

A Forrester Consulting
Thought Leadership Paper
Commissioned By Intel

January 2020

How PCs Will Drive The Future of Work

Why PC Refresh Matters More Than You
Thought

Foreword

The spread of COVID-19 is upending work-as-usual, and a majority of organizations are now supporting a newly remote workforce. Embracing the right technology is critical in supporting employees in these unprecedented times – 88% of business continuity decision makers indicate a key component of their workforce continuity strategy is provisioning employees with remote access technologies so they can work remotely from a location with internet access.¹ Remote access is more than just collaboration tools; IT decision makers must look at the full spectrum, including data access and Zero Trust security in addition to communication and collaboration technology.

The problem? Remote work was lower on IT leader's priority lists than it should have been, leaving many to scramble. In our research, we found that many IT teams were spending too much time reacting to device issues, rather than proactively creating better employee experiences. COVID-19 has only helped crystalize the fact that IT needs to focus more on enabling workplace flexibility.

Indeed, the COVID-19 crisis has made remote work the norm. However, it's difficult to support remote employees if you haven't embedded cloud-enabled modern management technology, secured hardware and firmware, and embraced Zero Trust — where security measures are baked inherently into the devices, apps, and content that employees use daily — to allow data to flow beyond the security perimeter.

In October 2019, Intel commissioned Forrester Consulting to evaluate the current and potential future states of PC procurement and management. At that time, no one could have predicted that PC management and remote workforce support would become one of the biggest topics on IT decision makers' minds. Although this research was conducted before the current COVID-19 crisis, we know that the themes explored here are more important than ever in today's remote world. We hope the results are beneficial in helping IT departments not only manage through the COVID-19 crisis, but also put the right pieces in place for an increasingly remote workforce in the future.



¹ [Source: "Prepare Your Organization For A Pandemic," Forrester Research, Inc., February 7, 2020.](#)

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91% of IT decision makers note that PC refresh is an important driver of security.



67% of enterprises and mid-market companies plan on investing more in PCs next year than they did this year.

Executive Summary

Employees today expect their technology to work in their professional lives much the same way it works in their personal lives — they expect their devices to be quick, convenient, and powerful. However, many companies are challenged to maintain a secure device environment while simultaneously meeting employees' expectations.

IT departments are struggling to maintain security across their PC environments, leaving employees to deal with poorly timed security updates and outdated tech. Though these problems persist, leading-edge companies are beginning to understand the importance of modernizing PC procurement and management practices to improve employee experience, productivity, and security.

In October 2019, Intel commissioned Forrester Consulting to evaluate the current and potential future states of PC procurement and management. Forrester conducted an online survey with 635 IT decision makers across six countries to explore this topic. We found that while companies are beginning to realize the importance of improving PC performance and supporting their employees, they are struggling to operationalize the tactics they know will drive employee experience (EX) and productivity.

KEY FINDINGS

- › **Improving the performance of PCs to enable better productivity is the top priority for businesses in 2020.** Companies are beginning to realize the value in supporting all employees with modern equipment and supporting remote employees with effective technology. Eighty-seven percent of respondents see the PC as central to their business and recognize that supporting a secure and effective PC environment is crucial for a successful strategy.
- › **However, IT teams often spend too much time reacting to device issues, rather than proactively creating better employee experiences.** While the benefits of empowering employees with advanced technology are clear, IT teams are still struggling to manage refresh cycles and maintain secure environments. Inconsistent and inconvenient PC updates, which inevitably disrupt employees' daily work, negatively impact employee productivity and experience.
- › **A majority of companies are investing more to improve EX and security.** Companies see the vision of the future of computing — shorter refresh cycles, modernized PC management and security — but are unclear how to reach those goals yet, leaving lots of room for growth. Eighty-five percent of information technology decision makers (ITDMs) noted that their leadership understands the link between PC refresh, employee experience, and productivity, but they are still struggling to lay the groundwork for their organizations to operationalize.

