WHITE PAPER

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Maintaining PC Refresh Cycles While Leveraging PC Innovations

Security, productivity, and efficiency enhanced by hardware-based breakthrough features

40%

In the U.S., 40% of survey respondents refresh their PCs every three years or less.

SOURCE: IDG RESEARCH "GLOBAL PC REFRESH STUDY"; GLOBAL BASE: 200.

Introduction

The vast majority of work worldwide is done on computers using the Microsoft Windows* operating system running on Intel® Core™ vPro™ processors, and those computers typically get replaced every two to three years. With developments such as the release of Microsoft Windows* 10, widespread disruption from digital transformation, changing security threats, and the rise of mobility, delaying PC refreshes or extending PC refresh cycles can put organizations at risk of falling victim to sophisticated cybercrime and increased competition.

A legacy PC that is 3 or more years old can become both a drain on productivity and a security risk. But by staying current with the latest features and innovations while continuing with timely PC refresh cycles, businesses of all sizes can help better protect valuable identities and information while maintaining costs and capitalizing on emerging PC technologies. This approach enables organizations to manage predictable PC refresh cycles, which new research shows is linked to providing a modern, secure, and productive computing infrastructure.

PC Refresh Cycles: The State of Play

IDG Research recently completed the "Global PC Refresh Study," surveying 200 respondents from organizations with more than 500 employees in the United States, UK, Germany, and Japan. The goal was to understand trends in PC refresh cycles and endpoint security—including how old computers and postponed refresh cycles are holding back organizations—and how they can work to deliver increased security and enable digital transformation. The study focused on IT managers and directors as well as C-level executives across a broad spectrum of industries.

Among the key findings in this research, sponsored by Intel, was that almost three-quarters of organizations refresh enterprise PC fleets at least every three years.

Refresh cycles are slightly shorter in the United States, where 40% of the respondents refresh PCs in under three years. The research also discovered that larger organizations tend to refresh more frequently, likely in response to emerging security threats and productivity demands. Windows* 10 is by far the most common operating system in use at respondents' organizations, regardless of the length of PC refresh cycles. More than half of all current operating systems deployed by the respondents are running Microsoft Windows* 10.

IT support departments within the companies surveyed typically face the greatest demands due to the increased

number of security incidents and PC-related help desk requests within the organization and the increased IT staff time spent on PC inventory management—and there's not much variance in these findings based on the length of an organization's PC refresh cycle.

The research concluded that PC refresh cycles are driven chiefly by security considerations and the burden placed on IT staff resources—especially in the United States. Although companies use PC refresh cycles primarily to boost IT and user productivity, endpoint security features were also identified as a key benefit. Organizations are increasingly coupling the need to increase productivity with the pressing need to bolster the security of endpoint devices.

Timing Is Everything

The research revealed key correlations between the length of time between refresh cycles, realizing critical benefits, and meeting key IT objectives. The top drivers for PC refresh are consistent across companies—whether they refresh PCs every three years, in less than three years, or in more than three years:

- Better performance and multitasking
- Timing—many companies need to reduce the time to refresh legacy PCs to prosper in a new services world
- Security concerns
- Standardization across the PC fleet
- End user requirements, such as the need for greater productivity and collaboration

However, the research found that these drivers are felt more strongly by organizations with refresh cycles longer than three years, perhaps because the longer the refresh cycle, the greater the need for productivity-enhancing innovations and improved security.

