Why You Should Read This Document

This planning guide is designed to help IT managers plan their device upgrade strategy based on decisions that help manage costs and maximize user productivity.

There’s a balance to be achieved between the direct costs associated with upgrading and the overall value gained by increasing productivity with newer, more secure mobile devices. By understanding all the factors that contribute to total cost of ownership, you can develop a stronger business case for upgrading that moves beyond budget constraints to focus on value.

You’ll also find out how the interactive Business Client Refresh ROI Estimator tool can help you evaluate the potential ROI of device refresh using your own organization’s unique data.
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The Risks of Aging Devices

Today’s IT organizations are juggling constant change. The environment is rife with new security threats, and consumerization has brought an influx of personally owned mobile devices into the workplace. Employee expectations around technology have changed; users now want the same level of flexibility with services and devices that they experience at home. Complicating matters are aging devices that can’t guard against the latest malware, run advanced software, or deliver on portability and speed. And newer, more sophisticated applications can easily slow performance on older systems, becoming a drag on user productivity.

All of this can have a significant impact on the total cost of ownership (TCO) for the enterprise. While delaying the replacement of older devices may seem like a cost-saving approach, the reality is that the growing IT support costs of these devices combined with the time users spend troubleshooting them will quickly surpass any expected savings.

The bottom line is that users are insisting on a new level of mobility that many older devices simply can’t deliver. And while efficiency gains can be somewhat difficult to quantify, new mobile devices are continuing to deliver greater productivity value across the business.

The Purpose of This Guide

The purpose of this guide is to help IT managers plan their device upgrade strategy based on decisions to help manage costs and maximize user productivity. There’s a balance to be achieved between the direct costs associated with upgrading and the overall value gained by increased productivity with newer, more secure mobile devices.

Intel has identified the key factors to consider for upgrading the devices in an enterprise environment, from user productivity and IT support to data security and device manageability.

By understanding all the factors that contribute to TCO, IT managers can develop a stronger business case for upgrading that moves beyond budget constraints to focus on value.

In addition, Intel has developed the Business Client Refresh ROI Estimator tool to help you evaluate the potential ROI of device refresh. Created with industry experts and Intel IT, this interactive tool is specifically designed to help you assess the business value of replacing devices using your organization’s unique data.
When upgrading the devices in an enterprise organization, gauging potential ROI can be complicated. It requires an assessment of all the costs to deliver an IT service, and the value that users and the business gain from it—throughout the life of the service.

This paper evaluates the IT service of delivering and supporting enterprise devices that are necessary to enable business processes, protect corporate data, and facilitate employee productivity. There are three primary cost and value categories that contribute to ROI over the life cycle of any device:

- **Direct IT costs** – These direct business costs are associated with device life-cycle management, including purchase, delivery, infrastructure, security, user support, repair, and replacement.

- **End-user costs** – These indirect business costs represent the time that end users spend troubleshooting or fixing older devices, in addition to the time spent learning to use a new device.

- **Productivity gains** – This is the value of additional productivity time gained by users after upgrading to higher-performance devices or devices that increase employee mobility.

Even though today’s business workflows are dependent on readily available devices with instant access to data, many organizations find it difficult to pinpoint the exact value of end-user costs and productivity gains. Yet these two categories play a significant role in total cost of ownership, and these costs can be amplified for remote workers or higher-salaried managers and executives.

**Industry Experts Weigh In**

In April 2013, Harris Interactive conducted a survey of office computer users, and the findings reinforce the significance of end-user costs. The survey found that 29 percent of office computer users identify computer problems as a top reason for decreased productivity. And when computers have problems, more than half of office workers (53 percent) are opting to either fix their own computer or ask a coworker for help, which creates hidden business costs by draining organizational efficiency.

Moreover, Gartner Analyst Federica Troni explores how end-user costs and other cost category drivers can impact TCO for notebooks in Gartner’s *Notebook Total Cost of Ownership: 2013 Update*. Insight on these categories is shown in the following graphic, which depicts a mobile worker (referred to here as “day extender”).