Companies Are Driving Productivity Gains Through PC Refresh And Management Modernization

Too many employees today still feel left behind by their company-provided technologies. With the number of remote employees growing and employees' technology expectations ever-increasing, companies are rethinking their budgets and priorities. Our research found that:

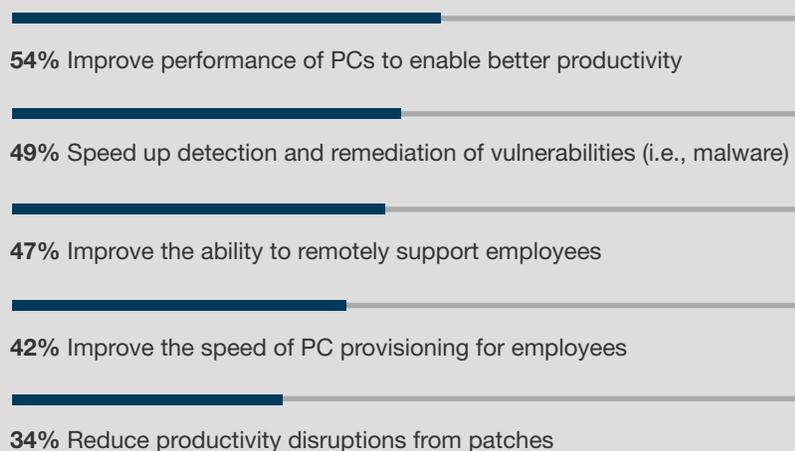
- › **Enabling higher productivity is the top business goal for 2020.** IT decision makers recognize that technology plays an outsized role in driving higher employee productivity and a better experience overall (see Figure 1). Businesses recognize that one the key challenges they face today is an engaged workforce. In fact, according to a Forrester report, global employee engagement hasn't improved in the past 17 years that it's been tracked – in the US, “only 32% of employees are engaged, meaning they're involved in, enthusiastic about, and committed to their work and workplace.”¹ By shifting their focus to improving the performance of PCs, businesses are beginning to recognize that they will be able to improve not only employees' productivity, but also their engagement.



Only **32%** of employees are **engaged**, meaning they're involved in, enthusiastic about, and committed to their work and workplace.¹

Figure 1: Top 5 2020 Priorities

“Thinking about the technology you provide your employees, what are your top priorities for the next 12 months?”



Base: 635 IT decisions makers in North America, EMEA, and Japan
Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, October 2019



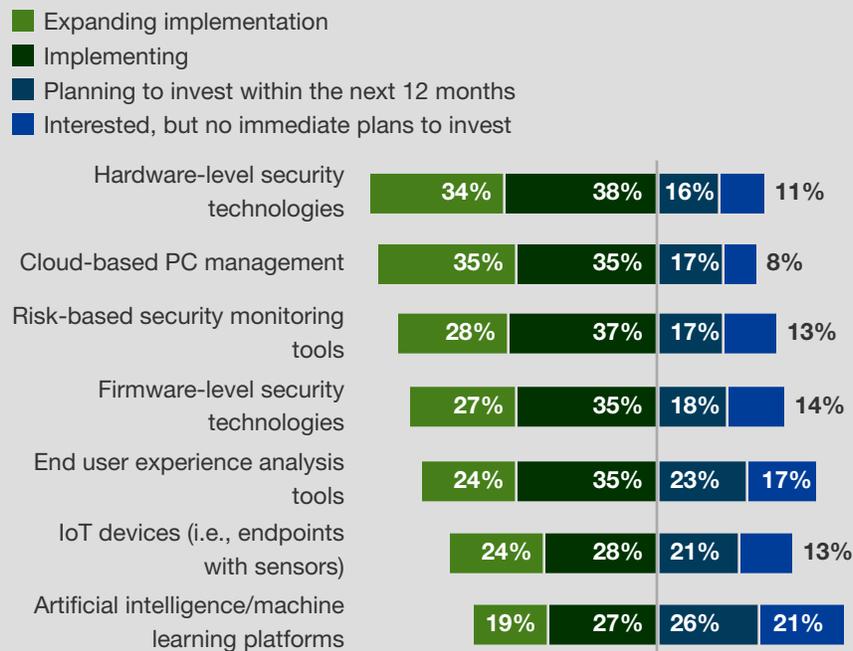
Top priorities for businesses are performance, security, manageability, and stability.