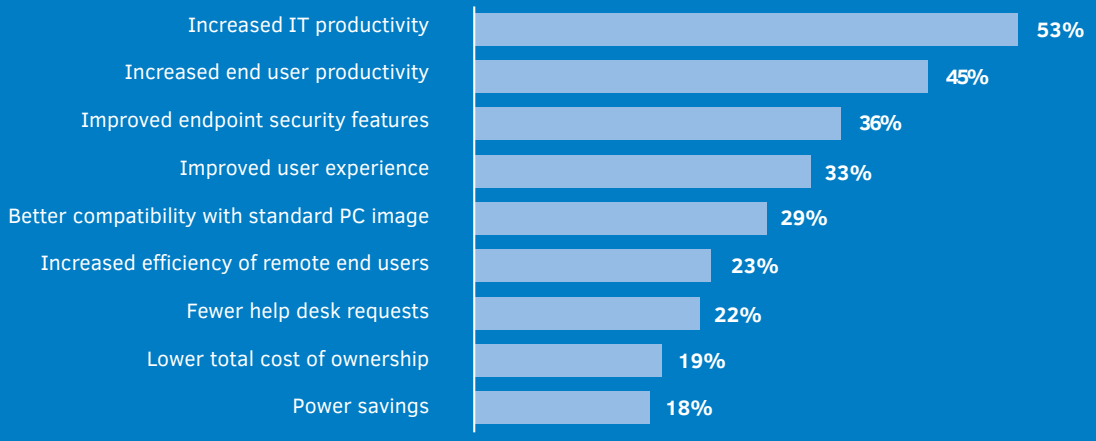
Addressing PC Refresh Drivers in New Silicon

One way to address PC refresh drivers is to consider deploying new computers powered by the Intel® vPro™ platform. The latest computers powered by the Intel® vPro™ platform provide built-in solutions for business-class computing that help handle four of the main business requirements in traditional refresh cycles:

- Improving performance
- Increasing productivity
- Strengthening endpoint security
- Enhancing device manageability

Advanced capabilities of new processors

Figure 1. Top organizational benefits of PC fleet refresh



SOURCE: IDG RESEARCH "GLOBAL PC REFRESH STUDY"; GLOBAL BASE: 200.

The most agreed-to statement by respondents—regardless of the frequency of their refresh cycles—was, "PCs with stronger security, better performance, and platform consistency are the foundation of an always up-to-date enterprise."

strengthen the new security features, enabling organizations to directly leverage processor technology to provide deeper, hardware-based protection. That makes it more difficult for cybercriminals to access and infiltrate enterprise PCs. When user biometrics replace passwords, IT tickets drop significantly, and when these keys are based in silicon, they're less susceptible to tampering. Silicon-grounded endpoint device protection makes it more difficult for cybercriminals to attack PCs and significantly lessens the attack surface that must be protected.

This comprehensive approach to hardware enhanced security starts with he latest computers powered by the Intel vPro platform and the Intel® Authenticate solution.

The latest version of the Intel Authenticate solution supports an even wider range of login factors so people can become their own password, including fingerprint and the latest addition of facial recognition. It also gives IT the confidence of hardening factors and IT policies at the silicon level. When credential keys, tokens, and policies are processed in the chip, they're much harder to see or reach.

Efficiently Protecting Diverse PC Fleets

Predictably, newer PC fleets have considerably more solutions in place for off-network protection that can defend organizations from as-yet-unknown threats. When asked to rate their level of agreement with general statements, the statement most agreed-to by respondents—regardless of the frequency of their refresh cycles—was, "PCs with stronger security, better performance, and platform consistency are the foundation of an always up-to-date enterprise."

The ability to improve performance and security while ensuring consistency of management across multiple PC form factors is crucial for ensuring that the enterprise is consistently prepared to address computing challenges. Organizations with shorter PC refresh cycles tend to rate their PC fleets much better on every item in a security checklist—in the following order:

1. **Safeguarding data beyond firewall**
2. **Protection of credentials and IT policies**
3. **Flexible factor breadth for customization**
4. **Remote manageability for recovery**
5. **Multifactor transformation of passwords**
6. **Continuous and transparent protection**

This is likely because more-frequent PC refresh cycles provide greater flexibility in delivering PC innovations to users and protecting PCs against emerging security threats, whether the user is computing from behind a corporate firewall or while traveling or working from home. In addition, organizations with refresh cycles of more than three years reported a higher increase in user complaints over the last 12 months, demonstrating that the longer an organization's PC refresh cycle, the greater the frustrations felt by users.

Developing an Action Plan

PC refresh strategies are closely aligned with the idea of modern, secure, and productive enterprise IT. The Intel vPro platform provides a suite of hardware, technologies, and solutions that help consistently power an innovative range of premium business computers.

For modern workforces and IT organizations of all sizes, computers with the Intel vPro platform badge meet some of the highest standards for processor performance and stability while also enabling Intel's best experiences for hardened security and remote and out-of-band manageability.