**Cost Categories for Moderately Managed Day-Extender Notebooks**

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin. labor</td>
<td>$217</td>
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<tr>
<td>IT ops labor</td>
<td>$627</td>
</tr>
<tr>
<td>Hardware and software</td>
<td>$1,159</td>
</tr>
<tr>
<td>End-user costs</td>
<td>$2,855</td>
</tr>
</tbody>
</table>

Figure 1. Chart created by Intel using source data from Gartner, *Notebook Total Cost of Ownership: 2013 Update*, Federica Troni, May 2013 (Gartner G00250520) from figure titled “PC TCO 2013—Same User Mix” selecting TCO data for moderately managed day-extender notebooks.
Key Factors That Impact ROI

When evaluating the cost and value of upgrading, there's a delicate balance to be found between direct IT costs, end-user costs, and productivity gains. With any upgrade, it's important to account for the full business use case and IT support model for all devices, ranging from purchase, deployment, and IT administration to support, security, and disposal—and everything in between.

In this paper, we will review the four key decision factors that have the most significant impact on ROI. These factors include device age, intended device usage, the degree of user mobility, and how the device is managed.

- **Device age** – The age of the device can greatly impact user productivity and the need for IT resources, becoming an important factor in determining the right time to upgrade.
- **Usage model** – How an employee uses a device (primary or secondary usage) to accomplish work has a significant impact on required IT service levels and corresponding support costs.
- **Employee mobility** – How mobile an employee is can have a significant positive impact on productivity, yet there is also the added cost of maintaining and servicing mobile devices.
- **Device management model** – How IT chooses to manage an employee device in terms of data security, application flexibility, and business service delivery affects the support costs.

### Device Age

Determining the right time to upgrade devices is a critical decision point for any enterprise. It seems like a simple concept, but every device has a useful life span. Many IT organizations establish a strategic cadence for regular refresh, but choose to hold on to older devices for practical reasons—from limited capital budget or IT resources to potential disruptions in workflow. And as these devices continue to age, organizations incur escalating IT support costs, while users experience increased downtime.

When determining the right time to replace aging devices, it's important to consider the key areas that can quickly escalate costs:

#### Repair and Resale

- **Specialized repair** – Maintaining older devices adds costs and complexity.
  - Reduced availability for spare parts
  - Added costs to inventory spare parts
  - Specialized warranty coverage
  - Specialized IT skills needed
- **Resale value** – As devices age, the used hardware will have a lesser value on the secondary market, if it’s sellable at all.

### Facebook: A Fresh Approach to Productivity

Facebook CIO Tim Campos transformed the idea of the traditional help desk. If an employee calls the help desk more than twice on any given issue, the device gets replaced. Campos identifies that “the cost of a laptop, $1,500 to $2,000, is minor in comparison to hampering the productivity of an employee who makes $100,000 per year.” Read the CIO Journal blog, Facebook CIO Doesn’t Waste Time, for more insights. (Note: Subscription required.)

### 4-Year-Old PC = Three Days Lost

Listen to IDC Program Vice President Bob O’Donnell talk about the impact of older PCs on productivity in this **WSJ** video (4:44). People spend up to three days a year waiting for older devices to boot or load web pages.

- **Repairs made out of warranty** – Extending the original manufacturer’s warranty coverage or paying for out-of-warranty repairs can add up fast.
- **Resale value** – As devices age, the used hardware will have a lesser value on the secondary market, if it’s sellable at all.

### Impact on IT and Employee Resources

- **Help desk** – Older devices require more IT support, such as troubleshooting, management, and repairs.
- **Lost employee productivity** – Employees spend more time troubleshooting devices, which impacts productivity.
Security Complexity
- **Malware protection** – Older devices typically lack the security to prevent and respond to today's sophisticated malware attacks.
- **Patch management and deployment** – Additional security measures such as frequent patching and operating system updates can take valuable IT time and resources; if not managed well, these can also result in user downtime.

Hardware and Software Compatibility
- **Update history** – Older devices are challenging to manage because there are more configurations, application updates, and system images for IT to navigate.
- **Newer software** – Some new software may not be able to run, or can negatively impact system and application performance.

Usage Model
The way in which a device is used has a significant impact on the degree of IT support required. For workers, it's about having access to applications and data with the flexibility to work across a variety of devices. For IT, the focus is on the degree of support needed to balance service quality against costs while maintaining proper data security and availability to keep the business running efficiently.

