

White Paper

The Key Role of the PC in Today's Data-Driven Organizations

Sponsored by: Intel

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IDC OPINION

In an increasingly digitized world, the PC remains the primary device for much of the world's data creation, storage, and management. PCs are the linchpin of productivity within the digital enterprise. Despite this, when faced with competing IT priorities, too many organizations have traditionally deprioritized the PC. This is a problem, as leaving old PCs in place can lead to many unintended negative consequences across the organization. During the COVID-19 pandemic, many organizations realized the folly of this approach. Our research shows that even during challenging economic times, intelligent companies plan to keep investing in their already expanded PC installed base. That's because new, faster PCs do more than drive increased productivity – they're also more secure, which is crucial when it comes to protecting your business' data.

Protecting a business' data has become a more burdensome task to IT managers as the amount of data being created increases exponentially and attempts to capture and control that data become more complex. Security is the top concern among IT decision makers (ITDMs) today, as malware and other malicious attacks can cripple organizations for months. Today, PC vendors are building systems with hardware-integrated security solutions as the starting point of the larger security solution. This helps IT managers control their company's data, and employees remain productive even when the next attack comes.

Next-generation PCs do more than facilitate data creation and protection – they also play a role in bringing the right employees into the organization. The PCs a company deploys can directly impact the quality of the candidates it can hire. Increasingly, workers are deciding what jobs to take based on the hardware employers offer. Access to the right tools is becoming essential to retaining talent. Better, faster PCs allow employees to engage with data in new ways. And the rise of hybrid work has altered expectations around when and where employees engage with a company's data.

While workers prefer that their company make the final decision around the business, productivity, and security applications they use on the PC, they would like to have a say in the matter. This shift, driven by the next generation of workers coming into the workforce, has changed how IT needs to work.

Among IT decision makers, there is a tangible shift from focusing on the cost of the PC to emphasizing employee experience and satisfaction. According to a recent Intel-sponsored IDC survey, 93% of enterprise IT decision makers say that device choice is either somewhat important or very important to their ability to recruit and retain talent. Employee satisfaction must be a critical consideration for IT, but it can't come at the expense of security and manageability. The data a company creates, stores, and manages on its PCs constitutes an organization's lifeblood, and there can be no compromise

regarding keeping that data accessible and safe. This white paper takes a closer look at the importance of the PC in a data-centric world, the role of high-performance products such as workstations, and the opportunities associated with upcoming technologies such as artificial intelligence. Finally, this white paper examines the critical role that next-generation PC processors play in the entire ecosystem.

SITUATION OVERVIEW

Importance of Continued PC Investment and New Capabilities

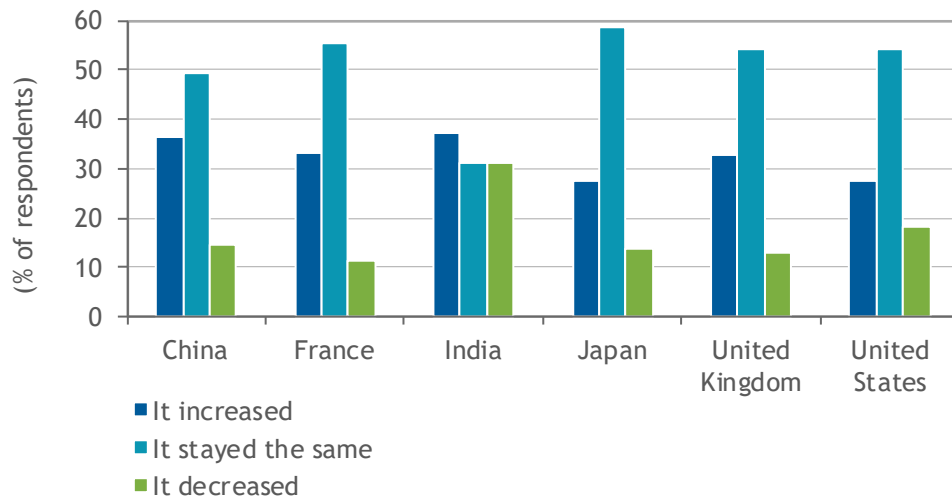
As the world becomes ever more data centric, workloads and jobs are changing. Data workers are running real-time, data-intensive workloads and must be equipped with PCs that keep them productive.

