential and build a foundation for long-term success.

Conclusion

ITDMs face the complex challenge of scaling their organizations' AI capabilities without compromising priorities such as security, privacy, performance, and employee satisfaction.

The demand for AI-driven insights and automation is rising across industries, putting pressure on ITDMs to deploy solutions that balance innovation with operational integrity. In this landscape, the AI PC is emerging as a cornerstone of forward-thinking organizations' AI strategies, offering a unique combination of on-device processing power, data privacy, and user-centric design.

Consider AMD

AMD is significantly contributing to the development of artificial intelligence by providing customers with end-to-end AI infrastructure from datacenter, cloud, and endpoint to client. The company's technology addresses various aspects of the AI ecosystem, supporting workloads across a range of environments.

Through partnerships with PC OEMs, such as Dell, HP Inc., and Lenovo, AMD offers a selection of commercial PC options that cater to different needs. These options include systems that are suitable for every workload, from everyday office use to the most demanding applications and workloads.

In addition to working with hardware partners, AMD is also working closely with ISVs, creating AI-infused applications to ensure compatibility with AMD-based systems. This work positions AMD as a contributor to the ongoing evolution of AI infrastructure and software, providing tools and systems to support the needs of businesses and individual users.

About the IDC Analyst

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Tom Mainelli heads the Device and Consumer Research group, overseeing a wide array of hardware and technology categories that cater to both home and enterprise markets. His team's research spans PCs, tablets, smartphones, wearables, smart home devices, thin clients, displays, and virtual/augmented reality headsets. He also co-manages IDC's Supply-Side Research team, which monitors display and ODM production across various categories. IDC's Consumer Research, anchored by the Consumer Market Model, employs regular surveys and proprietary models to forecast numerous consumer-focused activities and spending across hardware, software, and services. As Group Vice President, Tom collaborates closely with company representatives, industry contacts, and other IDC analysts to provide comprehensive insights and analysis on a diverse range of commercial and consumer topics. A frequent speaker at public events, he travels extensively, enjoying every opportunity to engage with colleagues and clients worldwide.

More about Tom Mainelli

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