The Business Value of Windows Vista

Five reasons to deploy now

Windows Vista

A Word from Microsoft Vice President of Product Management, Mike Nash

When should I invest in a new desktop operating system? If you're like most of the IT leaders I talk to, you've been asked that question at least once in the last year. And, if you are like most, you have also asked yourself, "Will the benefits outweigh the costs?" "Will this still look like a good decision in two or three years?" and "Given limited resources, is an OS the best thing to invest in right now?"

We believe the answer to those questions is yes – when you deploy Windows Vista. From the beginning, the business case for Windows Vista has always focused on delivering real value and real efficiencies through platform-level innovations, helping customers put a foundation in place that will provide value years into the future.

Of course, we were ambitious when designing platform improvements into Windows Vista. Our vision was big and bold and we tackled big challenges brought to us by customers. We heard security and reliability had to take top priority, and we made significant investments in those areas as a result.

Those investments often meant changing the way that applications and drivers run on Windows, and they impacted the initial performance and compatibility of systems. Many people saw the value of the work we had done on things like data protection, search, mobility, and deployment – but there was a tradeoff between those benefits and device and application compatibility.

Since then, much has changed. As you will see later in this document, we have worked tirelessly with our partners in the Windows ecosystem – and that work has paid off. Device and Application compatibility is dramatically better.

It is my firm belief that Windows Vista is ready for your business. If I ran an IT organization, I would first test and remediate my applications on Windows Vista. Then I would make sure that all new machines had 2 GB of RAM and run Windows Vista Enterprise Service Pack 1. For existing machines, with modern processors and less than 2 GB of RAM, I would consider upgrading the memory, BIOS and drivers, and then loading Windows Vista Enterprise SP1.

If you have not looked at Windows Vista in a while, we encourage you to look again. Working with our partners, we've improved the ability to support your enterprise deployment so you can experience all of the business value that Windows Vista has to offer.

Sincerely,

Mike

Mike Nash
Corporate Vice President
Windows Client Product Management

Table of Contents

Five Reasons to Deploy Windows Vista Now:

Executive Summary

This white paper presents strategic IT decision-makers with the business case for deployment of Windows Vista based upon research and analysis of current IT trends and challenges. The findings from this research illustrate that companies already using Windows Vista have identified tangible cost savings in IT labor and measurable improvements in user productivity. In addition to tangible cost savings, Windows Vista helps organizations with one of their most challenging mandates—reducing risk. The fundamentally more secure platform of Windows Vista provides more protection against spyware, viruses, and other traditional security threats. It also provides unprecedented levels of data protection to even help safeguard data on a lost or stolen laptop—which can help to protect your business reputation and help you to adhere to compliance standards.

Microsoft continues to invest in resources to assist in deployment and migration, allowing organizations to benefit immediately from the new security, mobility, productivity, and management capabilities in Windows Vista.

How does Windows Vista measure up? Here are ten key reasons why you can confidently deploy Windows Vista now.

Top Ten Windows Vista Facts:*

#	Fact	Details
1.	Worldwide Reach	• Over 100 Million licenses sold in the first year
2.	Adopted as Fast as Windows XP	• Millions of enterprise seats deployed, and growing • On pace to deploy faster than Windows XP
3.	Enhanced Security	• Less than half the vulnerabilities of Windows XP • 60 percent less malware than Windows XP
4.	Hardware Compatible	• Over 79,000 devices and components are supported out of the box—47,000 more since RTM
5.	Application Compatible	• Over 200 Line of Business applications unblocked • 99 percent of top selling consumer applications are compatible
6.	Solid Performance	• In recent tests, Windows Vista Service Pack 1 was noticeably more responsive after rebooting than Windows XP on several common business operations.
7.	Total Cost of Ownership	• Reports show $251 per mobile PC per year in cost savings
8.	Energy Efficient	• Energy savings of $38.3 thousand per year for a well-managed 2,500 PC organization
9.	Covered by Leading Analysts	• Gartner Report: "Don't Skip Windows Vista Entirely" • Forrester Report: "Building the Business Case for Windows Vista"
10.	True Customer Value	• "If a portable computer gets left behind, BitLocker will save the day." Josh Adams, Infrastructure Architect, Avanade • "Windows Vista is proving to be a powerful, secure, and highly stable operating system that is perfectly suited to professional use in large organizations." Daniel Heinzmann, Director, IT Service Department, City of Zurich

* As of June 2008.

Reason #1
Improves the Security of PCs and Confidential Data

Security was and is the number one driver of Windows Vista development. Today, Windows Vista has been market-tested and the results are clear: it is the most secure operating system Microsoft has ever released.