While many companies were forced to move quickly to purchase new PCs to address the rapid shift toward hybrid work in 2020 and 2021, a recent Intel-sponsored IDC survey shows that these companies have no plans to slow down their investments in the PC. When we asked 785 ITDMs across six countries (United States, United Kingdom, China, France, India, and Japan) if the share of their IT budget for PCs increased, decreased, or stayed the same since 2021, 33% said it grew, and 51% said it stayed the same despite the fact that so many companies made large PC purchases during that year. Among companies with 1,000+ employees, the percentage who said it increased was even higher at 34%. For country-level details, see Figure 1.

FIGURE 1

Change in IT Spending on PCs Since 2021

Q. *Has the share of the IT budget for PCs at your company increased, decreased, or stayed the same since 2021?*



n = 785

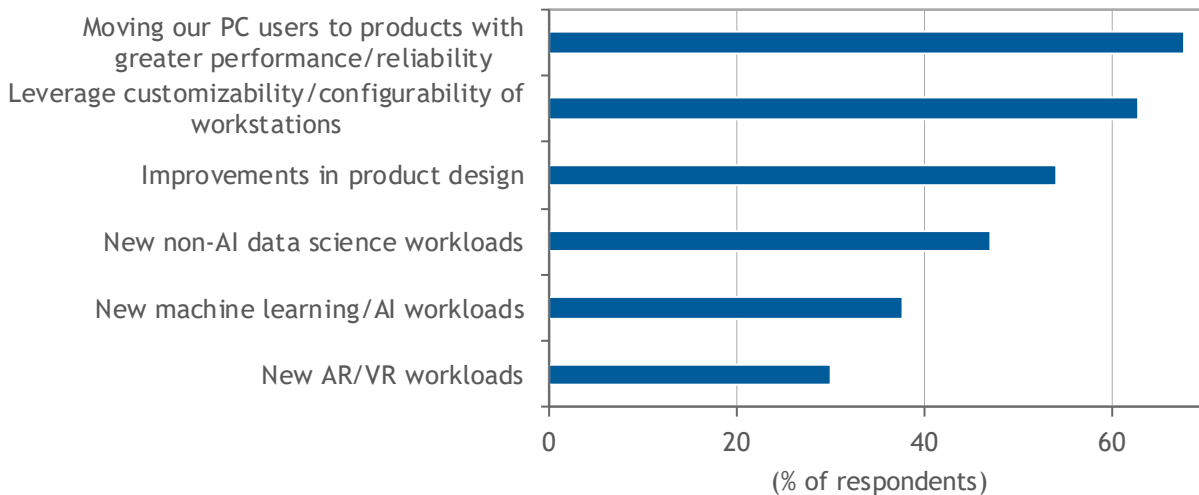
Source: IDC and Intel *Modern PC Survey*, 2023

It's not just the number of PCs deployed into the workforce that is changing, either. The nature of work being done on these new devices has also changed. An increasing number of companies are investing in workstations for their most compute-intensive employees. In 2021, the workstation market grew by 40% year over year. Like the rest of the market, that growth slowed in 2022, but IDC predicts growth will resume in the coming years, led by the expansion of the mobile workstation category. When we asked ITDMs about workstations, 62% said they'd already deployed them in their fleet. And 42% of that group said they had increased the number of workstations deployed in their company in the last year. There is a long list of reasons to deploy workstations, as reflected in Figure 2, but most ITDMs expanded their workstation fleets primarily to leverage the customizability and configurability of workstations.

