Windows 7 vs. Windows 8: Challenges and Opportunities

Microsoft has reimagined its Windows operating system, gaining plenty of attention with flashy touch features and better cloud integration. But what, if anything, does a business stand to gain by migrating to Windows 8?
The Great Migration Debate

**With the epic** disappointment caused by its Vista operating system, Microsoft gave its business customers reason to be wary of subsequent OS migrations. In an unanticipated bit of luck for the software maker, the Vista fiasco also provided those customers with ample cause to flee to a new and better operating system. Indeed, that widespread dissatisfaction helped fuel demand for the products that followed.

Microsoft no longer has that going for it. The acceptance of Windows 7 means that businesses large and small have no urgent desire to dump what they have. Most would say they are perfectly happy (or at least reasonably satisfied) with their current OS and in no hurry to move to something else.

So where does that leave Windows 8?

In this handbook, we tackle that question from a variety of perspectives, looking at where Windows 8 can help an organization make real strides toward becoming a tablet-and-cloud workplace and whether that effort is worth the trouble.

Contributor Gary Olsen looks closely at both the advantages offered by the new OS and the significant obstacles and learning curve involved in a Windows 8 migration. He also considers the very real temptation of staying with Windows 7.

IT expert Ed Tittel writes about how to get a feel for the Windows 8 touch features without migrating to the new OS, and TechTarget Senior Writer Stuart Johnston examines the market’s initial appetite for Windows 8.

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Where Does Windows 8 Fit?

As the newest and splashiest of Microsoft’s operating systems, Windows 8 is bound to hold a certain appeal. Microsoft touts a user interface that works across a range of devices, tablet-friendly touch features, a slew of Web apps and better cloud integration. The company also makes the case via its Better Together strategy that the updated Windows Server and aligned products perform more effectively with Windows 8 than without it. But does all that make for a compelling case for businesses to migrate to this newest OS?

Windows 8 is taking punches from nearly anyone with a blog. Some say it’s too radical a change, suggesting that maybe we needed an interim OS to warm up to this tablet look. Others applaud it as a bold jump to the future. Many complain that the desktop is missing familiar features of previous Windows versions such as the Start button and search box. There is no doubt that Windows 8 will require significant user training to get users comfortable, and it’ll take time for those workers to be as productive with the new OS as they are with their current systems.

Despite the negative opinions, Microsoft has set its strategy and is committed to Windows 8. It’s here to stay, so let’s consider that maybe, just maybe, Windows 8 has its place. If so, where is it?

As a starting point, it’s necessary to see Windows 8 for what it is: a fundamentally improved version of Windows 7 with performance capabilities and features beyond the unfamiliar tile interface that gets most of the attention.

Initially, it would appear that the enterprise would adopt a split-brain approach to Windows 8, with tablets, phones and similar devices getting Windows 8 while traditional laptops and desktops remain with Windows 7. That strategy overlooks a number of benefits of having Windows 8 deployed across the enterprise.

Yes, getting used to the user interface is painful. It is not intuitive, and users will need some retraining not only to find their way around but also in how they use computers for apps, data sharing and so forth. Those realities, however, don’t mean that users won’t ultimately benefit from Windows 8.

Consider a sales executive who spends 75% of his time away from the office and his company-provided desktop. While he has a laptop, he is becoming fond of his tablet for email, Internet tasks and demos because it is instantly on, never has to boot and has very handy
sales tool apps. The trouble is that the sales executive also needs access to word processors, spreadsheets and other office applications, and his tablet just isn’t ready for that. Beyond that, his company’s IT staff isn’t crazy about having so little control over his tablet.

One solution might be to provide the sales exec with a Windows 8-compatible tablet, install Windows 8 on his laptop and provide a Windows phone. A single operating system can take advantage of apps in the cloud and store data on the free SkyDrive service that’s included with Windows 8. Note that with Windows 8 on his tablet, the exec can have any app that Windows 8 supports. Now he can work on spreadsheets on his tablet if he likes and share the data with his laptop or a desktop running Windows 8. Plus, he has made IT happy by having them all joined in the domain—secure and managed.