Windows Vista is Fundamentally More Secure

Microsoft has built multiple layers of protection into Windows Vista—the first desktop operating system (OS) built entirely according to the principles of the Security Development Lifecycle (SDL). Under this initiative, leading security experts retained by Microsoft perform thorough threat analysis and security testing; additionally, Microsoft developers receive ongoing security training. SDL treats security as an ongoing process of threat recognition, anticipation, and response, including both the IT infrastructure and the information worker (see Figure 1). The end result is a fundamentally more secure platform—it is harder to exploit and requires fewer updates. Progress in the SDL is shown by the following:

- **Fewer security updates:**
  During the first year of Windows XP, updates were released 26 times. Through a combination of a monthly release schedule and decreased vulnerabilities, Windows Vista needed updates released only nine times in its first year.[1]

- **Less vulnerability:**
  The first year of Windows Vista had significantly fewer fixed and unfixed vulnerabilities than the first year of Windows XP: 36 fixed and 30 unfixed for Windows Vista versus 68 fixed and 54 unfixed for Windows XP.[2]

The reduction in security updates and vulnerabilities translates directly to decreased management costs for customers and less time spent on applying updates and cleaning-up malware infections.

Windows Vista is More Secure than Windows XP

Security challenges constantly evolve, so it pays to have the most up-to-date technology. Data show that Windows Vista is better-equipped to handle today's security challenges than Windows XP. Information collected by the Microsoft Malicious Software Removal Tool illustrate that the infection rate for Windows Vista-based computers is 60.5 percent less than that of computers running Windows XP SP2.[3]

Figure 1. Microsoft Security Development Lifecycle

New Security Features

In addition to general improvements in security engineering, Windows Vista includes features to address the following security challenges:

Unnecessary Administrator Privileges

Users with administrator accounts can place PCs and networks at risk by installing unauthorized software or making other improper changes to their systems. Additionally, computers running with administrator privileges are more vulnerable to viruses and other attacks. User Account Control (UAC) in Windows Vista enables IT staff to issue Standard User accounts

---

[1]   Windows Vista One Year Vulnerability Report, January 2008.
[2]   Ibid.
[3]   Microsoft Security Intelligence Report, July–December 2007.

"Windows Vista will make it easier to have a more secure, managed desktop."

— *John R. Douglas, CIO, Getronics*

instead. Running as Standard User has been demonstrated to reduce the impact of vulnerabilities. As of April 2008, 33 security bulletins have been released since Windows Vista RTM; 17 are less risky for those working as Standard Users.[4]

"We don't ship computers to our users with full administrative privileges anymore," says Douglas Kotulski, network services and support manager for Trek Bicycle Corporation. "We're able to lock down the computers so that users can make the changes that they need to, like changing the time zone, but they are not able to do things that could potentially harm their systems."

Accidental Loss or Theft of Data

Fifty percent of respondents in the Computer Security Institute's 2007 Computer Crime and Security Survey reported having had a laptop or mobile device stolen in the previous year.[5] Windows Vista includes BitLocker™ Drive Encryption, which helps protect the contents of a hard drive even if it falls into the wrong hands. Organizations can also block USB data storage devices to prevent users from taking sensitive data. "It's really valuable, for example, for IT staff to be able to control USB ports in such a way that allows a user to add a mouse but not a memory stick that could gain access to sensitive data," says Arron Lock, outsourcing desktop senior manager for CapGemini.

Unauthorized Account Access

Strong user authentication offers superior built-in support for smart cards, while providing simple extensibility for biometrics and other account authentication methods. Administrators can use granular event logging, auditing, and tracking for security events to comply with internal policies and government regulations.

Wireless Network Security

Windows Vista shows Microsoft commitment to security through support for numerous security protocols and extensions of protocols to enhance the user experience and manageability of wireless networking infrastructure. Insecure wireless networks are unprotected (often called unsecured or unencrypted networks). Connecting to an unprotected network is a significant security risk—too great for most organizations to tolerate. Anyone in the area near the wireless network can capture and view all vulnerable to unprotected network traffic, which might include user names and passwords, e-mail messages, instant messages, and Web sites. Windows Vista allows users to take advantage of wireless hot spots that are unprotected. To make sure users can take advantage of these hot spots, Windows Vista security features allow users to connect to unprotected networks. However, the Windows Vista user interface (UI) alerts users to the risks associated with unprotected networks, so that they can make more informed decisions about which applications to use while connected. Additionally, the Windows Vista operating system will never automatically connect to an unprotected or ad hoc network, reducing the risk of inadvertently connecting to a malicious wireless access point. An IT administrator can also block the user from connecting to any unprotected network through Group Policy.

Windows Vista also supports the major security initiatives and standards for wireless networking. These standards are supported by Windows Vista to ensure interoperability with popular deployed network infrastructure. A wide range of these security protocols and initiatives can be centrally configured by using Group Policy in Active Directory domains to provide for simplified management. Each security protocol supported by Windows Vista is helpful for connecting to a variety of wireless networks and helps make the connection more secure. By supporting such a wide range of protocols, Windows Vista can use the most secure method available for a given network.