FIGURE 2

Reasons for Workstation Deployment Expansion

Q. You indicated that you have expanded your workstation deployments. What drove your expansion?



n = 183

Source: IDC and Intel *Modern PC Survey*, 2023

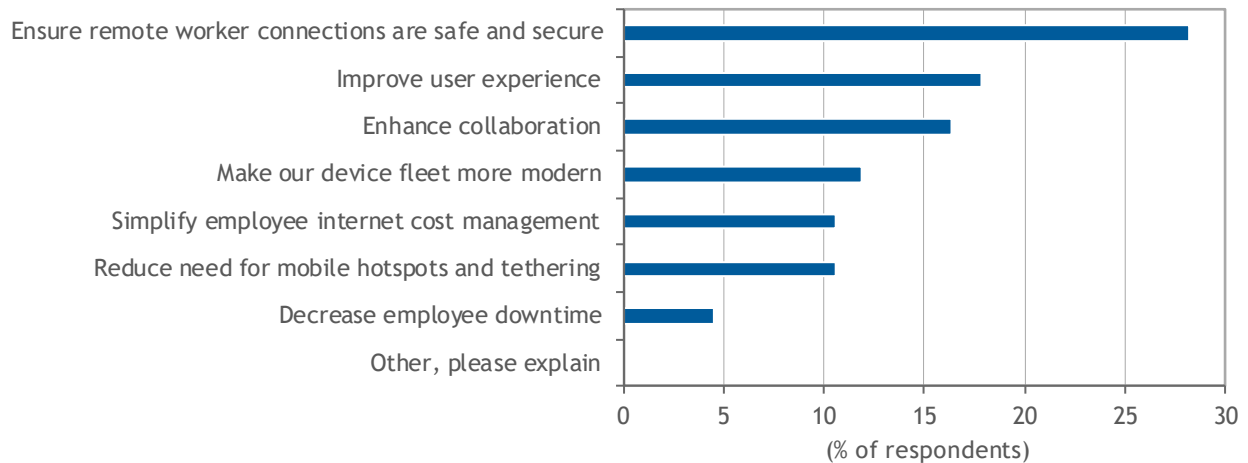
On the horizon, we can expect growth in another PC category: cellular-connected notebooks. Cellular-connected notebooks allow employees to remain always connected to their data more safely and securely. The rollout of 5G has brought bigger pipes, lower latency, more security, and the ability to connect more devices to the network. Growth of 5G will accelerate the data-centric world to its limits as more data is pushed to the edge, providing employees with an increased capacity to stay productive.

About 51% of the companies in the survey have either already deployed some cellular-enabled notebooks or plan to do so. The benefits of an always-connected PC are numerous, but the top 3 reasons cited by ITDMs included ensuring that remote worker connections are safe and secure (28.2%), improved user experience (17.9%), and enhanced collaboration (16.4%). For the complete list, see Figure 3.

FIGURE 3

Benefits of Cellular-Connected PC

Q. You said you have already deployed or likely will deploy cellular-enabled notebooks in the future. What do you see as the greatest benefit of an always-connected PC?



n = 397

Source: IDC and Intel *Modern PC Survey*, 2023

With more PCs in the commercial installed base, and employees working in new ways, tremendous amounts of data are generated daily. While most of this data is being used for content creation, engineering, and modeling, it can also give real-time feedback on how PCs are operating. This allows IT to operate more proactively, identifying potential security, hardware, and software issues before they negatively impact the end-user experience. For IT managers, this is paramount to keep their employees secure, productive, and happy. Moreover, by capturing and analyzing this data, IT can make sure employees receive the right type of PC for the demands of their job.

Growth of Data

The data-centric world does not mean a cloud-only world. According to the survey, despite growth in cloud management and data storage, about 19% of a company's data is still stored locally on the PC.

The Global DataSphere – the amount of data generated and stored worldwide – is expected to grow at a CAGR of 25% from 2016 to 2026, resulting in 221ZB of new data in 2026 compared with 25ZB in 2016. The amount of data generated over the next five years will be at least two times that generated over the past 10 years.

Security is a necessary feature of the data-centric world, and protecting data in today's world is no easy feat. Unfortunately, too much of this data is still unprotected, putting companies at risk. PCs with integrated hardware security features can help protect this data. The key to securing data going forward is easing the burden on IT and ensuring that every PC is protected with an integrated hardware security solution as the central starting point to build the rest of the security story.

