In 2015, enterprises view the PC (desktops, ultraslim notebooks, Chromebooks, and workstations) as the platform of choice for their employees. As the transformation from the 2nd Platform to the 3rd Platform continues to impact all aspects of IT infrastructure, IDC recognizes that holding on to existing assets has become a common strategy. Frequently, customers are extending equipment life cycles for many IT assets as they contemplate business projects and future equipment usages. This strategy often has a negative effect on overall life-cycle costs, as our business value research shows.

As presented in this study, leasing two generations of PCs over six years is 24% less expensive than buying one machine and holding on to it for six years. Key research conclusions include the following:

- IDC believes that shorter average life cycles, well-defined IT management practices, and disciplined IT equipment portfolio management produce the best results.
- Maintaining PC operations using older hardware creates a situation where the operating system (OS) is not optimized for the hardware platform on which it is running, causing incompatibilities that require frequent patching, additional testing, and increased help desk calls and time spent troubleshooting.
- For reasons identified in this study, organizations must overcome the barriers to shortening equipment life cycles. By decommissioning equipment prior to the end of its original amortization period, companies can position themselves to benefit from a "continuous flow" capital management plan, facilitated by leasing IT equipment.

In this IDC White Paper, the following key topics are presented:

- "Lease versus buy" evaluation routines, required by many companies, remain a "spreadsheet" exercise that attempts to measure small differences in capital cost. However, they often gloss over inconsistencies in planned life cycles, related support costs, and decommissioning/recycling requirements that potentially distort operating expenses — and the outcome of the analysis.
- Companies can benefit from leasing two generations of PCs over six years rather than buying one machine and holding on to it for six years. IDC’s analysis finds that following such a leasing strategy is 24% less expensive than purchasing a PC and keeping it for six years.

- Based on our ongoing end-user research, this study also explores the benefits of leasing and financing IT equipment as well as best practices in selecting a financing provider.

**SITUATION OVERVIEW**

The impact of the 3rd Platform is transforming all aspects of traditional IT infrastructure, and the PC market is certainly not immune. Over the past few years, the enterprise PC market has been plagued by reduced shipments as customers evaluate operating systems, Windows 8, and the latest technology options such as tablets or desktops as a service. Recently, PC trends have improved slightly, as evidenced by customers migrating from Windows XP to Windows 7 and business outlooks improving in key regions. In most geographies, commercial PC purchases played a key role, and the top 3 vendors — Lenovo, HP, and Dell — all achieved year-over-year growth. Other factors shaping the PC market were fierce competition and a downward shift in tablet pricing that put additional pressure on the market.

Lately, enterprises are extending the installed life of their PCs, which is increasing the need for PC life-cycle strategies to ensure a reliable infrastructure. As this study demonstrates, this strategy of lengthening PC life cycles can have a negative effect on the overall life-cycle costs of PCs.

**New Equipment Challenges Traditional Infrastructure Solutions**

**Tablets Encroach on PCs**

Tablets have been rapidly migrating into the PC market in recent years. IDC believes current- and next-generation models are likely to stimulate a new refresh cycle, provided Microsoft, a key OS vendor in this space, is able to improve the user interface and increase the number of applications available on these devices. However, the reports that tablets are overtaking PCs are overblown, and the reality is that PCs are still the preferred equipment option for the majority of enterprises.

The commercial segment of the tablet market is continuing its upward trajectory in market penetration in the United States. In 2013, the number of tablets shipped to the commercial market was up 121% year over year. In 2013, the number of tablets adopted by enterprises and small and medium-sized businesses (SMBs) increased 105% and 127%, respectively.

Interestingly, the majority of tablets deployed in enterprises are used as ancillary devices and not PC replacements. As a result, tablets currently pose little threat of cannibalizing share from the traditional portable PC market. IDC research indicates that tablets are being purchased largely as complementary devices that augment the compute functionality of employees who fall into discrete areas of vertical market functions and select high-level general executive functions. The features and functionality of these devices have yet to approach or equal the features and functionality available in traditional portable PCs for the commercial market. Although there is speculation that 2-in-1 devices with improved functionality will eventually become a viable PC alternative, that timetable is not clear today.
IDC anticipates that as the overall U.S. tablet market grows through 2018, the vast majority of units will continue to ship to consumers (85.8% in 2014 and about 82.7% in 2018). However, demand from the commercial market will continue to grow from 2014 to 2018 by a forecast CAGR of 14.9%, which is much higher than the -1.6% CAGR forecast for the consumer market. IDC anticipates that, by 2018, tablet shipments to the commercial market will account for an estimated 17.3% of all tablets shipped in the United States (see Figure 1).