While laptops and desktops can take advantage of a number of features in Windows 8, perhaps the most powerful one is the availability of apps that were previously restricted to tablets and phones. Windows 8 allows development of specialized apps that work in Windows 8 regardless of the device it’s on. This opens doors to a whole new environment. Imagine developing genuine enterprise apps to perform specialized tasks—or even business-critical functions—that could be taken advantage of by laptop users. What about human resources apps or IT apps that gather information and allow better help desk interaction? The possibilities seem endless.

Looking at Windows 8 as just a “mobile” OS misses the mark. Instead, see it as a truly enterprise OS that will bring all devices under the Active Directory umbrella with domain security and administrative control while still giving users the freedom they want. That’s a powerful concept.

**THE GOOD**

Let’s look at the new features of Windows 8 and how they will affect the enterprise.

- **Extended battery life.** Some testers have reported huge increases in battery life, such as going from 4.5 hours in Windows 7 to 6.5 hours in Windows 8. This is a big deal to the sales team or frequent travelers who desperately search for power outlets in airports and hotel conference rooms.

- **Faster, more secure boot.** The Unified Extensible Firmware Interface (UEFI) developed by Intel has some definite advantages. It is more efficient and contributes to faster boot times. In addition, it is more secure by using public and private keys to prevent loading of drivers or OS loaders that are not signed with the proper digital signature. Faster boot times might not be a big deal since a typical user probably boots a PC only once a day, but it matters for tablets, and the security feature is an important new capability.
Control over the BYOD problem. The most difficult challenge Windows admins face is the bring your own device (BYOD) trend of workers bringing more mobile devices to the office. This is a serious issue because these devices are not patched, and they are not subject to the same rigorous IT staff controls as company-issued hardware.

OS refresh options. Under PC Settings, there are several options for restoring the OS without losing files. It’s now possible to remove third-party drivers and software, but since these options are relatively new, it will take some time to see if this really will be a benefit.

Customize Windows 8 Start screen. Shortcuts to apps, tools, etc. can be added to the Windows 8 Start screen. As admins become more familiar with how to do this, they will enable users to move away from the desktop environment to the tile environment, though the desktop will still be required for some apps.

Direct Access via IPv4. If your company wanted the power of Direct Access but did not want to implement IPv6, you will be pleased to know that Windows 8 has improved the installation and setup when IPv6 is not available.

BitLocker and BitLocker To Go. Windows 8 offers a number of improvements here, the most significant of which is flexibility in encrypting large drives. In Windows 7, BitLocker encrypted either the entire drive or nothing. Windows 8 allows encryption of data rather than the entire drive. This means encryption can take place without waiting 12 or more hours for that large drive to be encrypted before it can be used.

BranchCache. There are some improvements in BranchCache in Windows 8, but those upgrades aren’t available unless you’re using Windows Server 2012.

Better with the cloud. Windows Azure provides data hosting and storage services that combine with Windows 8 to put data in the cloud and allow all devices to access it. You can also use SkyDrive and shared folders, but there are advantages with Azure, namely increased functionality, scalability, a safe place for data and collaboration.

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THE BAD
The critics have found much to dislike about Windows 8, so let’s touch on a few of the drawbacks.

■ **Upgrade/install woes.** Walt Mossberg, the popular technology writer for *The Wall Street Journal*, and others have tested the Windows 8 upgrade/install on older machines, and the results were not encouraging. I would not recommend attempting to upgrade a PC to Windows 8.

■ **Application incompatibility.** No surprises here—any move to a new OS typically requires considerable time for applications to be validated. But the Windows 8 user interface (UI) could present a new challenge: For the first time, users need to get comfortable with how to get applications to work and where to find them. In my testing, just getting Internet Explorer to print is a challenge, and I’ve seen even Microsoft presenters unable to get their laptop microphones to work in some applications. This is not a slam dunk.

■ **Apps will take time to develop.** Customized apps to take tablets and desktops/laptops to the next level will be a good thing. This won’t happen overnight.

■ **Security flaw?** Passcape Software has raised questions about whether Windows 8 stores login passwords in plain text, which could make those passwords retrievable by anyone with admin credentials.

■ **User training.** Going to Windows 8 may be worse for users than going from Windows 95 to Windows 2000. I heard one seasoned Microsoft presenter say it took him a week of playing with it to feel comfortable.