IT Decision Makers

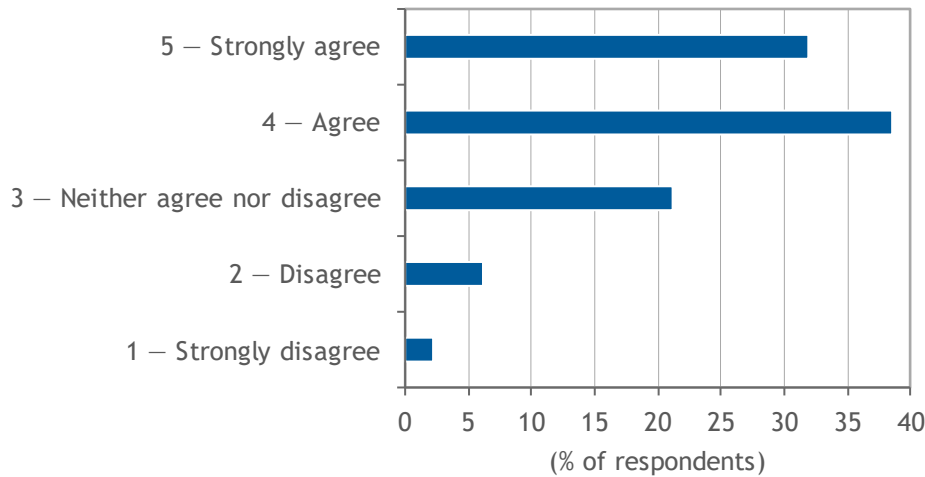
As the PC takes on a new role in the data-centric world, the priorities and concerns of ITDMs change. Employees want a say in what technology is deployed to them, with a direct link to their likeliness to take up and remain in a role.

According to the survey, 51% of ITDMs said the quality of the PC was "somewhat important" when it came to recruiting and retaining employees, while 43% said it was "very important." The importance is even more significant when recruiting younger millennials and Gen Z prospects, as reflected in Figure 4.

FIGURE 4

Technology Impact on Younger Employee Satisfaction

Q. *How much do you agree with the following statement: "Younger millennials and Gen Z prospects are more likely to take a job if they are offered a modern, well-equipped PC as a new employee."*



n = 785

Source: IDC and Intel *Modern PC Survey*, 2023

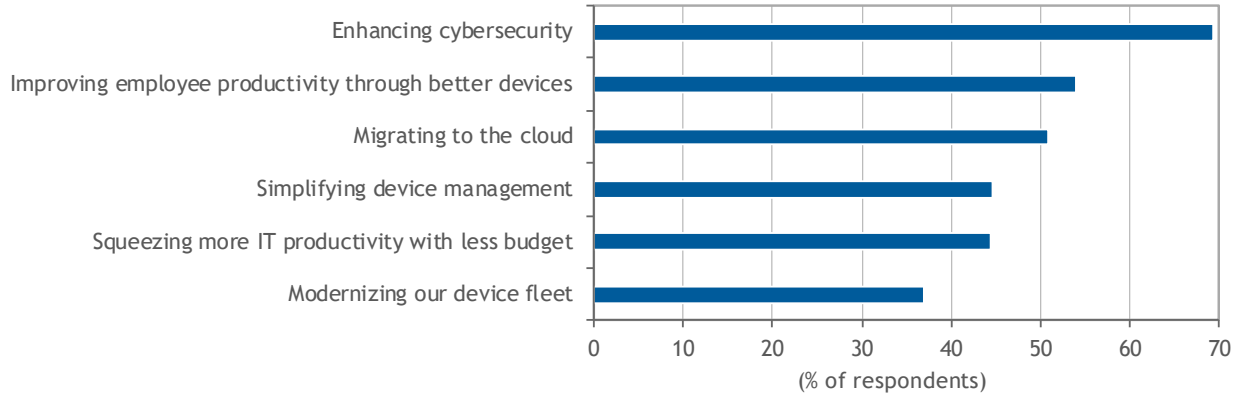
ITDMs are tasked with properly deploying the right device to the right person and protecting that device and the data being created and stored on it. The job of IT has become increasingly complex over time, and the pandemic-driven shift toward more hybrid workforces has only made the job more complicated.

