Telecom, Media & High Tech Extranet

BYOD: From company-issued to employee-owned devices

No.20
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BYOD: From company-issued to employee-owned devices

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Enterprise IT was once the driving force behind consumer technology innovation and trends. In a role reversal, tech-savvy consumers are now pushing businesses to integrate personal mobile devices into the enterprise IT fabric.

Over the last 20 years, enterprise IT played a significant and active role in leading mobile technology adoption. The first laptops freed PC users from their desks long before they became omnipresent at home. The earliest smartphones – the BlackBerry and the Palm Treo (before that Palm PDAs) – drove mobile communication and productivity apps anytime anywhere in enterprises long before teenagers began using them to post TwitPics.

Today, however, a shift is occurring with enterprise IT innovation being driven by consumers. Outside the office, employees are quickly discovering and adopting new consumer-focused technologies that they consider better than their corporate tools. They want to bring this enhanced productivity into the workplace to consolidate their personal and corporate productivity tools into a single device. As a result, employers and their IT departments face growing pressure to allow this: "Sure, you can bring your own devices (BYOD) to work" – a revolution that threatens to "consumerize" enterprise mobility devices and their resident applications along with collaboration styles.

The how and where of consumerized enterprise mobility

In today's enterprise environment, employees are bringing their privately owned mobile devices to work. Historically, companies have supported and even encouraged employees to work remotely. By issuing corporate smartphones for enterprise e-mail and voice calls and enabling intranet and e-mail access from a home PC, companies have sought to maximize employee productivity. But now employees are changing the terms of mobile productivity by using their own mobile devices (e.g., a personal smartphone or tablet) not just for

business calls and e-mails but to access their employers' data, applications, and intranet (Exhibit 1).

Complicating this trend is the fact that the personal devices in question likely operate outside the corporate IT architecture. Chances are they also fall short of security requirements for access within the firewall and IT management capabilities for corporate support.

In fact, a 2012 survey of 3,000 workers who use mobile devices for their job revealed that around 80 percent of smartphones used for work are employee-owned. This trend is also consistent with other emerging mobile devices such as tablets. Employees are driving the rapidly growing utilization of tablets in the enterprise, buying around 67 percent of the tablets used at work themselves.

Not only do employees foot the bill for devices, they are also paying for data connectivity service. Across all mobile devices used within the enterprise, the average worker is bearing about 63 percent of the device costs and around 62 percent of the mobile data service costs. This trend is apparent across the entire spectrum of industries, but is particularly prominent in cost-conscious sectors with mobile employees such as healthcare and education. There, the ratio tops 75 percent.

Employees are bearing the cost of the smart devices they use for work, but they also expect to be able to use the devices as they please

IT departments have traditionally restricted the use of these devices by limiting access to corporate

Many employees are using their personal devices for a variety of work-related tasks

Business uses of mobile devices
Percent of device owners

	Tablets	**Smartphones**
Simple communication	71	66
Basic content creation	49	25
Reviewing content	47	32
Presenting	43	15
Advanced communication	40	21
Admin	38	26
Accessing business info	38	21
Business activities	38	20
Advanced content creation	35	13
Data analysis	35	16
Voice calls	31	70
Training	30	12
Interface with business HW	29	14
Other	2	4

SOURCE: McKinsey 2012 iConsumer survey on the consumerization of mobile devices   US MARKET
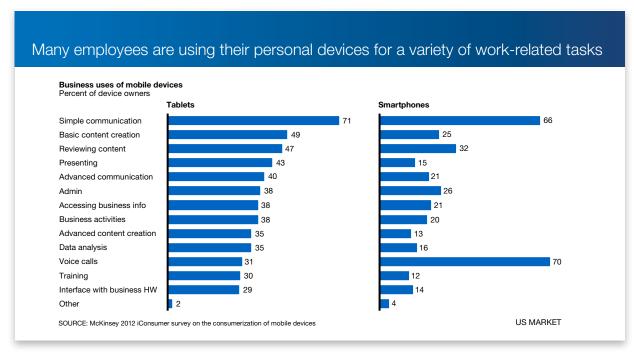
Exhibit 1

data. BlackBerry's enterprise servers are popular with CIOs and IT departments because of the level of control (e.g., management, security) they provide, but BlackBerry devices have not proven as popular with consumers in several developed markets, thus with the workers themselves. RIM's share of the US smartphone market slipped from 43 percent in 2008 to less than 16 percent today. As the ecosystem of consumer-friendly phones – like Apple and Android devices – proliferates, pressure is not only mounting from staff in general, but also from key employees. Senior executives – who carry more clout with CIOs and IT departments – are around 10 percentage points more likely to bring their own device into the office than the average employee. Beyond this, they expect to be able to tap into corporate data and applications. Around 77 percent of CIOs today state that they will allow some form of consumerization in the coming few years.

