5 PC Hardware Innovations that Pay Off for Business

The growing resilience of hardware and the tight IT budgets of the last few years have combined to extend traditional refresh cycles for many companies. If laptops, desktops and other user computing devices work, why replace them?

Just because hardware works doesn't mean it's providing the most benefit to the business. Today, innovative new technology is changing the upgrade value proposition. These new technologies — some not widely available even five years ago — provide compelling reasons to consider an upgrade of client laptops and desktops even if legacy systems are still chugging along (with "chugging" being the operative word).

Organizations must consider how the following tech developments change the corporate PC equation by creating new efficiencies and providing a platform for the most powerful operating systems and enterprise applications.

1. New Processors Boost Productivity and Energy Efficiency

Laptops and desktops based on the latest processors can provide significant return from:
- Time saved
- Productivity gained
- Applications optimized

Fourth-generation Intel processors are more powerful and energy efficient than earlier versions, providing increased speed and battery life, even for users of resource-intensive applications.

In Intel benchmark tests, a laptop based on an Intel® Core™ processor based on the Haswell architecture was up to 16 percent faster than a laptop based on a previous-generation Intel Core processor in single-task performance and up to 14 percent faster in multitask performance.[i] This performance boost gives users noticeably faster access to enterprise applications and files, as well as the ability to work more efficiently on tasks such as video production and data analytics.

A review of the new Intel chip family at PCPro.com states: "While this might be a good time to pick up an Ivy Bridge bargain, there's no doubt the future is with Haswell, which outshines its predecessor in every way." [ii]

2. SSDs Offer New Levels of Speed and Reliability

The huge storage potential of hard disk drives (HDDs) once made justifying the cost of solid state drives (SSDs) a challenge. However, new generations of SSDs are more affordable, have greater capacity and provide even speedier access to data.

SSD-equipped systems can help business users perform analytics and other resource-intensive tasks with the speed and agility required in a highly competitive business environment. Indeed, most companies today can't afford not to optimize their systems for these tasks.

SSDs offer high performance in terms of input/output operations per second, with low power consumption and cooler temperature, which reduces the total cost of ownership. Most importantly, SSDs offer all of this along with rock-solid durability.

The Business Benefits of New Hardware

Companies can see significant returns when they make smart hardware investments. Upgrading to modern computing systems gives organizations:

- Increased productivity and energy efficiency
- Peace of mind
- Improved security
- The ability to fully leverage a growing universe of mobile apps
- A more efficient (and comfortable) mobile workforce

"The SSD's immobility makes it shock-proof, lighter … and more durable than an HDD," according to DigitalTrends.com.[iii] "The lack of moving parts also lengthens the life of your computer and requires less energy to run … ."

SSDs are also much more reliable than HDDs — especially for mobile users. This provides another layer of protection for locally stored applications and data, and it means that IT pros can spend more time and energy on business-focused issues and less on help desk duties of the "My hard drive died!" variety.

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3. Security Tops Upgrade Priorities

There are many good reasons to update corporate computing systems, but none are as compelling as the peace of mind new devices provide.

New Intel® Core™ vPro™ processors, for example, offer built-in authentication, security monitoring and asset protection capabilities, and new laptop and desktop hardware boasts security features such as biometric scanners, antitheft technology and Trusted Platform Module-based authentication.

In fact, hardware vendors are integrating increasingly robust new levels of security solutions directly into new systems. Look for protections that will enable the organization to apply different levels of security — up to and including full-disk encryption — depending on factors such as the type of data being stored and compliance concerns.

In the end, the price organizations pay to deal with a security breach is far greater than the cost of upgrading to systems that help ensure the safety of user and corporate data.

4. Touch Capabilities Increase Mobile Effectiveness

With so many applications optimized for touch, users want computing systems that will enable them to take full advantage of the technology. In addition to providing touch-screen hardware, modern computing systems can take advantage of the latest Windows operating system.

Windows 8.1 touch-enabled features have the potential to increase productivity and create new opportunities for training and self-service, among many other applications. New convertible systems give companies the best of both worlds — laptops and tablets with touch capabilities — for their users.

Touch capabilities will also be important as more companies create mobile apps. Seventy-one percent of respondents to the 2013 *InformationWeek* 500 Executive Survey said they already have rolled out or are pilot testing mobile apps for customers, while 70 percent said they are currently provisioning or pilot testing smartphone and tablet apps based on employee role (beyond productivity apps).[iv]

5. Thinner/Lighter Devices Offer Usability Boon

A device is useful only if it is used, and the weight and bulk of many older laptops have made using them on-the-go prohibitive. New thinner and slimmer workstations allow employees to be productive wherever they are.

In its Laptop Buying Guide 2013, Laptopmag.com recommends buying systems that weigh less than four pounds for portability.[v] Companies that buy these newer, lighter systems will see a direct benefit in terms of the productivity and satisfaction of their staff.

16% performance increase achieved on a laptop using the latest Intel® Core™ i7 processor compared with one using the previous generation Intel processor.

Value to the Business

While the economic climate is brightening and corporate budgets are opening up, no organization has money to throw around. Any buying decision has to be made thoughtfully and must be backed up and justified with relevant data.

Deciding whether to refresh user computing systems has become more challenging because of lengthening upgrade cycles and the issue of users bringing their own devices into the workplace. When it comes to ensuring a productive environment and the ability to develop and host the most cutting-edge business applications, however, new and up-to-date computing systems — vetted by both IT and business managers — will pay for themselves.

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For more information, go to www.dell.com/migration or try the TCO calculator on this Intel site.

i http://www.intel.com/content/www/us/en/benchmarks/laptop/4th-gen-core-i7-4930mx-4950hq.html
ii http://www.pcpro.co.uk/reviews/processors/382204/intel-haswell/2
iii http://www.digitaltrends.com/computing/solid-state-drives-vs-hard-disk-drives
iv http://reports.informationweek.com/abstract/186/11376/InformationWeek-500/2013-InformationWeek-500.html
v http://blog.laptopmag.com/laptop-buying-guide