- › **PC procurement and management modernization will be the leading budget items for IT departments seeking to fulfill these goals.** Improving the speed of PC provisioning for employees will be a top priority for 2020, with 45% of respondents reporting they intend to increase group/department spending on technology products or services, on average by 7% over the next 12 months. This will be a 3% increase from the past 12 months. While the lion's share of current investments goes to hardware-level security tech and cloud-based PC management, end user experience analysis tools and artificial intelligence/machine learning platforms will see the largest increase of investment (see Figure 2).
- › **IT teams are managing large fleets of PCs.** On average, 70% of PC devices are employer-provisioned, leaving businesses to manage and maintain over 9,000 individual devices. At the same time, bring-your-own-device (BYOD) programs remain popular; nearly two-thirds of companies support BYOD programs for their employees. However, variation by national market on BYOD is strong. In APAC, only 53% of organizations support BYOD programs.

Businesses understand that driving productivity means employing updates to policies concerning PC procurement and management, but their BYOD and PC provisioning policies haven't quite caught up. Businesses must increase efforts to align both of these areas to empower remote employees and drive productivity.

Figure 2

“Which of the following technologies, if any, are you investing in?”



Base: 635 IT decisions makers in North America, EMEA, and Japan
 Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, October 2019

Top technologies are:

- Hardware-level security technologies
- Cloud-based PC management
- Risk-based security monitoring tools
- Firmware-level security technologies

IT Teams Struggle To Maintain Secure Environments In Today's Complex PC Landscape

Businesses understand that updated technology and hardware will help enable a faster, happier workforce. Still, IT departments are stuck playing catch-up and filling in the gaps of insecure computing environments. Especially in today's Zero Trust environment, where security measures are baked inherently into the devices, apps, and content that employees use daily, IT teams are left scrambling to build secure and productive environments. Rather than spending time proactively detecting vulnerabilities and enabling employees in new ways, IT departments are reacting to device issues and managing unoptimized PC update cycles. In other words, there is too often a perceived tradeoff between security and employee experience.

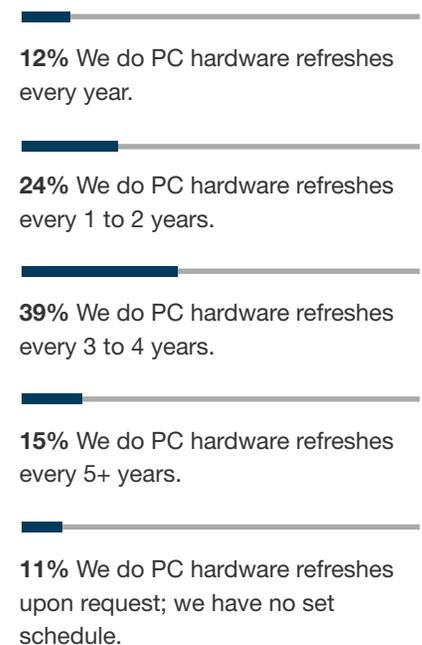
- › **Despite recognizing the importance of PC refresh, many companies are stuck in their old refresh model.** Ninety-one percent of IT decision makers agreed that PC refresh is an important driver of enterprise and endpoint security. But a majority of companies (54%) only refresh their PC hardware every three years or more, undercutting security effectiveness (see Figure 3). At the same time, most PC software is updated weekly or monthly. Despite this frequency, 53% of ITDMs fear a major security breach within the next two years, regardless of their best efforts, and only 40% strongly agree that their IT department can successfully secure employee PCs. This underscores the complex environment that IT teams are left to securely manage, and the difficulty of maintaining secure and productive PC environments concurrently.
- › **IT teams acknowledge being more reactive than proactive when addressing device issues.** The top challenge ITDMs noted they currently face in their computing environment is spending too much time reacting to device issues, rather than proactively addressing them. IT teams struggle to gain visibility into which devices need updating and pinpoint vulnerabilities, leaving them to react to issues only as they appear. And despite recognizing the opportunities of modern OS-as-a-service solutions, which can help with these visibility concerns, most businesses have only implemented them on some PCs (see Figure 4), in part because they find managing modern OS-as-a-service presents new management challenges.
- › **IT teams and employees alike express frustration at the current state of PC management.** Inconsistent and inconvenient PC updates, which inevitably disrupt employee productivity, contribute to a majority of employees expressing displeasure about PC performance. Only 36% of IT decision makers believe their current computing environment enables employee productivity, which makes it less of a surprise that 51% of ITDMs note that employees often express displeasure to their IT teams about their PC's performance. ITDMs struggle to ensure consistent updates across all end-user devices, provide adequate remote support for mobile employees, and ensure consistency of PC management across different OEMs, which results in both frustrated IT teams and employees.