By regularly deploying PCs that leverage innovation and improve security, the enterprise can increase workforce performance and device and data security.

55%

Of all respondents have had an increase in security incidents over the last 12 months.

SOURCE: IDG RESEARCH "GLOBAL PC REFRESH STUDY"; GLOBAL BASE: 200.

Organizations can deploy PCs in multiple form factors to increase productivity, contain costs, and simplify support and management for fleet operations.

Security Challenges Must Be Addressed

The research points out the security challenges organizations need to address. Of those surveyed by IDG, 55% have had an increase in PC security incidents over the last 12 months. Modern hardware-based security plus software-based security measures are needed to secure endpoint devices.

Modern PCs enable IT to take advantage of security built into the foundations of PC hardware as well as PC software applications to ensure that users are protected and secured when they are working beyond the protection of enterprise firewalls. Hardware enhancements can augment and strengthen traditional software-based device security measures and provide greater protection by anchoring critical validation processes and policies in the depth of the processor—farther from reach and from sight.

Advances in silicon enable organizations to make use of hooks inside processors to complement and strengthen PC security capabilities, and they enable greater flexibility in deploying the right device form factors securely for each user segment. Top security concerns such as endpoint security, multifactor authentication of passwords, two-factor authentication, and biometrics can all be addressed with silicon solutions as another layer of protection.

There also seems to be substantial room for improvement by organizations with longer PC refresh cycles. Newer PCs were considered by the survey participants to be more secure and more capable of addressing their concerns about security and data protection.

Greater Productivity and Manageability Needed

In a mobile-first, cloud-first world, the demands of heavy data are also putting more pressure on endpoints. The sheer volume of operations needed to analyze, synthesize, store, and share today's complex workloads is unsustainable on old devices, and productivity pays the price.

It's important to recognize that increasing user and IT productivity and improving the manageability of endpoint devices are important non-security-related drivers of PC refresh cycles. The enterprise has to achieve better device performance and improved multitasking capabilities, and standardization across a PC fleet is essential for improving IT efficiency. Most important of all, the enterprise should ensure that end user requirements for devices that improve productivity and streamline collaboration are successfully addressed in each PC refresh.

Advances in silicon are enabling a form factor renaissance enabling enterprises to optimize device platforms to meet the diverse requirements of multiple types of users while ensuring security. A one-size-fits-all approach to deploying and managing computing devices is no longer practical as organizations tailor functionality, form factor, storage, and processing power based on the productivity requirements of users throughout the organization.

"Flexible form factors allow workers to remain productive whether they're in an office environment, on the factory floor, or presenting to customers," says Tom Garrison, General Manager of Connected Home and Commercial Client at Intel. "That's a powerful change in how people are working, and it's making IT rethink device requirements and optimize devices for the work environments where they will be used."

Through a portfolio of built-in solutions, the Intel vPro platform provides consistent productivity and manageability options, enabling IT to secure endpoints and lock the door to hackers.

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Summary

The business world is moving fast, and enterprises need the latest technology, like Microsoft Windows 10, in order to embrace the digital workplace. A PC that is greater than three years old is simply not equipped to do this, nor does using legacy technology to attempt to empower the growing next-gen workforce. Through a portfolio of built-in solutions, the Intel vPro platform provides consistent security and manageability options for increasingly diverse PC fleets.

Taking advantage of PC innovations while managing PC refresh cycles is an important challenge facing the enterprise. The demands of today's business world place a burden on organizations to modernize IT—including their PC fleets—across all form factors. Maintaining a regular PC refresh cycle helps an organization run a more efficient and secure computing environment.

To optimize security features, hardware enhancements from Intel strengthen software-level protection to combat sophisticated threats. To optimize productivity, devices powered by the Intel vPro platform provide long battery life, smooth multitasking, and fast responsiveness for an exciting range of form factors. With increasing demands for digital transformation, the need to combat emerging security threats, and the requirement for greater mobility, maintaining or even shortening refresh cycles can help organizations maintain a modern, secure, and productive enterprise.

For more information, visit **Intel.com/PCRefreshNow**