---

4   Windows Vista One Year Vulnerability Report, January 2008.
5   CSI Survey, 2007.

Malicious Software Installation

Windows Vista provides a defense in depth technologies—
Data Execution Prevention (DEP), Address Space Layout
Windows Vista provides in-depth defense technologies—
that help prevent malicious software from making unau-
thorized changes to the file system, registry, network, or
other resources that could be used to allow malware to
install or to attack other computers.

Inappropriate Data Disclosure

Windows Search, a feature of Windows Vista that facilitates
fast, efficient access to information, also protects corporate
data from accidental disclosure. Search results are trimmed
based on user access permissions to ensure users only
see search results for content they are allowed to access.
Windows Search works seamlessly with locally encrypted
files and BitLocker, all the while making sure your sensitive,
Information Rights Management (IRM)-protected content
does not get indexed and disclosed.

Improve Regulatory Compliance with Windows Vista

The capabilities of Windows Vista can help organizations
comply with ever-growing regulatory requirements. For
example, many locales have legal requirements regarding
the protection of customer data, as outlined in Figure 2
below:

Region	Regulation
European Union	Data Protection Directive
Japan	Personal Information Protection Act
United States	Gramm-Leach-Bliley Act
United States	Health Insurance Portability and Accountability Act (HIPAA)

Figure 2. Regulatory Requirements by Region

Additionally, under the Sarbanes-Oxley Act in the United
States, companies are required to implement specific types
of software compliance. The User Account Control feature
of Windows Vista makes it easier to standardize desktops
and enforce compliance with regulations.

Unlocks the Potential of Today's Mobile PCs

Windows Vista Enables the Mobile Workforce at Lower Cost

IDC predicts that there will be over 1 billion mobile workers by 2011.[6] Strategy Analytics predicts mobile PCs will be the dominant form factor in the United States by 2010. Laptops are here to stay, but managing them can be challenging and costly. Windows Vista can help. A recent Microsoft-commissioned report from GCR on cost savings for mobile PCs shows that there is a $251 per machine per year cost savings attributable to Windows Vista as shown in Figure 3.[7]

Cost Item	TCO of Mobile PCs with Windows XP (a)	TCO of Mobile PCs with Windows Vista (b)	Savings (a-b)
a) Security	$224 (%)	$169	$55
b) Desktop Engineering & Support	$267 (6%)	$221	$46
c) Service Desk	$235 (6%)	$227	$8
d) User Labor	$2,171 (49%)	$2,030	$141
e) Hardware and Software	$1,509 (34%)	$1,508	$1 ($34 w/o memory)
Total	**$4,407 (100%)**	**$4,155**	**$251**

Figure 3. Mobility cost savings with Windows Vista[8]

Enhanced Manageability Helps Workers Stay Productive

For workers on the go, system problems can leave them stranded. Windows Vista is designed to be self-healing and easy to manage, enhancing reliability. The Startup Repair Tool enables mobile workers to automatically recover even unbootable systems. Instead of separate disk images for desktop and mobile PCs, Windows Vista enables a single image to be deployed across both.

Better Security for PCs Beyond the Firewall

The GCR report attributes $55 per year in cost savings when running laptops with Windows Vista to security features like User Account Control and BitLocker Drive Encryption. Windows Vista uses the latest wireless protocols, enhancing security for users connecting to public networks. For example, Network Access Protection, a feature that works in conjunction with Windows Server® 2008, helps ensure that only healthy computers (for example, those with the latest updates and an enabled and updated antivirus program) can access the network, helping to reduce the risk that mobile PCs can release a virus inside the network perimeter.

Get More Done on the Road

Windows Vista can increase the productivity of mobile workers by reducing the amount of time they spend managing their hardware and data. The GCR study reports the largest cost savings in the area of user labor—$141 per user lower than Windows XP. The Windows Mobility Center puts controls commonly used by mobile workers in a single location. And, Windows Vista enters and exits sleep states significantly faster than Windows XP so that users spend less time waiting for systems to come online.

Internal Medicine Office Reduces Support Calls by 15 Percent and Improves Patient Care with Windows Vista on Mobile PCs

Certified Microsoft Partner Curas helped Twin Cities Internal Medicine deploy Windows Vista Ultimate, the 2007 Microsoft® Office system, and a medical data management suite on mobile and desktop form factors. The enhanced mobility enables the staff to save up to two hours per day that were formerly spent on repetitive data entry tasks and helps them stay connected to patient data in hospital and clinic settings. Additionally, the solution has reduced helpdesk calls by 15 percent.