Operating system and network plurality seems to be an employee requirement, forcing IT departments to increase flexibility without sacrificing security. Employees will likely bring some combination of iOS, Android, BlackBerry OS, and Windows phones into the workplace. Of the approximately 50 percent of employees in the US who prefer to bring their personal devices to work, nearly 80 percent own Apple or Android phones and tablets. And the single-network contracts currently preferred by CIO/IT departments seem to be disappearing as employees select their own preferred carrier. In addition, 75 percent of employees will likely continue to use their own devices for both personal and business purposes regardless of who pays the bill.

While the laptop is unlikely to disappear anytime soon, employees are finding that the laptop isn't a productivity panacea. Other devices may be better tailored to their tasks and roles. Nearly 90 percent of employees use smartphones and tablets to do at least 25 percent of the work they formerly did on their PCs. More than 40 percent of employees claim that smartphones and tablets decrease their need to bring laptops with them to meetings or on vacation. Still, laptops have some advantages over smartphones and tablets (Exhibit 2). Instead, some companies may find their need to outfit employees with personal computers declines and that a
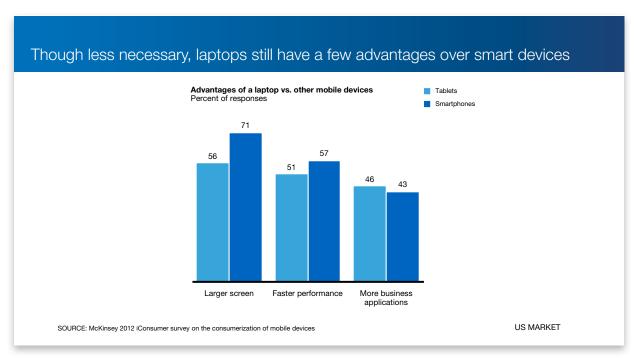
Though less necessary, laptops still have a few advantages over smart devices

Advantages of a laptop vs. other mobile devices
Percent of responses

■ Tablets
■ Smartphones

	Larger screen	Faster performance	More business applications
Tablets	56	51	46
Smartphones	71	57	43

SOURCE: McKinsey 2012 iConsumer survey on the consumerization of mobile devices

US MARKET

shared workstation (or thin client) might be sufficient when provided alongside a dedicated tablet and phone. The salesperson who does a limited amount of content production or the physician who carries a tablet for most activities, for example, may only need a home or office PC occasionally.

Smartphones and tablets are also changing where employees work, not just how. Still most commonly used at the desk or at home, employees use these devices at work away from the desk, in remote locations, or in transit about 45 percent of the time. Mobile workers will continue to increase the percentage of time these devices are used away from the desk as technology advances enable greater functionality. A better understanding of mobile use cases and the increased productivity that follows will lead to even more on-the-go usage.

Mobile devices are permeating the entire workforce, not just the management suite. At least 50 percent of respondents across five job tiers ranging from contributor to senior executive have increased their tablet usage since last year; from 35 to 50 percent of respondents across all tiers

have increased their smartphone usage. As these devices make their way across the technology adoption curve, these figures are likely to grow.

The trend is clear, but questions remain

While more than two thirds of employees would prefer a single mobile device for both work and personal use, an increasing number of people carry separate devices. The most common explanation for this is that employees owned a personal device before receiving a work device. Eventually, the prevalence of corporate-issued devices will decrease to be replaced by company-subsidized, employee-owned devices.

Even among employees who prefer to consolidate their activities into a single device, many still want to separate work from personal space. Half of all employees will want some sort of partition (e.g., separate e-mail clients). Where that partition may fall will impact the extent to which employers can exert control over their employees' devices without eliciting ill will. Employees who bring their own
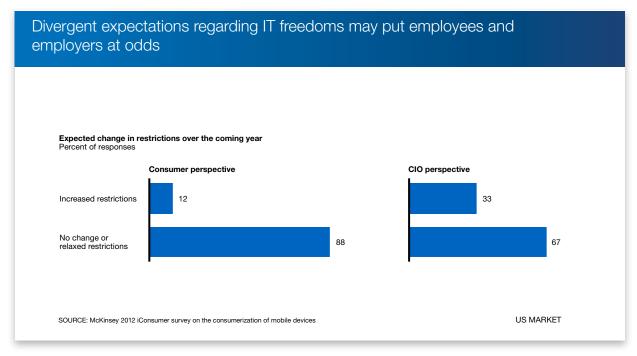
Divergent expectations regarding IT freedoms may put employees and employers at odds

Expected change in restrictions over the coming year
Percent of responses

Consumer perspective

Increased restrictions — 12

No change or relaxed restrictions — 88

CIO perspective

Increased restrictions — 33

No change or relaxed restrictions — 67

SOURCE: McKinsey 2012 iConsumer survey on the consumerization of mobile devices

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Exhibit 3

devices to work expect little to no limitations on their mobile devices, and 88 percent of employees expect their employers to either relax existing restrictions in the coming years or maintain the current policy. Over 50 percent of CIOs, however, say that they impose some restrictions today. Over 30 percent plan to increase such restrictions going forward (Exhibit 3). Either employees or employers will find themselves disappointed with their degree of mobile device freedom and control.