There are two common usage models for enterprise devices, primary and secondary, which dictate two very different support and cost models:
- **Primary** – This model represents the devices necessary for accomplishing assigned work-related tasks and therefore receives the full support of IT. Primary devices are most commonly a company desktop PC or laptop. However, for highly mobile workers, tablets are also emerging as a popular option.
  - The applications and software running on this device typically include a full suite of business applications and services fundamental to business process workflows, such as inventory reporting, payroll processing, or file sharing and enterprise collaboration.
  - Proactive IT service delivery and support is required for this device. If the device fails, there is a clear impact on user productivity and business processes.
- **Secondary** – This increasingly popular model represents complementary device usage for more flexible access to business services from multiple locations. Secondary devices are most commonly a phone or tablet, but could also be a home PC with access to the corporate network.
  - Workers may rely on secondary devices daily for a reduced set of basic business services, such as e-mail access and content consumption, gaining incremental productivity in the process.
  - IT support includes securing data and information delivery, with lower expectations for data availability and productivity.

Intel Gains an Hour a Day
Intel is now supporting the deployment and support of secondary devices. And Intel employees report saving an average of 57 minutes a day using mobile devices. That’s nearly an hour of productivity gained daily by simply providing an alternative way to work.
Learn more from the IT@Intel white paper: *Improving Security and Mobility for Personally Owned Devices*.

Assessing ROI at a Glance: Implementing New Devices

Three Recommendations for Device Age
- Establish a regular refresh cadence for devices based on useful life span to help reduce overall IT costs and minimize productivity losses.
- Consider investing in higher-end solutions during refresh to gain longevity for optimal performance with the latest software and applications.
- Choose new devices and technologies that boost user productivity through faster application performance and greater security and manageability.
The Importance of BYO Policies

Businesses are increasingly evaluating Bring Your Own (BYO) programs as a means to support secondary devices and potentially reduce costs for primary devices through stipend programs. Regardless of the program parameters, it’s critical to evaluate and determine policies for all devices. Effective BYO policies establish usage parameters and support expectations, such as service and support agreements, approval processes, privacy regulations, and rules around fair use.

Employee-Owned Devices Aren’t Free—and May Not Be Secure

Although BYO devices are usually paid for by employees, those devices still come at a cost to the enterprise. Integration, maintenance, and security are still needed when business data and applications are supported—and users can only go so far with self-service support. There’s also a security risk: Many employee-owned devices used for work were designed for consumer use and therefore lack the security and manageability needed to protect business data.

Employee Mobility

Mobile devices are continuing to drive efficiencies across the business. When employees are able to work when and how they want, it can boost productivity, improve decision making, and streamline business workflows. Yet mobility doesn’t come without its challenges. Aside from the obvious security risks of a lost or stolen device, mobile devices have shorter life spans, and mobile users place additional support demands—and costs—on IT.

- Increased physical demands on the device result in a shortened life span with higher average failure rates, resulting in greater support costs.
- Remote management places higher support costs on IT, either through the deployment of remote management solutions, onsite IT support, or time lost shipping devices to a central location—or a combination of these things.
- Increased security complexity and risk result from multiple devices accessing the corporate network, requiring the protection of user identities, network access, and data.
- Additional wireless infrastructure investments may be needed to enable mobile computing and support increased secondary device usage in the enterprise.

Three Recommendations for Usage Model

- Manage primary devices with the highest degree of management and proactive support to help reduce overall costs, maximize device and service uptime, and improve productivity.
- Support secondary devices with the appropriate degree of security and manageability to safeguard data and minimize business costs while meeting privacy rules and enabling worker flexibility.
- Work in close collaboration with human resources and legal departments to establish clear policies and communicate to employees the service agreements for both BYO and secondary device support models.

Intel IT Looks at BYO Stipends

After years of managing a successful Bring Your Own Device (BYOD) program, Intel IT conducted an extensive evaluation of stipends for primary PCs. Although 72 percent of employees initially favored a stipend-funded PC supply model, most were not interested in being responsible for hardware support. Intel IT determined that using a BYO stipend model for primary PCs was not a cost-effective business model for Intel. Read the white paper.

Assessing ROI at a Glance: Supporting Primary Devices

$IT costs
$End-user costs
Productivity

Mobile devices are continuing to drive efficiencies across the business. When employees are able to work when and how they want, it can boost productivity, improve decision making, and streamline business workflows. Yet mobility doesn’t come without its challenges. Aside from the obvious security risks of a lost or stolen device, mobile devices have shorter life spans, and mobile users place additional support demands—and costs—on IT.
The Gartner report titled *Notebook Total Cost of Ownership: 2013 Update* compared the total cost of ownership for supporting different levels of mobility in the enterprise, as shown in the following graphic.