---

[6] IDC, "Worldwide Mobile Worker Population 2007–2011 Forecast", 2007 (Doc #209813, December 2007).
[7] Reducing TCO with Windows Vista, Wipro Technologies and GCR Custom Research, September 2007.
[8] Ibid.

Going Green with Power Management Features that Save Money and Increase Mobility

A typical mid-sized company wastes more than $165 per PC per year in energy costs from inefficient power-management practices.[9] With Windows Vista, Information Technology (IT) managers, desktop administrators, and individual users can save energy and improve productivity simultaneously. In a report entitled "PC Power Management Activation Leads to Significant Power and Cost Savings," Gartner stated that "organizations actively employing power management functionality can expect to save $38.3 thousand per year compared to unmanaged ones (based on the number of new machines)." In addition, "total PC power consumption per year for a well-managed 2,500 PC strong organization is 50 percent lower than for an unmanaged one" according to the same Gartner Report.[10]

To understand the environmental impact, for every six PCs left on when not in use, an acre of trees is required to appropriate the greenhouse gas released due to the energy needed to power them when not in use. Windows Vista energy features aren't just good for business, they're good for the environment.[11]

IT administrators can also manage more than just Sleep and Hibernate functions. Group Policy allows IT managers to define organization-wide policies to control any number of specific settings and put those policies into effect with little effort. More than 35 power management settings can be managed via Group Policy including timeouts for screensavers, monitors, and hard disks, sleep mode, and hibernate mode.[12]

For mobile workers, battery life can also have a big impact on productivity. In addition to enhanced power management features, Microsoft has worked with notebook manufacturers to optimize laptop PC configurations for maximum battery life when running Windows Vista. This includes reducing power drain from preinstalled software and modifying device drivers to minimize unnecessary power usage. Test results have shown as much as 30 percent improvement in battery life with the newly updated drivers.

---

9   PC Energy Report 2007, 1E.
10 Charles Smulders, "PC Power Management Activation Leads to Significant Power and Cost Savings" Gartner, 2007. (Document # 150422 August 31, 2007).
11 Windows Vista Energy Conservation, October 2006, Microsoft Corporation.
12 Aggar et al., "Conserving Energy with Group Policy", May, 2008.

Reason #3

Makes You and Your People More Productive

In a study titled "Hidden Costs of Information Work", IDC found that information workers spend 20 to 30 percent of their time looking for information and that organizations waste up to $14,000 per knowledge worker each year because those workers are unable to find information and need to recreate existing data.[13]

Number of information workers	Annual cost of searching and analyzing information (US$ M)	Cost of wasted time on "searched but not found" (US$ M)
250	7.0	1.3
500	14.0	2.6
1,000	28.0	5.2
5,000	140.0	26.0
10,000	280.0	52.0

Figure 4. The cost of information work for businesses[14]

"If we realize even a 0.5 percent productivity improvement from faster search, that's a savings of more than $30 million across 31,000 employees."

— John Hollinger
Vice President, EMC Corporation

Windows Vista Measurably Improves Productivity

Windows Search in Windows Vista enables users to find information almost instantly. In a Microsoft-sponsored study of 206 corporate participants in the Windows Vista Technology Adoption Program (TAP)[15], IDC found that Windows Vista reduced information search time by 42 percent and reduced unsuccessful searches by 16 percent compared to Windows XP SP2.

Windows Search in Windows Vista	Search in Windows XP
Keywords, tags, and information about documents users receive or create is automatically indexed.	For optimal performance, indexing must be enabled explicitly. Not all file types are indexed.
Instant Search finds information everywhere you store it—on the local hard drive, in e-mail, and on remote shares.	By default, only the local hard drive is indexed when indexing is enabled.
Instant Search is immediately available throughout the Windows Vista user interface.	Search is available only when browsing files in Windows Explorer.
A rich UI helps users preview and organize search results.	Simple sorting is the only means available to analyze search results.
Rich search queries can be used and stored for future searches.	Search parameters are more limited and cannot be stored.

Figure 5. A comparison of search functionality in Windows Vista and Windows XP

13 IDC, "Hidden Costs of Information Work" IDC, 2006. (Doc #201334, April 2006).
14 Ibid.
15 IDC White paper sponsored by Microsoft, "Analysis of the Business Value of Windows Vista," 2006. (Doc #205246, December 2006).

Windows Search can be managed using Group Policy, giving administrators control over search scopes available to individual users or groups of users. Additionally, Windows Update will automatically install improvements to Windows Search as they are released.

Higher Level of Functionality

For Heidelberger Druckmaschinen, a global leader in print solutions, the improved search functionality provided a higher level of functionality for its end users and was a key factor in upgrading to Windows Vista from Windows XP.

Less Downtime and Easier Support

Windows Vista helps enterprise customers improve lost user productivity resulting from a number of activities, including installing software and patches, adding printers or other hardware, managing user data, troubleshooting, and supporting peers.

