

## Tablets: Will They Replace PCs?

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### Executive Summary

*As mobility becomes more prevalent within the enterprise, tablets are becoming crucial tools with specific business cases. Some companies indicate tablets already are starting to supplant traditional PCs as primary compute devices. Though only about 12% of employees are using tablets for business purposes today, companies expect this to increase to 26% in 2014. Already, 72% of companies support tablets, whether owned by the employee or the business. A variety of forces are driving tablet growth but the key benefits include tablets' unique capability to provide quick access to information. Accordingly, use cases that require speedy, repetitive information access without a lot of input or processing are well suited to tablets. Conversely, extensive content creation is the Achilles' heel of tablets built on mobile platforms such as iOS and Android. Vendors are responding with devices such as new generations of convertible tablet/laptops, peripherals, and specialized software including virtual desktop clients to transform tablets into strong multi-purpose devices. Many enterprises also want to enable their mobile workforce through app development, extending corporate resources employees need for their workday to tablets and smartphones. As tablets become more functional, many IT leaders expect them to slowly become the primary device for most employees' workday. But the key is developing a clear use case and making sure the right infrastructure is in place.*

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### The Issue

Even though tablets are superior to laptops in some use cases, for the majority of roles they are still too limited. Fundamentally, most tablets offer clear benefits in the user experience—low weight, instant “on,” touchscreen, long battery life, relatively low cost, and easy-to-use mobile interface. To achieve these benefits, popular tablets such as the iPad or Google’s Nexus line use the same components as today’s smartphones. By contrast, laptops use very powerful components to support highly flexible, feature-rich, and complex operating systems, and are designed for content creation. The drawbacks are, laptops have much shorter battery lives, are much less mobile, and are cumbersome to carry in comparison with their tablet brethren. Although laptops may

be perfect for somewhat stationary workers and today's tablets for highly mobile workers, a middle ground could serve all workers' requirements.

While 25.8% of organizations expect that, on average, 9.3% of their workforce will have swapped a tablet and/or smartphone for their laptop already, this is largely for roles that are well suited to tablets. More than half of organizations expect this number to increase in 2013, but only to an average of 10%: that is, many more companies expect to see this happen, but usually only for small portions of their staff. When the employee's work requirements are more consumption based, or where they have a specific business application (say, a claims adjuster who needs to fill out forms with button clicks), they'll replace PCs with tablets. But for others, we expect to see either a slow migration to tablets or a hybrid model, using both laptop/PC and tablet for the specific requirement that makes sense at the time.

### Tablet Adoption Drivers

This trend of rising replacement of laptops with tablets underscores the enterprise's broader shift to consumer-oriented solutions. Today, 92% of companies support 'Bring Your Own Device,' (BYOD), either as their sole purchasing methodology or more commonly, as part of a larger strategy that includes IT and business-unit purchases. Ultimately, worker behavior and clear use cases are driving the popularity of tablets, with business cases for adoption based primarily on increased productivity, improved functionality and corresponding cost savings. (Please see Figure 1.)

#### *Enhanced Productivity*

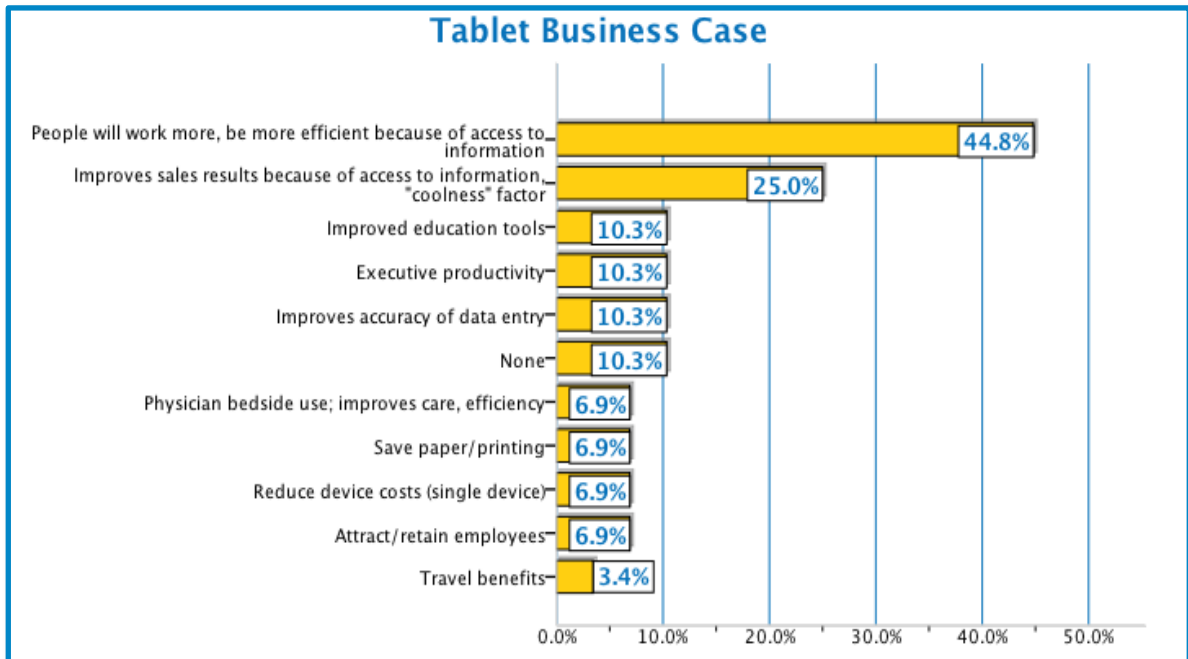
Enabling employees to use their smartphones or tablets promotes increased productivity—a compelling value proposition. Almost 45% of IT executives indicate that tablets will cause people to work more and be more efficient because of improved access to information.