91% of ITDMs agree that PC refresh is an important driver of enterprise and endpoint security.

Figure 3: PC Refresh Cycles Are Infrequent

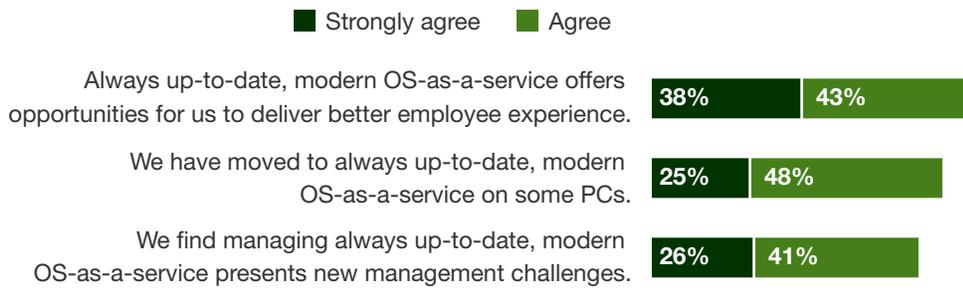
“On average, how often is the PC hardware refreshed?”



Base: 635 IT decisions makers in North America, EMEA, and Japan
Note: Percentages do not total 100 because of rounding.
Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, October 2019

Figure 4: Always Up-To-Date Modern OS-As-A-Service Presents New Opportunities And Challenges

“How much do you agree with the following statements about operating systems (OSes)?”



Base: 635 IT decisions makers in North America, EMEA, and Japan
 Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, October 2019

Prioritize PC Refresh Investments To Boost Productivity And Employee Experience

Leading-edge businesses have begun to realize that investing in PC refresh and updated PC management is the quickest way to not only improve employee satisfaction, but also to decrease security vulnerabilities. Forrester research reveals that the top 1% of performers in high-complexity knowledge work are 127% more productive than average performers, and up to 47 times more productive than the bottom 1% of performers. The key to performance is the ability to self-regulate attention and stay focused on the task at hand.² Consistently being able to focus on work (and not get distracted by PC updates or issues) is not only good for productivity, but also good for overall engagement. This realization is driving more businesses to invest in cloud-based device management with higher-performing, more secure PCs.

- › **Leadership understands the value of always-up-to-date PCs.** Eighty-six percent of ITDMs said that PC refresh is an important driver of employee productivity, and 87% agreed that PC refresh is an important driver of employee experience. Fast, better PCs allow employees to work more efficiently and effectively. Critically, leadership understands this as well: 85% of ITDMs indicated that their leadership is bought into the value of updated PCs.
- › **Despite PC management challenges, ITDMs plan to increase investment in PCs.** Eighty-seven percent of IT decision makers said that PCs are central to their business and 67% acknowledge that they will be investing more on PCs in 2020 than they did in 2019 (see Figure 5). Businesses are already investing in cloud-based device management (56%), more secure devices (55%), and higher-performing chips (48%) as methods of improving their computing strategy. This is enabling a faster, more secure, and more productive work force.