Cannibalization of devices is under way, with more than 10 percent of employees claiming that their time on a smartphone or tablet completely replaces their time on a PC. Still, PCs are not the only devices being cannibalized – smartphones are falling victim to tablets. More than 25 percent of employees say that they use a tablet for some voice call conferencing even though they also carry a smartphone. If this trend persists, employees equipped with a tablet (e.g., some salespeople) may find that their need for a laptop and/or a smartphone will wane. They could make their voice calls using a Bluetooth headset that links to their tablet or replace their smartphones with sim-

pler, cheaper phones that provide much more talk time. Employees would then rely on their tablets for more advanced video communications and e-mail. This would not just save costs; it would mean a less cumbersome and quite literally lighter load for the mobile worker.

In contrast, approximately half of CIOs believe that an alternative future might prevail: the smartphone used as a computing platform that modularly docks with required attachments wherever and whenever needed (e.g., screen, keyboard, custom devices). In this world, the smartphone replaces both the PC and the tablet. This future entails some significant hurdles, such as battery life in a compact design and standardization of connectivity. Nevertheless, it does highlight the broad range of possibilities that are on the drawing board.

Half of CIOs believe smartphones with keyboard and screen docking stations are the form factor of the future

BYOD implications for key stakeholders

Employee pressure to use their own devices at work is clearly apparent and building – with implications for every other player in the mobile enterprise ecosystem. CIOs and IT departments will need to maintain corporate data security, while enabling more mobile devices and functionality. These challenges are driving the transition speed, but more and more CIOs and IT departments are compromising their requirements and using the latest mobile device management and security software along with a restricted list of approved devices (employees have a choice, but choice is limited) to acceptably manage the change. However, conflicts with employees still seem inevitable. Even when employers limit work activities on personal mobile devices, nearly half of employees perform some type of unapproved work on these devices. Employees expect fewer restrictions to their personal activities, particularly if they are paying for the devices themselves.

On the plus side, employees are increasingly willing to bear the cost of their own IT tools. According to a recent Cisco report, net cost savings from employee-owned devices will likely exceed 20 percent. A compromise could result where employees bear more of the cost and CIOs accept less control over the device itself, but gain greater control over a specified "space" on the device.

Manufacturers will need to create dual-purpose devices that appeal to the consumer market but still satisfy CIO hurdles to qualify for the "approved list." Today's most popular mobile devices among consumers – iPhones and iPads – are only half as popular as BlackBerry and one third as popular as Android devices with CIOs. OEMs should tailor their B2B marketing efforts to larger enterprises and to financial services and healthcare. These sectors are more likely to impose stricter policies regarding which devices can be used to access corporate data and applications.

Carriers will continue to see mobile devices proliferate, but they will need to focus marketing and sales budgets on reaching consumers rather than CIOs. Carriers will also become less reliant on RIM to drive enterprise sales as consumers increasingly force employers to support multiple devices. This has led RIM to introduce Mobile Fusion as a cross-platform solution.

Robust mobile device management solutions – whether carrier-supported or independent – may become critical marketing tools.

As the personal-business lines blur, manufacturers will need to create devices with consumer appeal and enterprise security

Carriers should also be wary of margin compression as corporate voice and data plans give way to more personal accounts.

Consumer application writers will need to address the added restrictions imposed by IT departments. This means that applications must "play nice" with enterprise device management software, security policies on data access and communication, and/or potentially run in a "silo" or non-enterprise persona on the device.

For business application writers, flexibility will be important. Applications will need to run on a variety of operating systems to ensure that all employees can utilize those applications regardless of the device they bring. Mobile enterprise application platforms could become a key control point if they enable application writers to design a single version of their software that is compatible across operating systems. This flexibility will also have to extend to writers' licensing agreements, as traditional models of employer-licensing and software distribution will likely change.

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The era of identical, company-issued mobile devices has passed. Workers across the enterprise – whether they are sitting in an executive office, a cubicle down the hall, or are roaming around in the

field – will sport a wide array of mobile devices that they buy themselves and tailor to their individual preferences. Just as employers are expecting their employees to be more productive in more places, employees are more tightly integrating their personal and professional tools.

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