  An organization will need to purchase or develop user training. This adds up in deployment costs as well as in unproductive time for your business units.

■ **Are the good points really good?** Consider that while Windows 8 makes some improvements in the crown jewels of Windows 7—DirectAccess and BranchCache—it won’t have the same effect as when those features were introduced in Windows 7. You may, however, view these features as developed enough to finally deploy.

Don’t assume that Windows 8 is ready for you. Treat it as you would any other migration, and do not try to isolate Windows 8 to mobile users. Put it in the lab, put it through its paces, and deploy it when it works for your environment.

WIN transforming the Endless possibilities

Windows 7: The Case for the Status Quo
Many technologists always want the latest and greatest
 hardware and software, but there is also a camp that says stick with what works.

While Windows 8 may boot a few seconds faster, Windows 7 is no slouch for performance. Microsoft will provide mainstream support for Windows 7 until January 2015 and extended support until 2020. Unlike when organizations were getting rid of Vista, there is no compelling reason to move away from Windows 7 in terms of operating system flaws.

Don’t try to pigeonhole certain users, organizations or tasks as just using Windows 7 or force others to adopt Windows 8. Plan to eventually move entirely to Windows 8.

Migration is much more palatable because enterprises can develop a plan based on business needs and be confident that Windows 7 will be a stable environment long enough for them to move to Windows 8 at their own pace.

Just as in any migration, Windows 7 and Windows 8 machines will be scattered throughout the enterprise for quite some time. And there may be compelling reasons to stick with Windows 7 for application compatibility. It’s worth emphasizing that the two environments will work fine together.

RECOMMENDATIONS ON HOW TO MIGRATE TO WINDOWS 8

Develop Windows migration plans just like for any other migration. Don’t try to pigeonhole certain users, organizations or tasks as just using Windows 7 or force others to adopt Windows 8. Plan to eventually move entirely to Windows 8.

1. Use the Windows 8 features and benefits to determine which segment of the company can benefit and provide a positive return on investment (ROI). This will likely be mobile users, but keep in mind that all users will be migrated eventually.

2. Identify a pilot group of “power users.” This is especially important with Windows 8 because it will take time for even the most savvy users to get comfortable with the interface.

3. Combine these early adopters with the corporate PC refresh program. Since new PCs will come with Windows 8, start with them.

4. Identify tablets that support Windows 8 to be provided to users.

5. Create images specifically for devices to run Windows 8.

6. Purchase or develop training to shorten the time it
will take workers to get used to the new user interface. Include cheat sheets, trained help desk personnel and online help. Don’t underestimate how this will affect productivity.

7. **Validate** applications, and make sure they will work.

8. **Check** with manufacturers to be sure your hardware is compatible with Windows 8. Don’t make assumptions, and don’t trust Microsoft’s lists. Drivers will make or break the migration.

The best route is to not upgrade, but instead to do a fresh installation. It’s too likely that you’ll need to do an OS reinstall on systems that had the OS upgraded to prevent old drivers, registry settings, etc., from carrying over into the new installation. If you have an image built with the applications and settings required for users to do their jobs, and if their data has been backed up to the network, a fresh install should be relatively easy.

Many companies like to wait for the first service pack before going to a new version of Windows. Microsoft has changed its software release strategy so that its code is essentially secure and final at the release candidate (RC) version. This means the release to manufacturing (RTM) is Service Pack 1 in terms of how previous versions of Windows were released.

While Windows 8 will require time and money to get users over the learning curve, it could be an enterprise OS for all devices. In fact, Windows 8 will ultimately provide a very nice environment to bring all devices under one secure, manageable umbrella. —Gary Olsen
Adding Windows 8 Multi-touch

Even IT professionals who are in no rush to migrate to Windows 8 should be aware of its capabilities. It’s possible to grant users the multi-touch experience on (mostly) existing hardware. Microsoft has specified requirements for hardware to earn the Windows 8 Touch logo.

To gain access to a multi-touch experience on an existing system, you’d need to add a touchscreen, replace an existing non-touch display with a touchscreen or add a multi-touch pointing device (or device driver).