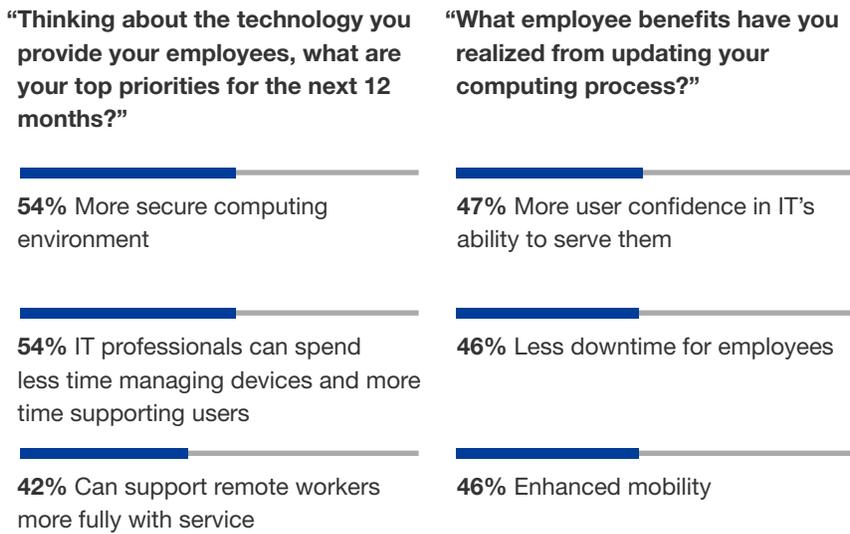
Figure 5



Base: 635 IT decisions makers in North America, EMEA, and Japan
 Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, October 2019

› **Updating computing processes benefits both IT professionals and the employees they serve.** Businesses that are investing in improving their computing strategies are specifically improving their IT employees' experience. Fifty-four percent of ITDMs noted that with an improved computing process, their IT professionals are able to spend less time managing the minutiae of their devices and more time supporting end users. That sparks not only an improvement in IT employees' job satisfaction, but also an improvement in the end-user employees' day-to-day experience as well (see Figure 6). Similarly, ITDMs reported an increase in employee confidence in IT's ability to serve them and less downtime for employees with improved computing processes.

Figure 6: Top 3 Technical And Employee Benefits Experienced



Top benefits include more secure environments, better remote support, and more user confidence in IT's ability to serve them

Base: 621 IT decisions makers in North America, EMEA, and Japan at organizations that are investing to improve their computing strategy
 Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, October 2019



Key Recommendations

Forrester's in-depth survey of IT decision makers about end user computing modernization yielded several important recommendations:



Construct your end user computing plan around employee experience.

Placing employee experience at the center of your analysis will lead to better decisions around every tactic and policy you choose to employ. Customers benefit when EX is high, and the company itself earns more money. Technologies like PCs and the policies around them can either drive or hinder EX, so they need to be at the forefront of your strategy.



Throw out the traditional refresh cycle. The old method of “replacing PCs every X years” is outdated. Too often, PCs don't match the needs of specific employee groups. Disaggregating this policy (for example, by segmenting the workforce) is one way to approach it. Other strategies are to expand the number of choices of company-owned machines and the frequency with which employees can make those. Finally, adopting PC-as-a-service instead of ownership can drive more rapid refresh.



Embrace modern management tools. Improving employee experience will be impossible if IT teams remain mired in undifferentiated PC management tasks of the past. Leveraging a modern toolkit of cloud-based APIs, conditional access, and deployment automation will enable technology leaders to adapt to the needs of employees faster, cheaper, and easier.



Solicit input from employees to cocreate their experiences. How you do it is just as important as what you do. Embracing the viewpoints and needs of employees themselves to cocreate a strategy will drive up employee experience. But it's not just a single, monolithic group; employees in different roles will have varying needs and should be considered accordingly.



Make no compromise between security and experience. The new security model based in Zero Trust means security is baked inherently into the devices, apps, and content that employees use daily. At the same time, embracing a data-centric approach to security enables greater flexibility for employees to work remotely, access data from different locations, and choose their own devices and apps for work. Your security strategy should fundamentally drive a better technology experience, not inhibit it.