Another dimension of IDC's Windows Vista research conducted on 330 Windows Vista early adopter customers involved in the TAP indicates that Windows Vista is expected to reduce the amount of time users spend maintaining their own PCs and experiencing downtime. IDC reports that "Windows Vista's greater reliability and security should reduce the time users spend troubleshooting their PCs or on the phone with the service desk. Each user could enjoy annual cost benefits from reduced downtime and self-maintenance of $140 compared to Windows XP SP2."[16]

> ### "The new search function is a real advantage for all knowledge workers. Every day, they spend a lot of time looking for documents. Now, they simply enter a search term, and the file that contains it is displayed immediately—it's awesome. In my opinion, it's an immense improvement."
>
> *— Axel Junghans, Global Client Director, Heidelberger Druckmaschinen AG*

[16] IDC White paper sponsored by Microsoft, "Analysis of the Business Value of Windows Vista," 2006. (Doc #205246, December 2006).

New technologies in Windows Vista help make it faster, easier, and less expensive to deploy than previous Windows operating systems. These include improvements to planning, testing, deployment, and migration. Additionally, Microsoft offers customers tools and guidance to help with all stages of deployment.

Worldwide Momentum for Windows Vista Deployment

According to Gartner's latest forecast of PC operating systems, Windows Vista share of the professional PC OS installed base is slightly than higher than that of Windows XP one year after its introduction and will gain share at a faster rate than Windows XP did over the next year. [17] Industry-leading companies including Citibank, Charter Communications, Edipower, Satyam, Banco Bradesco, Avanade, Infosys India, Cerner, Continental Airlines, and many others have deployed Windows Vista en masse. There are already several million seats deployed and according to a survey conducted by Microsoft, 60 percent of IT professionals expect to have deployed Windows Vista on the majority of their PCs by this time next year.

> **"Most companies are well under way with their software and hardware compatibility testing and are planning to start their deployment toward the end of this year and into 2009."**
>
> *— Forrester, "Building the Business Case for Windows Vista", April, 2008*

Deploy Faster, Save Time and Money

With fewer images to deploy and more efficient deployment models, Windows Vista can be up and running faster than previous operating systems. Windows Vista introduces image virtualization with the Windows Imaging Format (WIM), which companies can use to deploy a single disk image across hardware types. Telekom Austria was able to use WIM to reduce 30 images to one in order to address a range of hardware and allow for more efficient IT management. "We can service image components offline, without recreating the whole image," states Klaus Aigner, Manager of IT Client Services, Telekom Austria.[18] The Multilingual User Interface in Windows Vista Enterprise enables a single image to be deployed in more than 30 languages.

The Microsoft Deployment Toolkit (formerly Business Desktop Deployment) enables Windows desktop and server operating systems to be deployed using the same tools, helping IT professionals work more efficiently. As a part of the Microsoft Deployment Toolkit, Windows Pre-Installation Environment (Windows PE) provides OS features for installation, troubleshooting, and recovery to help prepare IT for a better managed and consistent experience in a heterogeneous Windows XP and Windows Vista environment.

Deploying Windows Vista in conjunction with Windows Server 2008 just became even better. As a component of Windows Server 2008, Windows Deployment Services enables multicasting for Windows Vista deployment. This allows an IT administrator to image multiple computers simultaneously, dramatically saving network bandwidth.

Regional Bank Deploys 16 Times Faster with Windows Vista

"With our branches spread across Oregon and Washington, we don't have enough staff to deploy systems onsite, so we're really excited about the zero-touch deployment capabilities that we've been using with Microsoft Systems Management Server 2003 and Windows Vista. We've been able to shorten the amount of time that it takes for us to deploy the systems from 4 hours per computer to just 15 minutes—that's 16 times faster—which translates to a migration savings of $46,875." —Nathan Church, Vice President and Information Technology Manager, Columbia River Bank.

Easier Upgrade Assessment with Automated Tools

A top concern with any new operating system is compatibility with existing IT systems. With Windows Vista, the first step—discovering which PCs are ready and which must be upgraded or replaced—is made easy with the Microsoft Assessment and Planning Solution Accelerator (MAP). As part of its broad IT system assessment capabilities, MAP automatically scans hardware for compatibility with Windows Vista, providing detailed guidance about how to proceed. As IT director at Collegiate Housing

---

[17] Gartner Forecast: PC Market by Operating System, Worldwide, April 2008 Update.
[18] Telekom Austria, Microsoft Case Study, November 2006.

Services, an 80-person college facilities management firm, Sumeeth Evans recalls spending about five days to upgrade approximately 40 users to Windows XP six years ago. With the help of the MAP tool, Evans upgraded 80 systems to Windows Vista in half a day. "Even though the tool required much less work than a manual inventory, it gave me much richer information," says Evans.