Some IT leaders (7%) even point to BYOD policies as a tool for attracting and retaining employees. The benefits of BYOD and allowing employees to use devices of their choice for work will continue to drive tablet adoption, but work requirements have an equivalent impact.

A growing number of employees use wireless as their sole connection technology, either via cellular or the wireless LAN. These highly mobile workers need mobile devices to match their work requirements and style. Only 7.6% of companies had these types of employees in

"We have to create a work environment that crosses over to our personal life. Give people the right technology so they can mingle personal and corporate. Off hours, our employees are working more because of tablets!" - senior architect of a very large manufacturer

2011, but 12% expect to in 2013. “We use anything that enables us to do something quickest. We will use a tablet first because of the instant on, rather than pulling over to Starbucks and opening a laptop, getting connected, etc.,” says the manager of a large software and hi-tech company. The speed of access to information is important to employees who must input or present information quickly, and is something tablets provide exceptionally well. Illustrating this, more than 10% of companies indicate tablets improved the accuracy of data entry.



**Figure 1: Tablet Business Cases**

### Improved Functionality

In addition to supporting worker preferences and requirements, tablets in some cases fulfill specific business requirements better than traditional laptops. For example, tablets are excellent ways to present information, allowing employees to show everything from slide shows and videos to product demos and sales pitches.

Presenting from a tablet also sends a message that the company is innovative, forward-thinking, and invests in technology. “If we had a field rep out there with an iPad, suddenly the doctor wanted to talk to him. It opened doors for them. It's a nice medium to share information,” says the director of IT of a large manufacturer.

### Cost Reduction

Most business-technology leaders see the value of supporting employee device choice, along with associated cost savings in offloading the equipment and monthly service fees via a BYOD program. When an employee-owned tablet can fully replace a company-provided laptop, significant cost savings can be realized. For staff whose

computing needs can be met fully with a \$700 tablet, even a company-owned device can bring a cost savings when compared to a \$1500 laptop.

## The Road From PC to Tablet: IT Support Requirements

Laptops are proven, general-purpose content creation devices built around the idea of trading some flexibility and power for limited mobility. Tablets take that trade-off much further and so are better suited to highly mobile, content consumption use cases. Vendors are struggling to find the right balance between the two, and as evidenced by the proliferation of small and light laptops, netbooks, ultrabooks, and convertible devices. To replace laptops broadly, tablets will have to become more general purpose, will need some way to reach and use the vast library of PC applications already out there, and will need to fit into the enterprise network and security architectures.