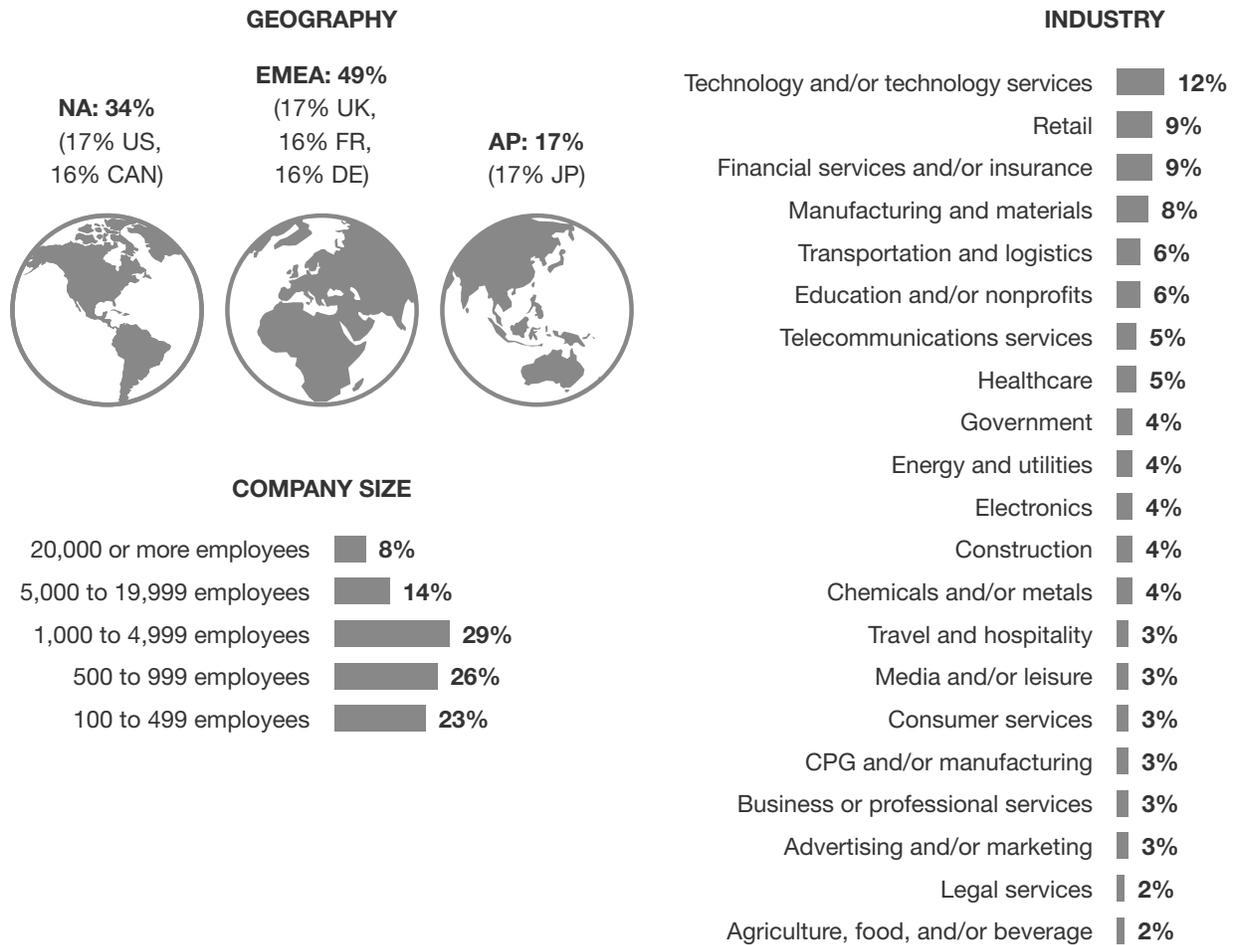


Think holistically about PC platform support. As the need to improve employee experience increases, enterprises will naturally need to invest in native PC platform capabilities for management, security, performance, and stability. Why? Point solutions for each area will only increase complexity and contribute to experience degradations. Be sure to evaluate your PC platform's capabilities holistically when making an investment to improve PC experience.

Appendix A: Methodology

In this study, Forrester conducted an online survey of 635 IT decision makers in North America, EMEA, and Japan to explore enterprise investments in PCs. Survey participants included decision makers with influence over technology selection strategy. The study was completed in November 2019.

Appendix B: Demographics



Base: 635 IT decisions makers in North America, EMEA, and Japan
Source: A commissioned study conducted by Forrester Consulting on behalf of Intel, October 2019

Appendix C: Endnotes

¹ Source: “The Employee Experience Imperative,” Forrester Research, Inc., December 15, 2017
² Source: “The Digital Employee Experience Drives Engagement And Productivity,” Forrester Research Inc., April 14, 2017