FIGURE 1

U.S. Commercial Tablet and 2-in-1 Shipments, 2014-2018

Source: IDC, 2015

Shift in IT Buyer Redefines Procurement

Another change we are witnessing is the emergence of business-line managers in IT solution decision making. In a 2013 survey, we asked over 1,200 technology buyers how they allocated funds for technology projects, and the results were surprising: Lines of business are funding 61% of IT projects. We expect this stakeholder shift to remain, as line-of-business managers are empowered to take more initiative with technology procurement because of increased business urgency and the need to complete new projects quickly. Closely tied to this trend is the fact that most organizations are revising their capex practices to tighten integration between IT and business stakeholders when requesting capital investments. This requirement goes beyond ROI and increases the financial link between technology and business to clarify the value and purpose that IT investments will have for the business opportunity. Managing new business and technology requirements while dealing with potentially impaired IT assets due to a mismatch of customer needs and equipment book values has led corporate executives to consider more flexible IT investment acquisition strategies than ever before. This tighter integration between business and IT is a reality today. Within the next 12-24 months, customers will look to IT financing partners for the financial tools necessary to help them navigate this fast-changing IT equipment space.


Leasing and Financing Trends

Despite the rapidly shifting demand trends that have defined the PC market in the past few years, the appetite among customers for leasing and financing in this segment remains stable as they continue to recognize the advantages of PC leasing. Throughout the 3rd Platform transformation, organizations have been most concerned about the faster pace of new initiatives and the rapid deployment of assets that often must accompany these new projects. Utilizing a comprehensive PC asset management strategy removes many of the burdens associated with rapid deployments because the strategies often include planned migration options. Customers that lease PCs recognize that the advantages of deploying a PC leasing strategy go far beyond a financial equation — the asset management strategies, end-of-life options, and protection from technology obsolescence make PC leasing and financing a smart acquisition tactic. Our conversations with IT managers who lease PCs continually underscore the advantages that leasing provides their organizations. Specifically:

- **Flexibility and agility.** When discussing IT, we often focus on the speed of the technology, but there are other considerations. The transformation to the 3rd Platform and the rapid pace of new business initiatives continue to accelerate, and IT managers are tasked with deploying new equipment with speed and agility. Compounding the issues are new operating system rollouts and new product options such as tablets.

  To keep up with these rollouts, IT organizations must be able to anticipate business needs, rapidly provision equipment, and respond to evolving conditions. For these reasons, an IT financing program that allows additional orders against a pre-established credit line significantly enhances the ability of the organization to respond while simplifying paperwork and creating new efficiencies through an IT organization with an inherent capability to support business requirements in a timely fashion.

- **Protection against obsolescence.** Unlike other capital equipment that can be long-lived, IT equipment is built around core technologies that continue to be replaced by more capable devices — as often as every 18 months. And while continuously increasing performance is interesting, perhaps more important to IT organizations is that each new generation of technology has more sophisticated tools that make it easier to configure, manage, and maintain, which can help reduce costs associated with these activities. These ongoing opportunities to improve efficiency are no doubt the key reason IT organizations rated "protection against obsolescence" the most important benefit of IT financing.

- **Proper equipment disposal.** The requirement to properly dispose of surplus equipment, for both regulatory and ethical reasons, has highlighted one of the potential benefits of leasing IT equipment — the opportunity to return it to the financing company. As the owner of the equipment, the financing company shoulders full legal responsibility for its proper disposal.

**EVALUATING LEASE VERSUS BUY**

Organizations typically compare equipment deployment scenarios, including an evaluation of lease-versus-buy options, as part of their capital acquisition processes. They use such analysis to contrast the cost of leasing equipment with the cost of buying and depreciating it. A nominal salvage value is usually assumed by the organization at the end of the period being evaluated (typically three years). Minor differences in assumptions often tip the balance in favor of one scenario or the other.
Most companies "roll up" equipment purchasing during the year and begin the amortization process on January 1 of the following year. In addition, most organizations do not replace IT equipment immediately upon completion of the amortization process. Collectively, these two delays in equipment deployments add 6-8 months to a typical 36-month equipment life cycle. In most organizations, the amortization period for IT equipment is 48 or 60 months. With these two delays, the amortization period for owned equipment can be significantly longer than what organizations assume it will be when they conduct their lease-versus-buy analysis.

