ON THE DESKTOP: PCs AND WINDOWS 7.

THE NEWEST ITERATION OF WINDOWS BREATHES NEW LIFE INTO AN UPDATED LINEUP OF DESKTOP STALWARTS.

»»»

The successful launch of Microsoft's newest version of Windows last fall couldn't have come soon enough for many businesses. Concerned about Windows Vista's lackluster performance, strenuous hardware demands and compatibility issues, many companies chose to stick with the tried-and-true Windows XP they'd grown familiar with over the years.

Windows 7 has largely laid those concerns to rest. Performance tweaks and functional enhancements throughout the core system have greatly improved the user experience. Plus, Vista's proven new network stack and security model have been carried over to the new version.

With Windows 7 winning rave reviews throughout the industry, IT managers and corporate leaders alike are looking to clear four- and five-year-old machines — and their sometimes nine-year-old operating systems — off employees' desks. That's a prospect made more interesting by the wide range of new form factors and niche platforms that have emerged in PC manufacturers' lineups.

The days of the boring beige box are long gone. Today's company can choose from a variety of desktops according to the precise physical form, computing power and storage requirements needed for employees' specific tasks and workstation layout.

» CORPORATE WORKHORSE

Notebook computers and netbooks — and even smartphones — have made serious inroads into the corporate environment. Still, desktop systems aren't going to disappear anytime soon.

"They may not be as sexy as notebooks," acknowledges Richard Shim, research manager for IDC's Personal Computing Program. "But they are still seen as the workhorse of the corporate world."

This is so for several reasons, not the least of which is the fact that desktops do not leave the building. "Desktops do not present the security risk of a notebook filled with corporate secrets and intellectual property," Shim points out. "And since IT always knows where they are, they can easily push updates and security patches."

Adds HP's Lisa Harmeyer, product manager for business desktops at HP Americas, "There's less theft of desktops, and people don't leave them in cabs or lose them at airports. Lost notebooks are not only a security problem but also a significant financial drain."

Legacy equipment also plays into continued desktop PC longevity. Considering the range of client equipment scattered throughout most corporate offices — monitors, keyboards, hard drives and other peripherals — the ability to upgrade just the system core can represent a significant cost savings versus replacing whole systems with notebooks.

Finally, new desktop PC design options are gaining in popularity. For example, small form factor (SFF), ultra-small form factor (USFF) and the even tinier nettop PCs let companies assign low-cost, energy-efficient computers to workers whose day-to-day tasks require little computing power.

Then there are all-in-one PCs such as Sony's L-Series and HP's TouchSmart Series — with or without touchscreens. Featuring a single box that is both the display and computer, they provide style and elegance to the front office and customer kiosks.

» FITTING FORM TO FUNCTION

Never before have there been so many different kinds of desktops to meet the needs of different applications. "At the end of the day, the particular application is what we need to understand" when making computer buying choices, says Ben Thacker, vice president of distribution sales for North America in the Systems Business Group at ASUS Computer.

For example, ASUS' nettop computer, the Eee Box, is a tiny, Atom processor-based computer designed as a gateway to web information, applications and services. In fact, it could be considered a desktop version of the company's popular netbook.

As companies adopt cloud computing services, move to centralized servers for data and applications, and rely more heavily on web information sources, the need for local storage and raw computing power is minimized. Therefore, you have to ask yourself, "Why pay for it?"

Consider a typical call center. "You're utilizing a software program like Salesforce.com that's web-based to interact with customers and enter sales orders," says Thacker. "People in inside sales or call centers are not using huge amounts of hard-drive storage and are using, in most cases, cloud-based programs."

As for all-in-ones, they eliminate clutter on users' desks and expand their available workspace. "The ability to have all the components contained in one unit enables you to move it around, put it at different angles," says Xavier Lauwaert, product manager for VAIO product marketing at Sony Electronics. "It's much easier to manage than if you were moving a tower, a monitor, a keyboard and all that goes with it."

Some all-in-ones offer touch-based interfaces as well. Although business productivity applications are just beginning to take advantage of touchscreens, the growing popularity of touch as a primary way of interfacing with bank kiosks, airport ticketing systems and smartphones is seen as spurring interest in touch-based computing.

Windows 7 has multitouch implemented throughout the interface. The software is said to support touchscreen from its core, so even programs not designed to work with touch features may be compatible, assuming the user has the appropriate hardware.

Even now, says Thacker, "There is a class of business user that likes the human interface aspect" of touchscreens. This is despite the current lack of software specifically designed to be controlled with fingers. However, this will be changing as

more and more developers recognize the potential in touch interfaces.

Even with all of today's cutting-edge computing platforms, don't rule out the traditional tower. Today's tower desktops are offered in a range of form factors, with several chassis styles intended for different spaces while meeting whatever expandability needs you may have.

For graphics and video-rendering capability, the ability to mount multiple graphics cards, run large amounts of RAM and install multiple hard drives for terabyte-plus storage, the standard tower or smaller microtower and minitower remain unparalleled.