Device and Application Compatibility Continue to Improve

Device compatibility has improved dramatically since the initial release of Windows Vista. In the past year, the number of available drivers has more than quadrupled, with over 79,000 devices supported out of box or through Windows Update.

Major improvements to application compatibility have also been made:

- Microsoft and partners have remediated over 200 major applications nominated from field sales personnel, unblocking the deployment of 5 million enterprise seats.

- Today, there are 2,500 Windows Vista logoed applications—ten times as many since Windows Vista was officially released.

- 99 of NPD's top 100 applications are compatible with Windows Vista, 48 of the top 50 applications downloaded from www.download.com are compatible.

"To date we've tested about 150 applications, without considerable problems," reports Klaus Aigner, manager of IT client services at Austria Telekom.

Compatibility Tools Make Deployment Easier

- The Microsoft Application Compatibility Toolkit (ACT) 5.0 identifies which applications are compatible with the Windows Vista operating system and which require further testing. ACT helps customers lower application compatibility testing costs, prioritize application issues, and deploy Windows Vista more quickly.

- From a button within ACT 5.0, customers can access an Online Compatibility Exchange that offers access to the test results from Microsoft, ISVs and other IT professionals.

- The Application Compatibility Factory (ACF) connects enterprise customers with partners that deliver high volume, low cost application compatibility and remediation services.

- In rare situations when a crucial application cannot be made to work with Windows Vista, Microsoft Virtual PC 2007 enables customers to run Windows XP in a virtual machine on top of Windows Vista. This solution will be further improved with an almost seamless end user interface and centralized IT management via the Microsoft Enterprise Desktop Virtualization, a feature of the Microsoft Desktop Optimization pack that will become available in 2009.

- Microsoft Application Virtualization, available as part of the Microsoft Desktop Optimization Pack, can help reduce or eliminate application coexistence conflicts and significantly reduce the costs of testing the impact of applications on each other by virtualizing the applications. Essentially, the applications run on Windows Vista but each application is provisioned and managed from a separate server.

Swiss Federal Institute of Technology (ETH Zurich) Implements Flexible Deployment System with Windows Vista and Windows Server 2008

"Using Windows Server 2008 with Windows Deployment Services and Application Virtualization is quite a revolution here at the institute," says Jacque Laville, manager of the Institute for Microbiology at ETH Zurich. "For 15 years, we cloned client computers with images that were specific to each hardware model. By using Windows Server 2008, we can deploy a single, generic Windows Vista image to all machines and seamlessly deploy hardware-specific software as well as user-specific applications." The latter are streamed from servers using Microsoft Application Virtualization, eliminating application coexistence conflicts and delivering instant access.[19]
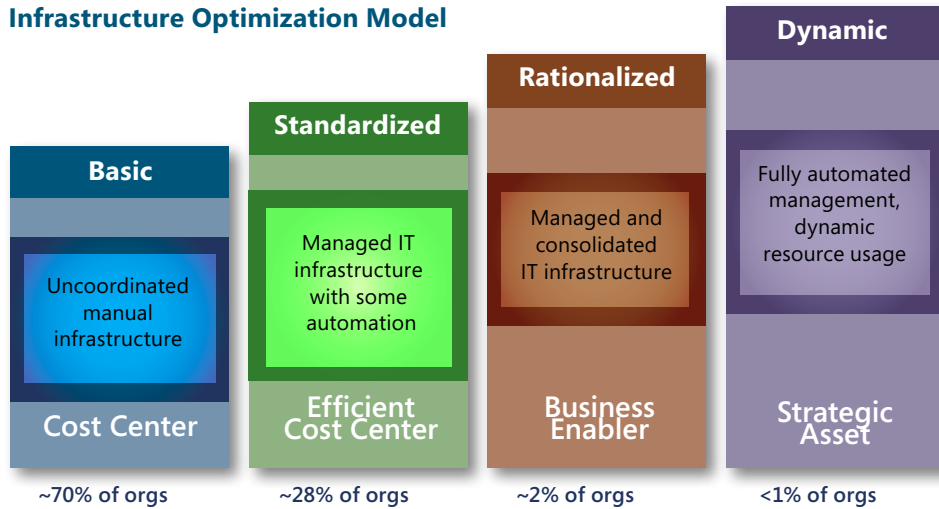
---

[19] ETH Zurich, Microsoft Case Study, April 2008.

Reason #5

Reduces Support and Management Costs

Windows Vista is a crucial part of optimizing your desktop infrastructure. It enables organizations to move desktops along the continuum from a basic, unmanaged cost center toward an automated, dynamic, and strategic asset.