Thus, because lease-versus-buy financial models usually compare a 36-month lease cycle with a 36-month ownership cycle where the ownership cycle can be anywhere from 6-32 months longer, financial analysis behind capital acquisition decisions can ignore the fact that IT support costs, deployment/decommissioning expenses, and the actual upgrade experience for users are not factored appropriately. Because these additional costs are not included in the final analysis, evaluations can be skewed.

IDC's survey data analyzes PC deployment processes and demonstrates how support costs for PCs can vary based on the length of time that a PC is deployed (see Tables 1 and 2). The original research was based on interviews with 120 large enterprises (median = 7,000 PCs) based in North America and was supplemented with data from interviews IDC has carried out in the past two years with global organizations using PCs. The companies represented in these tables come from over 20 major vertical markets, including government and education.

**Evaluating PC Support Costs**

Once IT equipment is installed, the obsolescence cycle begins. IDC research consistently finds that IT support costs increase considerably calendar quarter by calendar quarter. These cost increases are driven by two key factors:

- Mechanical failures as the equipment ages, which are often random errors in a system's software configuration as a result of power transients, user twiddling, or other factors
- The unbudgeted or unplanned cost of updating software configurations as other changes within the internal or external IT infrastructure trigger the need for the device to be reconfigured/changed or have new software installed

IDC research on organizations' support costs for PCs demonstrates how these costs for a typical PC vary and change as the device ages. Table 1 demonstrates the extent to which these support costs for PCs typically escalate as the devices age. By years 5 and 6 of a PC's life cycle, average annual support costs have risen to $887 and $1,553 per PC, respectively. These increased costs reflect the fact that machines have more maintenance "events" with higher expenses as they age and often struggle to support the tasks that they are being asked to perform. Many IT professionals fail to account for this shifting cost structure for PC support. Often, IT managers view provision of support as an average unit cost across a portfolio of PCs regardless of their age and other characteristics, which can obscure and distort actual support costs incurred as machines age.
TABLE 1

Average Annual Support Costs per PC ($)

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>$220</td>
</tr>
<tr>
<td>Year 2</td>
<td>$278</td>
</tr>
<tr>
<td>Year 3</td>
<td>$386</td>
</tr>
<tr>
<td>Year 4</td>
<td>$571</td>
</tr>
<tr>
<td>Year 5</td>
<td>$887</td>
</tr>
<tr>
<td>Year 6</td>
<td>$1,553</td>
</tr>
</tbody>
</table>

Source: IDC, 2015

Upgrade Experience

Based on our experiences with IT organizations, IDC has estimated the percentage of PCs upgraded by deployment year, as shown in Table 2.

TABLE 2

Estimated PC Upgrades by Deployment Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Portfolio Requiring Upgrade (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>5%</td>
</tr>
<tr>
<td>Year 2</td>
<td>10%</td>
</tr>
<tr>
<td>Year 3</td>
<td>10%</td>
</tr>
<tr>
<td>Year 4</td>
<td>10%</td>
</tr>
<tr>
<td>Year 5</td>
<td>15%</td>
</tr>
<tr>
<td>Year 6</td>
<td>15%</td>
</tr>
</tbody>
</table>

Source: IDC, 2015
As presented in this study, leasing two generations of PCs over six years is 24% less expensive than buying one machine and owning it for six years. Key research conclusions include the following:

- IDC believes that shorter average life cycles, well-defined IT management practices, and disciplined IT equipment portfolio management produce the best results.
- For reasons identified in this study, organizations must overcome the barriers to shortening equipment life cycles. By decommissioning equipment prior to the end of its original amortization period, companies position themselves to benefit from a "continuous flow" capital management plan, facilitated by leasing IT equipment.

**Factoring Operational Expenses into Lease-Versus-Buy Analysis**

To demonstrate the impact of factoring operational expenses into a lease-versus-buy analysis, IDC has performed an analysis comparing the cost of buying and keeping a PC for one six-year period with the cost of leasing a similar PC for three years, then returning that PC and leasing another PC for a further three-year period. This analysis assumes management with "basic" deployment and decommissioning practices and support, maintenance, and upgrades based on the values provided in Tables 1 and 2.