It’s clear that with increased mobility comes increased IT costs and end-user costs. However, by increasing employee productivity, mobility generates tremendous value for the business that can be measured in direct proportion to an employee’s salary. For example, if an employee earning $100,000 in annual salary and benefits is able to increase her productivity by 1 percent, it creates a value of $1,000 per year. For higher-salaried workers who are frequently mobile, this benefit value/cost proportion is amplified.

**Mobile Productivity at Intel**

Intel IT actively embraced mobility when it transitioned the majority of employees from desktops to notebooks in the early 2000s. The move led to an estimated 5 percent increase in overall productivity.

**Worker Types Based on Mobility**

To help realize these benefits and offset the incremental costs of mobility, the best approach is to make sure that users have the right mobile device in hand. IT organizations can select devices that best meet users’ needs according to three common worker types:

- **Stationary worker** – This employee works primarily at a single location, therefore placing lower demands on the technology.
- **Mobile worker** – This employee works primarily in an office environment, but often takes mobile devices home to complete tasks in the evenings and on weekends.
- **Traveling worker** – This employee works outside of a traditional office environment most of the time and is also a frequent collaborator, requiring connectivity via diverse networks across different devices.
Each of the factors discussed so far—device age, usage model, and mobility—have an impact on how devices need to be managed to support business continuity and safeguard corporate data. Devices typically fall under one of the following management models, which vary depending on the level of IT support and corporate governance required.

- **Unmanaged** – Users are able to install applications and alter settings. There are few to no IT management tools in use.
- **Somewhat managed** – There are some IT management tools in use, but processes and policies are not fully developed or implemented.
- **Well managed** – Users are able to install approved software and customize some device settings, and there are robust IT management tools in use accompanied by well-established business processes and policies.
- **Locked** – Users are not able to install software or change critical settings, and there are strictly established IT management tools, security processes, and business policies in use.

### Why Choose a Higher Management Model?

There’s a common assumption that an unmanaged model translates to lower costs. However, the opposite is true: Devices under a well-managed model often can result in significantly lower life-cycle costs. For example, by applying a well-managed model to mobile devices for traveling workers, IT can:

- Keep devices up to date—with the latest operating system, security measures, and applications—with higher frequency and less effort by working remotely.
- Gain greater control over the security and manageability of those devices.
- Apply proactive management practices to better predict and avoid device failure and maximize user uptime.

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**Mobile Devices Gain up to 17 Percent Productivity Increase**

Intel IT recently deployed Intel® architecture-based tablets and Ultrabook™ 2 in 1 devices within its manufacturing environments as a way to increase business productivity. After conducting multiple proof-of-concept (PoC) studies, Intel was able to identify business benefits in workflow efficiency, data accuracy, and time savings. With the mobile devices in hand, facility technicians reported a productivity increase of up to 17 percent, based on the number of completed work orders.¹

¹ *Deploying Tablets Safely in Manufacturing to Boost Productivity.* IT@Intel (May 2013). IT@Intel White Paper
Another aspect to consider is that primary devices require higher management models because there are greater expectations for data availability, security, and IT support. A lower management model may be acceptable for a secondary device, provided that it isn’t required for daily work use and that company data security requirements can be maintained.

The Gartner report titled *Notebook Total Cost of Ownership: 2013 Update* compared the total cost of ownership for different management models, as shown in the following graphic.

**Day-Extender Notebooks across Management Models**

- **Unmanaged**: $2,141 - $4,017 (TCO: $6,158)
- **Somewhat managed**: $2,099 - $3,437 (TCO: $5,536)
- **Moderately managed**: $2,003 - $2,855 (TCO: $4,858)
- **Locked and well managed**: $1,809 - $1,693 (TCO: $3,502)

Figure 3. Chart created by Intel using source data from Gartner, *Notebook Total Cost of Ownership: 2013 Update*, Federica Troni, May 2013 (Gartner G00250520) from Gartner figure titled “PC TCO 2013—Same User Mix” comparing end-user costs and direct costs for day-extender notebooks across the four management models shown above.

### Three Recommendations for Device Management

- Select a higher management model for primary devices to help reduce IT costs, improve security, and increase productivity over time.
- Consider choosing a more managed model for secondary devices to help maintain compliance.
- When supporting mobile devices, increase the level of device management to help offset higher mobility costs and gain better control through remote management.