Infrastructure Optimization Model

Basic	Standardized	Rationalized	Dynamic
Uncoordinated manual infrastructure	Managed IT infrastructure with some automation	Managed and consolidated IT infrastructure	Fully automated management, dynamic resource usage
Cost Center	Efficient Cost Center	Business Enabler	Strategic Asset
~70% of orgs	~28% of orgs	~2% of orgs	<1% of orgs

Figure 6. The Evolution of IT Management, from Basic to Dynamic

> **"Collectively considered, our research shows that TAP customers found Windows Vista out-of-the-box savings of $236 per PC annually in IT labor, user labor, and improved productivity."**
>
> *— IDC, 2007*

IDC estimates annual IT labor costs for supporting PCs range from $230 to as much as $1,320 per PC, depending on a company's IT management practices.[20] They demonstrate considerable savings from implementing three important elements of desktop optimization available to Windows Vista users.

Best Practice	Savings
Centrally Managed PC Settings and Configurations	$190
Comprehensive PC Security	$130
Standard Desktop Strategy	$110

Figure 7. IT Labor Savings from Windows Vista-enabled Best Practices, per PC, per year.[21]

---

[20] "Optimizing Infrastructure: The Relationship between IT Labor Costs and Best Practices for Managing the Windows Desktop". (Doc #203482, October 2006).
[21] Ibid.

As IDC determined, enterprises whose management practices met the criteria of "Rationalized" exhibited 82 percent lower IT labor costs than those with "Basic" practices.[22]

Together, these capabilities can greatly increase the efficiency of IT staff.

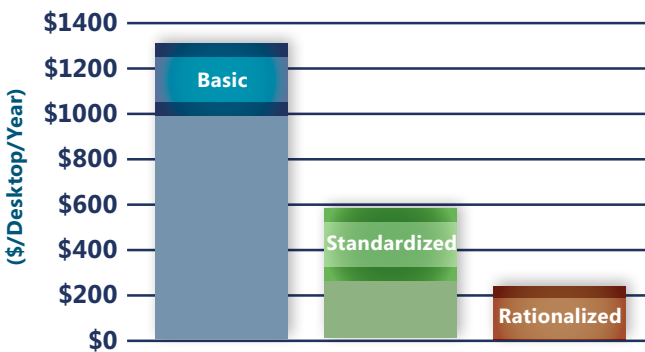**Annual IT Labor Cost by Comparison by IT Optimization Level**

Figure 8. Labor Costs and IT Optimization Level[23]

Savings Found by Early Windows Vista Adopters

In a separate Microsoft-sponsored study of Windows Vista early adopters by IDC in 2007[24], it was determined that "there is definitive business value and lower operational costs associated with a move to Windows Vista." IDC's research, based on organizations enrolled in the TAP, shows that the combination of core technology and best practices saves organizations on average 24 percent on IT labor and 19 percent on user labor per PC per year. The study also found that TAP participants experienced fewer calls to the service desk, which IDC believes was most likely related to the improvements in the reliability and security features, and the self-healing capabilities built into Windows Vista.

[22] IDC White Paper sponsored by Microsoft, "Optimizing Infrastructure: The Relationship Between IT Labor Costs and Best Practices for Managing the Windows Desktop," Doc #203482, October 2006.
[23] Ibid.
[24] IDC White paper sponsored by Microsoft, "Analysis of the Business Value of Windows Vista," 2006. (Doc #205246, December 2006).

Don't Wait for Windows 7

Realize the Benefits of Windows Vista Now

Some customers are considering whether to deploy Windows Vista or whether to skip in anticipation of Windows 7. The discussion is often phrased as one of balancing costs and timing of releases. By not deploying Windows Vista, it means missing out on the proven benefits such as better security, productivity, search, mobility, manageability, and infrastructure optimization. Windows Vista works with more applications and devices than ever before and can be significantly less expensive to support than Windows XP SP3.

Moving to Windows Vista will Ease Migration to Windows 7

There is no need to wait for Windows 7. It is a goal of the Windows 7 release to minimize application compatibility for customers who have deployed Windows Vista since there was considerable kernel and device level innovation in Windows Vista. The Windows 7 release is expected to have only minor changes in these areas. Customers who are still using Windows XP when Windows 7 releases will have a similar application compatibility experience moving to Windows 7 as exists moving to Windows Vista from Windows XP.

Historically, mainstream deployment occurs not when Microsoft releases a product but 18 months later. While the mainstream deployment cycle is beginning for Windows Vista now, it isn't expected to begin for Windows 7 until at least mid-2011. With Microsoft set to release a new version of Windows every three years, there will always be a new version on the horizon during a typical evaluation period. This means that customers should not base their deployment decisions on the anticipated release-to-market (RTM) date but on an "evaluation completion date," sometime after RTM and dependent on the customer. For more information on deployment lifecycle, refer to Gartner's report, "Don't Skip Windows Vista entirely", Gartner 2007.