This analysis, which is designed to highlight differences between two capital management options and not be a definitive financial analysis, shows an average savings of 24% over six years for those organizations utilizing the leasing life-cycle management scenario (see Figure 2).

PC support costs were taken from Table 1 for this analysis. There is a material difference between the two scenarios because costs increase each year. For the six-year scenario, the costs included for each year are as portrayed in Table 1, whereas in the scenario with two three-year leases, the cost of support for years 1-3 was used for each machine. Because newer machines require less support, their average annual cost is $295 during years 1-3.

However, during years 4-6, the average support cost increases by more than 240% to $1,004 annually. The point of this analysis is to highlight that lease-versus-buy analysis models should consider expected operational practices and costs. For the purpose of financial analysis, there is always a desire to isolate as many variables as possible to measure the "real" impact of the changed input. As this example highlights, the comparison of a programmed or cyclical replacement life-cycle management model implemented in a consistent manner with an ad hoc or largely situational replacement strategy demonstrates how operational expense factors can materially shift the outcome.
Figure 2 presents a side-by-side comparison of the cost of PC ownership for the two scenarios described previously. It demonstrates the extent to which escalating support costs during years 4-6 of a PC’s deployment cycle impact overall PC costs.

**FIGURE 2**

Comparison of Average PC Costs: One 6-Year Ownership Deployment Versus Two 3-Year Renewable Lease Deployments

The underlying challenge with this type of financial analysis is that, for many organizations, a disconnect remains between modeled financial outcomes and operational practices. The outcome of this analysis suggests that overall expenses can be lessened by using shorter average deployments for PCs. By doing this, organizations can reduce the overall cost of owning PCs by minimizing the support costs associated with these machines, particularly as they age.

In summary, IDC believes that, from the perspective of IT professionals, a leasing strategy enhances the direct operational life-cycle management; for finance professionals, leasing is a strategy that can minimize capital assets and thus improve the return on invested capital.
FIGURE 3

Comparison of Average Cumulative PC Costs: One 6-Year Ownership Model Versus Two 3-Year Renewable Lease Model

Source: IDC, 2015

CRITERIA FOR EVALUATING LEASING AND FINANCING PROVIDERS

- **Technology expertise.** There are material differences in the expected useful life of a PC as well as the desk it sits upon and the building it resides in. There are also differences in the procurement, configuration, maintenance, upgrade, and decommissioning/disposal practices. Each of these practices creates implications for the leasing/financing structure and provider. Different providers have unique IT infrastructures, underwriting practices, and used equipment management practices and have tailored their business models to optimize the delivery of certain types of financing options. When IT organizations select financing providers, IDC recommends investing the time to understand their differing capabilities in structuring financing options for equipment, software, and services as well as the strength of their used equipment remarketing operations.

- **Lease management services.** IT financing is much more than the ability to lend money at a favorable rate. When financing IT equipment, software, and services, IT organizations also need to consider other factors, especially when large numbers of individual pieces of equipment are involved. Does the vendor offer data wiping services, assistance with software license management, and tracking of equipment serial numbers to support maintenance programs? Is there an online tool to handle different aspects of the transaction? What programs exist to simplify the acquisition and administration of large numbers of PCs or laptops? Lease management services are an essential component of a successful leasing engagement because...
leasing/financing involves an interface with many different business processes within a customer organization. Finally, streamlining lease and maintenance payments is a desirable feature many IT buyers seek.

- **End-of-life equipment and disposal options.** Aligning with a financing partner that offers secure equipment disposal is a key criterion for many companies. The downside risks of a data breach and/or fines from noncompliant equipment disposal are no longer tenable. Most customers find that a partnership with a leasing company removes these issues.

- **Geographic coverage.** The rising tide of globalization has greatly enlarged the middle class and expanded the lexicon to include terms like "emerging markets" and the "BRIC" countries (Brazil, Russia, India, and China). For many organizations, it has created unprecedented new opportunity and challenged them to extend their global reach. Because virtually all business processes are now enabled by IT, business cannot occur without IT being installed and functioning. To that end, careful evaluation of provider capabilities to support financing in major industrialized countries in North America, the European Union (EU), and Asia/Pacific is necessary. A select number of financing providers have the capability to provide integrated international business practices and processes, similar contracts, and coordinated order management.