**Assessing ROI at a Glance:**

- **Improving Device Manageability**
- **IT costs**
- **End-user costs**
- **Productivity**
By understanding all the factors that contribute to total cost of ownership, IT managers can develop a stronger business case for upgrading. It’s an opportunity not only to support stronger mobility and productivity, but also to better secure, protect, and manage company devices and data.

This exploration of the four key factors that contribute to ROI—device age, mobility, management model, and usage model—provides a solid foundation for the key business decisions to be made around refresh. Yet IT organizations must also account for other aspects of investment, from capital costs for hardware, software, infrastructure, and IT support costs to the lost productivity time users spend during device transition, including delivery and training. Then all of these must be balanced against the value created in the three categories of direct IT costs, end-user costs, and productivity gains.

Cost and Value Benefits Summary

After device upgrades, organizations experience a reduction in IT operating costs and improvements in user productivity. One of the goals of this paper is to map these business benefits to the three primary cost and value categories that contribute to ROI, as shown in the following table.

<table>
<thead>
<tr>
<th>Cost/Value Categories</th>
<th>Business Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct IT costs</td>
<td>Organizations can lower costs to maintain new hardware; lower IT help-desk support costs across all tiers of IT support services; and lower security management costs.</td>
</tr>
<tr>
<td>End-user costs</td>
<td>Users spend less time troubleshooting new devices and software as compared to older devices.</td>
</tr>
<tr>
<td>Productivity gains</td>
<td>Users gain valuable productivity from stronger system performance and increased mobility.</td>
</tr>
</tbody>
</table>

Figure 4. Summary of cost and value business benefits.
When you’re evaluating ROI, it’s critical to consider which IT decisions will have the most significant business impact. For example, how much mobility employees need; how your organization will manage devices; and how you will deploy those devices can all impact the business benefits.

To help you understand the trade-offs, Intel has developed an online tool to evaluate the potential ROI of refreshing the devices within your own organization. Developed in collaboration with industry experts and using insights from Intel IT best practices, the tool is designed to help you assess the business value of refresh by using either prepopulated enterprise scenarios or your own unique business data. You enter specific information about your organization and select how you want to manage and support your employees, and the tool will show you estimated ROI across the primary cost and value categories.

The Business Client Refresh ROI Estimator tool provides estimates for investment and value across the categories described in this paper, including device age, usage model, employee mobility, and management model, as shown in the following graphic. You can also use the tool to explore a current-versus-future scenario—with interactive output and reports you can use in your planning efforts.
Once you’re ready to upgrade the devices in your organization, choosing the right device technology can help you build value across the business. Intel® architecture-based devices are designed to help you increase user productivity, reduce operations costs, and protect sensitive data on the go—with power that ranges from the Intel Atom™ processor to the 4th generation Intel Core™ vPro™ processor.

**Intel® Atom™ Processor: Compatibility You Can Carry**

When you select devices based on the Intel Atom processor, you can get the thinnest, lightest form factors with the longest battery life available on Intel architecture-based devices. The technology is designed for compatibility with existing IT systems, with flexible, low-power models that give users everything they need without sacrificing performance.

**Intel Core™ vPro™ Processor: Built for Business**

Devices based on 4th generation Intel Core vPro processors deliver embedded security2 and manageability so that you can:

- Choose from a flexible range of form factors to meet unique business needs, from desktop PCs and traditional laptops to 2 in 1 and Ultrabook™ devices and tablets. By giving users the flexibility they want, you can increase productivity across the business and help boost employee retention.
- Gain peace of mind with built-in security2 for threat management, access, data protection, and remote monitoring and remediation. Added protection for mobile devices helps to simplify IT management and keep users productive, all while helping to keep IT costs down.
- Work with remote management capabilities for any device, whether it’s connected to the network, powered off, lost, or stolen. IT can manage any device, in any location, for faster troubleshooting in less time, helping to minimize user downtime and gain IT efficiencies.
- Deploy powerful system performance that can keep up with your users while helping to reduce the burden on IT of slower, lagging systems.
- Track and manage thousands of devices with update, disable, wipe, or restore capabilities using McAfee ePO® Deep Command® with Intel Active Management Technology (Intel AMT®), helping to better protect devices on the go.
- Simplify the upgrade process with technology that fits with your IT infrastructure and existing applications, including compatibility with the Windows® 8 operating system. Users can get up and running quickly with the familiar applications they already know.