The survey showed that among decision makers, the top 4 IT topics of high priority were simplifying device management, enhancing cybersecurity, improving productivity through better devices, and migrating to the cloud (see Figure 5).

FIGURE 5

Top 5 Concerns Among IT Decision Makers

Q. Which of the following IT topics are of high priorities for your company today?



n = 785

Source: IDC and Intel *Modern PC Survey*, 2023

Device management and cybersecurity rank at the top for a simple reason: Attacks on endpoints have become more complex, and IT managers are struggling to keep up with the shifting threats to their organizations' devices and data. New efforts are being made to make devices more resistant to security breaches, including hardware solutions that protect the PC from the BIOS up. Select silicon vendors have developed hardware-based security features and worked with PC OEMs to integrate them into their PC solutions to keep employees and data safe, making the PC itself the first line of defense in the new world.

Although the role of the PC is ever changing, performance remains a top concern among ITDMs. When we asked respondents for the top reasons for a PC's selection, hardware performance reigned supreme (84%), followed closely by security (75%). Both were notably more important than price (55%), brand (31%), and support (38%).

Increasing employee productivity and device choice can make managing and securing the PC fleet more difficult. This pain point can be further exacerbated for modern organizations with remote workers, workplace hoteling, or flexible staffing models. Ten years ago, work occurred at the office on standardized devices for cost, manageability, and security purposes. Today, work occurs across a spectrum, anytime and anywhere. This has driven up cost and complexity and made choosing trustworthy and dependable partners all the more critical.

CONSIDERING INTEL

Intel has been at the center of and has enabled many of the most transformative innovations in the PC space over the past decade. Its early work with OEMs on the Ultrabook spec spurred a revolution of thinner and thinner notebook designs that persist today. Its work with Microsoft on two-in-ones advanced the convertible notebook and detachable categories.

With Intel's Project Athena innovation program, tomorrow's PCs will increasingly be tuned to give your employees the optimal work experience. Many of today's most desirable PCs are powered by Intel. Forward-thinking IT managers would be prudent in considering the wide breadth of thin and light and convertible notebooks, detachable tablets, compact desktops, and all-in-one PCs that run on Intel. In short, Intel powers the form factors employees want while increasing the productivity and security the companies need.

In addition, Intel's vPro platform has become synonymous with enterprise ready. The Intel vPro platform is built to support the needs of modern businesses, boost productivity, and offer peace of mind with business-class control. PCs with vPro run the gamut in terms of price and performance and today include Xeon-class processors geared toward workstation users. Organizations can serve the rank and file up to the powerhouse users all on Intel vPro platform-based devices.

The Intel vPro platform can help protect your organization with security features directly baked into the silicon. It also enables remote management capabilities that allow for more seamless deployment, integration, and management even when the system is hung or powered off, on premises, or off premises.

Increasing employee productivity and utility while helping IT managers keep up with the complexities is why the Intel vPro platform resonates strongly with enterprises. In the survey, 38% of enterprises listed vPro as either "nice-to-have" or a "must-have" on their PCs.

CHALLENGES/OPPORTUNITIES

The challenge for any PC modernization initiative is that it requires change. The past three years have brought about that change, whether your organization was ready for it or not. And today, the war for talent is only intensifying, and research shows that device choices will increasingly play into the modern organization's ability to recruit and retain talent. Rethinking the PC strategy will require companies to prioritize the PC chain.

Those who commit to a modern PC strategy will find many more exciting devices than ever before. This should subsequently lead to material gains in employee productivity and satisfaction over the long haul.

CONCLUSION

The PC remains the starting and ending point for creating, accessing, and managing data, yet most companies could use an upgrade on how they think about the PC's importance. IT not only must increasingly think about enhancing the employee experience but also must manage and secure an increasingly complex infrastructure. The Intel vPro platform gives IT managers the tools to keep their users happy while keeping their peace of mind.

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