- **Mobile apps and partner integration.** Over the past few years, the IT market has shifted toward a mobile-first strategy, and the leasing and financing industry is slowly adopting a similar outlook. For customers and partners, the ability to verify a lease transaction through a mobile platform reduces the time to close a transaction by a significant margin. In addition, the use of mobile apps also improves communication between vendors and partners, which may lead to increased business returns.

- **Terms and conditions.** Financing contracts contain common language regarding obligations, default, representations, and warranties. For many IT organizations, the first reaction to a "contract" is to forward it to their attorney for review. And while the decision to involve such experts is a sound business practice, many organizations overlook the need to clearly understand and assign the "contract management" responsibilities embedded in the terms and conditions to members of their team. Most providers are somewhat flexible in areas such as end-of-lease options, renewal terms, and return provisions. In some circumstances, the right to substitute identical equipment may be negotiated. It also serves both parties well if key terms are carefully defined and examples of how values are determined are included.

- **Administration and customer service.** Because their contracts typically last for two, three, or more years, IT finance providers are, by definition, long-term service providers. Administrative processes, within both the provider and the IT organizations, require commitment, follow-through, and investments — with regard to people, process, and technology. As the number of leased/financed assets increases, the complexity of successfully managing the service relationship grows concurrently. Therefore, a careful evaluation of the administrative infrastructure, online systems, tools and resources, and overall commitment to establishing and maintaining high levels of customer service forms an integral part of a successful leasing/financing engagement.

Although the preceding list is not exhaustive, it highlights major areas that IT organizations should consider before entering into a leasing/financing relationship.
CONCLUSION

The 3rd Platform is fundamentally a business transformation as enterprises undertake this change to improve operational efficiency and increase responsiveness to customers. As with any transformation, there are major integration challenges, and the IT industry is grappling with these issues today. With IT buying responsibilities increasingly being shifted to lines of business, many IT organizations have lost control over the procurement of technology. The result is a proliferation of devices and services obtained in isolation, which create redundancy and inconsistency and require a wider range of skills that are not available in the current IT organization.

Our analysis underscores the magnitude of the dilemma with conclusive data. Leasing two generations of PCs over six years is 24% less expensive than buying one machine and holding on to it for six years. Furthermore, this data reflects the costs for one machine when most organizations are deploying thousands of PCs across multiple locations. Compounding the analysis are the support costs incurred when enterprises extend PC installation beyond three years. IDC research shows that during years 4-6, the average support cost increases by more than 240% to $1,004 annually, a significant spike in average costs.

IDC research underscores the hidden costs of lengthening PC life cycles and offers a solution: partnering with a financing organization that can provide well-defined IT management practices and disciplined IT equipment portfolio management that will improve the return on capital investments.

METHODOLOGY

IDC's standard methodology was used to measure the costs associated with leasing and buying PCs based on data collected from organizations using PCs. To gather information used in this study, IDC asked organizations questions about their spending on PCs (including hardware, software, maintenance, warranties, and IT support) and the performance of PCs (including the amount of downtime). Responses to questions about how these metrics change over the life cycle of a PC's use and about the age of PCs being used by these organizations helped IDC calculate how the average costs and downtime of PCs change over time.

For the data used in this study, IDC drew from hundreds of interviews that are conducted every year with organizations using similar IT equipment.

DEFINITIONS

- PCs include desktops, ultraslim notebooks, Chromebooks, and workstations and do not include handhelds, x86 servers, and tablets (i.e., iPad or tablets with detachable keyboards running either Windows or Android).
- Acquire costs include the cost of the laptop, extended warranty, OS, and baseline antivirus software.
- Deploy costs include the time cost of deploying/installing PCs.
- Support costs include the cost of ongoing updates, repairs, and help desk operations for PCs.
- Upgrade costs include the cost of scheduled OS and hardware upgrades.
- Retire costs include the time cost of retiring/decommissioning PCs at the end of their life cycle.
About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

Global Headquarters

5 Speen Street
Framingham, MA 01701
USA
508.872.8200
Twitter: @IDC
idc-insights-community.com
www.idc.com

Copyright Notice

External Publication of IDC Information and Data — Any IDC information that is to be used in advertising, press releases, or promotional materials requires prior written approval from the appropriate IDC Vice President or Country Manager. A draft of the proposed document should accompany any such request. IDC reserves the right to deny approval of external usage for any reason.

Copyright 2015 IDC. Reproduction without written permission is completely forbidden.