To learn more, read the Enterprise Mobile Security guide on 4th generation Intel Core vPro processors.
Five Best Practices

By understanding all the factors that contribute to total cost of ownership and ROI, IT managers can balance the direct costs associated with upgrading and the overall value gained by increased productivity with newer, more secure devices. By applying the following five best practices to your device refresh strategy, you can help make the right investment for your business.

1. Keep costs down and productivity up with a regular refresh cycle.
   With a proactive approach to device refresh, you can ensure that the devices in your organization are maintained for an appropriate length of time, avoiding the support costs and lost productivity of aging devices. In most cases, devices will have a useful life span of two to four years.

2. Enable mobility.
   With better insight into workflow and how people use mobile devices, it’s easier to determine the right tool for the job. By integrating mobile devices into your enterprise environment, you can drive productivity across your business while keeping users happy.

3. Reduce costs with a well-managed device model.
   With a well-managed device model, you can help reduce IT costs while increasing security and improving business efficiencies. Although mobile devices increase costs, these costs can be offset with a well-managed device model.

4. Use advanced technologies.
   By design, newer technologies are built to enable the mobile business. 4th generation Intel Core vPro processors deliver the remote manageability and security your business needs, with the performance and long battery life users want.

5. Consider a 2 in 1.
   The 2 in 1 device is a tablet when users want it and a laptop when they need it, with convertible or detachable form factors that minimize the number of devices for users to carry and for IT to manage.
Understanding Device Total Cost of Ownership (TCO)

- Business Client Refresh ROI Estimator Tool
- Gartner Report: Notebook Total Cost of Ownership: 2013 Update
- Wipro Study: Using Total Cost of Ownership to Determine Optimal PC Refresh Life Cycles
- Principled Technologies: Evaluate Total Cost of Ownership of a 2 in 1 Compared to Selection of a Separate Laptop plus Tablet

Planning Considerations

- Intel IT Center Planning Guide: Increasing Mobile Productivity
- Intel IT Center Real-World Guide to Improving Enterprise Mobile Security
- IDC Analyst Bob O’Donnell Discusses Benefits of PC Refresh on Employee Productivity

Device Considerations

- Moor Insights & Strategy: Evaluating Intel-Based Tablets in the Enterprise
- Intel Device Selector Tool: Find the Right Tool for the Right Task
- Intel IT Center Device Selection Guide

Business Devices

- Business Ultrabook™ and 2 in 1 Devices
- Business Tablets Powered by Intel
- Desktop and All in One

Additional Intel Resources

- IT@Intel White Paper: Increasing the Business Value of Mobility
- IT@Intel White Paper: Improving Security and Mobility for Personally Owned Devices
More from the Intel® IT Center

This planning guide, A Business Investment Strategy for Device Refresh, is brought to you by the Intel® IT Center, Intel’s program for IT professionals. The Intel IT Center is designed to provide straightforward, fluff-free information to help IT pros implement strategic projects on their agenda, including enterprise mobility, virtualization, data center design, intelligent clients, and cloud security. Visit the Intel IT Center for:

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- Information on events where you can hear from Intel product experts as well as from Intel’s own IT professionals

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The TCO or other cost reduction scenarios described in this document are intended to enable you to get a better understanding of how the purchase of certain products, including Intel products, combined with a number of situation-specific variables, might affect your future cost and savings. Circumstances will vary, and there may be unaccounted-for costs related to the use and deployment of a given product. Nothing in this document should be interpreted as either a promise of or a contract for a given level of costs.

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1 The Business Client Refresh ROI Estimator is an interactive estimator that uses the information that you supply to provide an estimate of IT operational costs, as well as end user and business productivity gains associated with replacing aging devices with new ones. The estimator is intended to enable you to get a better understanding of how decisions pertaining to maintaining and managing aging devices can affect a range of both direct business costs and indirect, softer productivity costs associated with the value of time and money.

2 No computer system can provide absolute security under all conditions. Built-in security features available on select Intel processors may require additional software, hardware, services, and/or an Internet connection. Results may vary depending upon configuration. Consult your system manufacturer for more details. For more information, visit intel.com/technology/security.

3 Requires activation and a system with a corporate network connection, an Intel AMT–enabled chipset, and network hardware and software. For notebooks, Intel AMT may be unavailable or limited over a host operating system–based VPN, when connecting wirelessly, or when on battery power, sleeping, hibernating, or powered off. Results dependent upon hardware, setup, and configuration. For more information, visit Intel Active Management Technology.