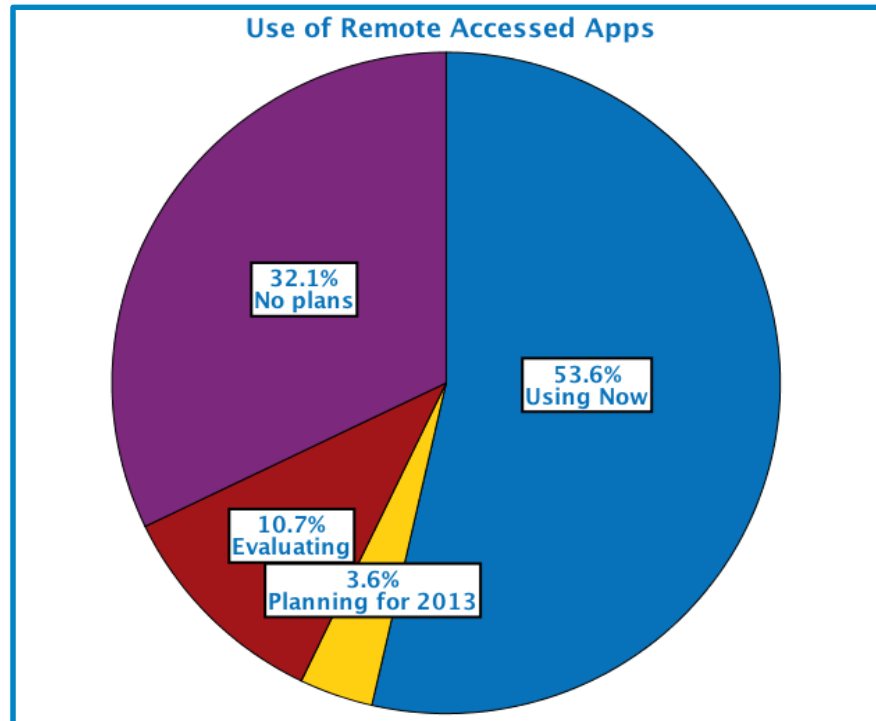
### *Operating Systems*

The resource requirements of operating systems such as Windows and Apple's OS X, along with standard laptop components, result in laptops having worse battery life, portability and user interfaces than tablets. At the same time, tablet operating systems and components are the same as their smartphone siblings, which hampers their ability to provide the same robust experience as a PC. Tablet and laptop makers are well aware of these discrepancies and are trying to close the gap.

### *Virtual Desktops and Custom Applications*

Virtual desktops provide a pathway to the vast portfolio of PC applications for non-PC platforms. Unfortunately, because they provide it via a virtualized PC, user interfaces remain aimed at PCs, optimized for keyboards and mice. Tablets have touchscreens and on-screen keyboards, usually. Some just work with them anyway, others use additional software to translate from one user interface paradigm to the other: "We use a solution that proxies the applications over the browser so that about 20% of our app catalog are completely usable over the mobile browser, but 100% of what people actually need to use is available," says the IT director of voice at a large professional-services company.

So, though 54% of companies provide mobile users remote access to PC applications via virtual desktops or terminal services, many are waiting to see how that will shake out in comparison to more direct mobility enablement strategies such as application development. "What will drive greater tablet purchases is us providing better functionality on the tablet. We are looking at building additional applications," says the director of IT for a global financial-services organization.



**Figure 2: Use of VDI/Remote-Accessed Apps For Mobile Devices**

In fact, 32% of companies are developing native mobile apps today for operating systems including Apple’s iOS and Google’s Android. However, few companies are as far along with tablet enablement as they are with remote access, primarily because of costs, difficulty in finding coders, and the risks of deploying for a single platform with native app development. “We looked to see if [native app development] would be a benefit to the business, but we couldn’t justify a use case,” says the director of network infrastructure at a small non-profit institution.

A small but growing set of companies see native app development as overly platform-specific. These organizations are turning to HTML5 and Web-based app development instead. Only 8% of companies are using Web apps to empower mobile strategies today, but an additional 28% plan to by the end of 2013; another 16% are evaluating this as a solution path. This Web-based app development strategy is growing in popularity much more quickly than native app development or use of remote access, demonstrating companies’ emphasis on enabling their app catalog for multiple platforms. This is inline with a BYOD strategy, which most companies are using today.

### **Bandwidth & Security Considerations**

Organizations also must spend time evaluating the supporting network and security infrastructure for tablets. A well-designed WLAN is essential, with capacity engineering that considers the WLAN to be as important as the LAN; adequate WAN capacity is also essential. As tablets move into an organization, traffic *will* increase on

both WLAN and WAN, driven by high-bandwidth apps such as video conferencing. Accordingly, enterprises plan to add approximately 80% in WLAN capacity through 2013, provisioning roughly 75% of new capacity for mobile devices.

In addition to network considerations, Mobile Device Management (MDM) to control the security of the device and apps is another area needing careful evaluation. Many vendors have recognized the complementary nature of Network Access Controls (NAC) and MDM, and are beginning to provide integrated solutions for complete enterprise control over mobile devices and apps on the network.

### Conclusions and Recommendations

Tablets demonstrate ever-improving value for enterprises, including improved employee productivity, a greater breadth of functionality and cost advantages over PCs. Leveraging this value doesn't come without some considerations however; IT professionals need to evaluate the different tablet platforms and operating systems, shore up remote access capabilities, plan mobile app strategies, and review network and security readiness. As the line between tablet and laptop continues to blur, more and more employees will be able to use a tablet for their entire workday. Nemertes recommends you consider the following:

- ⊕ Ensure you have the right supporting infrastructure for tablets (and mobility in general): WLAN & WAN capacity, virtual desktop or terminal services for PC application access as needed, a VPN infrastructure, and NAC and/or MDM.
- ⊕ Evaluate use cases and staff roles where tablets can provide a productivity or process improvement over laptops, e.g. for field workers, or for floor workers such as salespeople, nurses, or physicians.
- ⊕ Decide if you will allow workers to choose to use tablets where you do not see a compelling business case by supporting BYOD.
- ⊕ Evaluate where custom apps will have the biggest impact on your workforce.

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