Adding or replacing a screen makes more sense for desktop systems, in which the screen and system are not always mechanically coupled as they invariably are on notebooks. But this can be an expensive option: An 18.5-in. 3M Multitouch M1866PW (1366x768 resolution) still costs more than $1,100, while its 22-in. and 24-in. cousins cost $300 and $550 more, respectively. Displays bearing the Windows 8 Touch logo remain pricey, but those costs should come down as more vendors compete for a place in the market.

The other options for adding touch to the Windows 8 experience require a touch-enabled mouse or touchpad. For desktop systems, Microsoft offers a couple of very interesting options for under $100. Both the Microsoft Touch Mouse (manufacturer’s suggested retail price (MSRP): $80, street: $65) and the Microsoft Wedge Touch Mouse (MSRP: $70, street $70) support the fundamental Windows 8 gestures.

Microsoft’s mice will also work with gesture definitions supplied as a standard part of writing apps for the Windows 8 environment. As an added bonus, these devices behave like regular mice for users operating programs on the Windows 8 desktop.

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If IT admins update the drivers of existing touchpads and verify that underlying hardware supports multi-touch, which many devices do, adding multi-touch to an existing laptop or notebook PC should be easy and straightforward.
Users must learn to place only one finger on the touchpad because multiple fingers might inadvertently trigger gestures, even when one of them is stationary. I was able to practice gestures on the touchpads for every notebook on which I tried Windows 8, including models from Hewlett-Packard, Dell, Acer and Lenovo.

I’m guessing that most users who want to upgrade notebooks from Windows 7 or Vista to Windows 8 won’t have to purchase an external mouse to gain gesture/multi-touch support. Desktop owners surely will, unless they’re already using an external touchpad, though that’s not a very common peripheral for most desktops nowadays.

But where there’s a will, there are multiple ways to obtain a true or “near-touch” experience with Windows 8, depending on whether or not it makes sense to bring a touchscreen into your computing mix. —Ed Tittel
Windows 8 Adoption in Enterprises
Hinges on UI Acceptance and Devices

Microsoft customers haven’t taken to Windows 8 as quickly as they did to Windows 7, and there are very specific reasons for the lack of immediate uptake.

In its first two months on the market, Windows 8 eked out a 1.72% share of desktop operating systems usage, according to Web analytics firm NetApplications. In comparison, Windows 7 holds a 45% share, while Windows XP has 39%. Even the all-but-abandoned Windows Vista still has 5.67% share, by NetApplications’ count.

“Unfortunately, it’s true [that] there aren’t many companies that are already migrating to Windows 8,” said Michael Van Horenbeeck, technology consultant at Xylos, a systems integrator and Microsoft Certified Gold Partner in Belgium.

The adoption rate for Microsoft’s latest operating system has been slower than the rates for previous Windows versions at the same point in their release cycles is partly because Windows 8 is fundamentally different from Windows 7, Horenbeeck said.

Another reason for Windows 8’s lack of popularity to date is that while it works on non-touch hardware, Windows 8 is better suited for touchscreens than for use with a mouse, users said. Concomitant with that is the new tile-based user interface.

“Windows 8 does not work well on non-touch PCs and laptops,” said Tim Bajarin, principal analyst at Creative Strategies Inc. in Campbell, Calif. “The second thing from an IT standpoint is that the new OS is generally disruptive—the leap to Windows 8 requires not only getting users used to the UI [user interface], but also through the learning curve.”

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When Windows 7 arrived, there was a lot of pent-up demand among IT shops that had been waiting to do a hardware and software refresh following the Vista debacle. Much of that demand has been sated by Windows 7. There is still the backlog of XP machines out there.
that will need to be replaced in the next year or two, but when and how that will evolve is difficult to predict.

Typically, enterprises continue to run old versions of Windows for as long as possible to delay upgrade costs and headaches. Even those eager to upgrade often wait until an OS’s kinks can be worked out.

As the operating system matures, interest may increase.

What could boost demand is the rising number of new devices that support Windows 8, said Philip Moss, managing partner at U.K.-based IT solution provider NTTX.

“At the moment, a large number of my clients carry an iPad with some form of laptop or ultrabook,” Moss said. “I can see that being reduced to just a Windows 8-based device.” —Stuart J. Johnston
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