For users needing fewer expansion options, the same models are often available in SFF and USFF sizes. They can easily make up for what they lose in expandability by offering energy efficiency, little fan noise and ease of placement.

For example, Lenovo's recently announced ThinkCentre M90 will be available in tower, SFF and USFF formats. The HP Compaq 8000 Elite line comes in SFF and ultra-slim sizes, as well as a convertible minitower that can be adapted to sit either horizontally or vertically.

Using several form factors of the same PC makes managing them easier, says Harmeyer. "If you have a company that needs microtowers for expansion abilities in some environments, but they could use small form factors to save space in other environments, they could purchase both within one family and have only one image to manage and manipulate. And the fewer images the IT department has to manipulate, the easier their job is."

» SAFETY WITHOUT WALLS

But what about security across many platform styles as businesses deploy Windows 7? Microsoft learned its lesson well from the security problems that plagued Windows XP at release.

Consequently, the Microsoft security team rewrote vulnerable networking functions for Vista and added features such as Data Execution Prevention (which minimizes buffer overflows) and address space layout randomization (placing core system software in random memory locations so hackers cannot predict where to target their attacks).

These might seem like profoundly unsexy features, but they nonetheless go a long way toward freeing today's Windows systems from the security issues of yesterday by removing the standard routes that hackers and viruses use to gain access to and control a system. Microsoft also developed User Access Control (UAC) for Vista, which prevents the unintentional installation of malicious software.

All of these features have been carried over into Windows 7 and refined. For example, UAC is not nearly as intrusive as it was in Vista.

Microsoft's full-disk encryption system, BitLocker, also makes a return in Windows 7, allowing users with sensitive information on their computers to prevent unauthorized access. A new feature, BitLocker To Go, extends this encryption tool to flash drives, so users can share data more securely.

In addition, Windows 7 supports biometric login and authentication via fingerprint reader. It can store up to 10 different fingerprints (allowing login with an alternative finger when, say, a hand is injured).

Although most of these tools are not strictly new, they have all benefited from two years of "field testing" in Vista

Popular Desktop PC Form Factors:

Tower	Full tower cases are typically 30 inches or more in height and stand on the floor
Minitower	The minitower case typically stands from 12 inches to 18 inches tall
Small Form Factor	Computers that are sized smaller than traditional minitowers
Ultra-Small Form Factor	Computers that are typically smaller than small form factor PCs
Ultra-Slim Form Factor	A notebook-sized PC that is ideal when desk space is at a premium
Nettop	A small form factor computer specifically designed for the completion of basic tasks
All-In-One	All-in-ones offer a single CPU containing both display and computer

computers. Therefore, in Windows 7, they are fully mature, tried-and-true security systems.

Perhaps most telling, suggests Lauwaert, is that Windows 7 was released on time. "When Vista was about to come out, it was delayed because Microsoft had to address some serious security holes before they could release it," he says.

"Windows 7, on the other hand, was released on time. And the fact that they released on time means that they addressed security very seriously."

» STEPPING UP TO WINDOWS 7

The simplest way to deploy Windows 7 in an enterprise is to purchase it preinstalled on new PCs. But for some companies this is not the best option, particularly if they recently refreshed hardware but stuck with the almost decade-old XP, or replaced gear when they moved to Vista.

Upgrading is a fairly easy prospect on most newer computers because, unlike virtually every new edition of Windows in the past, Windows 7 actually has fewer hardware requirements than its predecessor. For example, while Vista struggled with integrated graphics chipsets and 1 gigabyte or less of memory, Windows 7 takes advantage of systems with limited resources.

"Windows 7 definitely has a performance boost over previous systems," says Lauwaert. "It was built from the ground up with netbooks in mind; anything that is more powerful than a netbook will run Windows 7 very, very well."

It will also run many existing applications well. Because Windows 7 is built on the same core as Vista, almost anything that Vista could run will also run on Windows 7. More important, for companies that have been using XP for the last nine years, Windows 7 includes a virtualized version of the entire XP system, allowing for continued use of XP-based apps.

»» Sixty percent of corporate IT departments plan to deploy Windows 7 in 2010.

SOURCE: ITIC Windows 7 Deployment Trends and Adoption Survey

"Let's say that you are a midsize business, and you have a homegrown application that is mandatory for your business," says HP's Harmeyer. "The XP mode in Windows 7 will allow you to continue to use that in a stable environment while you are working to get it modified and ported to Windows 7."

The pace of Windows 7 adoption has surpassed expectations for good reasons. The operating system offers more power, greater software and hardware compatibility, better security and a more user-centric interface than its predecessors.

In the end, though, Windows 7's success is that it gets out of users' way and lets them get on with their work. "What drives the business user is the application, not the OS," Thacker says. "Do we have a piece of hardware and an OS that will support the security, reliability and desktop environment of that application? Because that's the real driver of why they're using the device." ◊

GET MORE FROM WINDOWS 7 WITH DESKTOP DEPLOYMENT PLANNING SERVICES FROM CDW.