Not deploying can also have implications for security, support, and regulatory compliance and reduce flexibility in the face of changing business requirements. Due to the lag time between typical OS evaluation and deployment, as well as the fact that many businesses deploy slowly following better hardware attrition cycles, companies who skip an OS release may end up relying on outdated software as third-party vendors stop supporting older systems. For the vast majority of companies, deployment, application, and device support are well-established for Windows Vista, making it an operational best practice to begin migrating now.

Get the Benefits of Windows Vista SP1 Today

With the release of Windows Vista SP1, Windows Vista is more capable than ever of addressing contemporary business challenges. With a focus on continuous quality improvement, SP1 offers benefits in six key areas:

1. **Device coverage:**
   98 of the top 100 devices are now supported, and more than 47,000 drivers have been added since Windows Vista was released. 99 percent of Windows Vista PCs have drivers for every single supported device installed.

2. **Application compatibility:**
   Over 200 of the major enterprise applications have been remediated since the release of Windows Vista, representing more than 5 million seats worldwide.

3. **Security:**
   The improved code base of Windows Vista has resulted in less vulnerability over its first year of life compared to Windows XP. In addition to all previously released security updates, Windows Vista SP1 includes security improvements such as enhanced BitLocker

Drive Encryption and better support for third-party security and malware protection tools.

4. **Reliability:**
   The continuous, anonymous feedback system built into Windows Vista has allowed Microsoft to address a significant portion of code-related crashes. Early tests indicate that Windows Vista SP1 averages twice as long without disruptions compared to the RTM version.

5. **Performance:**
   Windows Vista SP1 allows faster moving and copying of many files, faster browsing of network shares, and faster recovery from hibernation and sleep states.

6. **Manageability:**
   Terminal Server and Virtualized Desktop modes are simplified in SP1, and expanded Network Diagnostics make it easier for users to diagnose connection problems.

With Microsoft and industry partners working constantly to provide new improvements, Windows Vista only gets better. For maximum return on invesment (ROI), ease of deployment, and operational flexibility, now is the time to deploy.

A Conversation with Daniel Heinzmann, OIZ Director for the City of Zurich

Simplify Management by Standardizing on Windows Vista

The City of Zurich is optimizing its IT infrastructure by bringing its 15,000 PCs and notebooks spread across 60 service departments in line with one common standard. The City used to manage the different service department's desktop and notebooks with unique procurement policies. At the end of 2007, the centralized IT department (OIZ) standardized its IT office workstations on the Windows Vista operating system.

Employees from Microsoft Consulting Services helped the OIZ distribute the software quickly and smoothly. They also assisted in setting up the new IT office workstation in all service departments, establishing the different requirements of users and ensuring the compatibility of the 1,600 applications currently in use.

Microsoft System Center Configuration Manager 2007 (SCCM) was used to install Windows Vista and the 2007 Microsoft Office system, and the City will leverage SCCM for central configuration and maintenance going forward. The City of Zurich also realized faster deployment, easier provisioning, and better management with the Microsoft Desktop Optimization Pack (MDOP). This solution's technologies support accelerated provisioning of Windows Vista while also making it easier to manage.

"With Windows Vista and Office 2007 as a basis, we can offer our customers solutions in no time at all, for instance when it comes to collaboration." The City realized improved productivity with Windows Vista Instant Search. With the powerful search functionality, employees in the administrative offices can quickly and easily access numbers and documents. Since they frequently move from one workstation to another or work on different PCs employees can find the same, familiar PC working environment—significantly reducing the time it take to locate files and programs.

"Pre-rollout tests showed that our requirements for stable and secure operation were completely met," reports Heinzmann. Windows Vista proved to be more stable, with enhanced security—and MDOP helps manage the operating system and applications even more effectively. The standardization also decreased administrative costs. And the same can be said of error rectification, as numerous faults were eliminated centrally without an engineer having to appear on site.

For more information about City of Zurich Windows Vista deployment visit the Web site at:
http://www.microsoft.com/casestudies/casestudy.aspx?casestudyid=4000001326

Summary

The Value of Windows Vista

- In a fast-changing world, IT needs to support the business with platforms that are secure, adaptable, and able to deliver the performance that business users need.

- Search and organization features in Windows Vista make it easy for users to instantly access the documents and business data they need to stay productive.

- Organizations with mobile workers should use Windows Vista on their new laptops and Tablet PCs—don't downgrade the security, performance, and connectivity benefits.

- Deployment and migration have been simplified by extensive pre-launch compatibility testing, partner support, and Microsoft investment in resources and tools.

- The costs of deployment are more than repaid by the documented ROI of better desktop management practices.

- There is no need to wait for Windows 7—Windows Vista is ready today, and Windows Update ensures it will be kept continuously up-to-date.

For more information, visit www.windowsvista.com/business