CIO strategies for consumerization: The future of enterprise mobility

By Paul D'Arcy

IT consumerization of enterprise mobility is changing the relationship between employers and employees. Learn the five trends shaping the future of enterprise mobility, and get nine recommendations for tackling the challenges of IT consumerization.

It has been a generation since the first workers to grow up with personal computers at home entered the workforce. Twenty years ago, this new generation of workers helped fuel the massive expansion of business computer use and the productivity gains that ensued.

The year 2011 marks a similar milestone as the first incoming knowledge workers raised with the Internet begin graduating from college and entering the workforce. When these workers learned to read, the World Wide Web and e-mail were in a period of mass expansion and commercialization. They were in elementary school when the dot-com boom peaked and in college as social media and smartphone usage exploded.

Already, the expectations of a new generation of workers are resetting the CIO agenda. As social media becomes a foundational component of work life and corporate collaboration, as new mobile devices and application platforms proliferate, and as increasing numbers of employees work from home, traditional corporate policies on personal computer usage, data security, and application usage are quickly becoming antiquated.

The result is the rapid *consumerization* of IT. Consumerization is the migration of consumer technology—including electronic devices, platforms, and applications—into enterprise computing environments. In some instances, home technology has become as capable and cost-effective as its enterprise equivalents. Today, the issue is most pronounced in the realm of enterprise mobility, given the increased use of consumer smartphones, media tablets, and Internet applications in the workplace—all of which have been intentionally excluded by IT policies in many organizations.

With the cloud providing applications and computing power to anyone with a credit card, employees are increasingly bypassing IT altogether to get the tools and technology that they desire without the hassle of outdated IT processes. Unfortunately, employee self-provisioning of third-party cloud services includes complex enterprise applications that may store sensitive corporate data in the cloud.

In IT consumerization, corporations may be seeing the law of unintended consequences at work: *Corporate IT policies that ban the use of employee-owned devices in the name of security inadvertently create new, large security holes as users skirt IT restrictions.* In other words, locking down the employee computing environment forces users to find their own alternatives, undermining the very policies that IT is trying to enforce. Often, some of the first offenders are C-level executives who require network access for their own personal smartphones, laptops, or tablets.

This difficult situation is echoed by the technology analyst firm Gartner, which advises that "When building client computing strategies, most organizations realize that they cannot stop the influx of personal devices and are looking to

🌐 CIO strategies for consumerization

Get a deeper understanding of the role consumerization plays in the changing relationship between employees and employers by downloading the Dell CIO Insight series white paper from which this article was excerpted.

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the post-consumerization era, seeking ways to stop managing the devices used by workers."[1]

5 trends shaping the future of enterprise mobility

The year 2011 will see a perfect storm of consumerization as five trends intersect to create an important workplace inflection point.

1. The rise of social media as a business application

Underestimating the impact of social media on not just the workplace but on society in general is difficult. For example, by the beginning of 2011, the average Facebook user spent 1,400 minutes, or 23.3 hours, on the site each month.[2]

2. The blurring of work and home environments

For CIOs, the blurring of work and home environments complicates the development of employee technology policy. Flexible work arrangements that encourage employees to work from home—or any location—make it difficult to control employee technology usage.

3. The emergence of new mobile devices

Every decade, the world sees a new paradigm for end-user computing. So far, there have been distinct eras for mainframe computing, minicomputers, personal computing, the desktop Internet, and most recently, devices for mobile Internet access.

4. The need for tech-savvy workers because of shifting models

Dramatic increase in the use of social media and mobile devices is changing the technology relationship

between employers and employees. These same trends also affect the relationship between businesses and their customers and public institutions and their constituents.

5. The changing employee expectations of corporate IT

With a new generation of knowledge workers, end-user technology is increasingly becoming a talent recruitment and retention issue. Organizations that invest in end-user technology and implement innovative technology policies will see advantages as they look to recruit the next generation of knowledge workers.

Consumerization: A business decision as trends collide

For the CIO, consumerization represents the confluence of a difficult set of IT challenges—security, technology policy, data protection, and end-user technology—and business strategy—new business models, talent strategy, corporate brand, and identity. For this reason, CIOs should take the consumerization of IT into consideration during business strategy development.
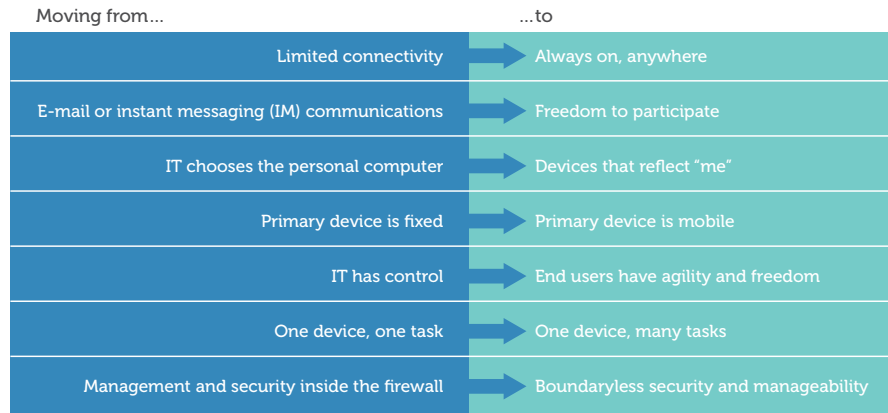
As organizations embrace consumerization, a number of changes need to occur (see Figure 1). These changes, however, can be difficult to execute. For most CIOs, many questions come to mind: How do organizations maintain security and protect data as they loosen IT standards? How can organizations support heterogeneous employee devices? Does consumerization apply to all employees or only to certain employee segments? What will organizations pay for that they do not pay for today? What

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[1] "Predicts 2011: Network capacity and consumers impact mobile and wireless technologies," by Ken Dulaney, Phillip Redman, Carolina Milanesi, Van L. Baker, Monica Basso, and Leslie Fiering, Gartner, Inc., November 18, 2010.
[2] Facebook, Press room statistics, retrieved January 18, 2011, facebook.com/press/info.php?statistics.

Figure 1. Changes necessary for IT consumerization

Moving from...	...to
Limited connectivity	Always on, anywhere
E-mail or instant messaging (IM) communications	Freedom to participate
IT chooses the personal computer	Devices that reflect "me"
Primary device is fixed	Primary device is mobile
IT has control	End users have agility and freedom
One device, one task	One device, many tasks
Management and security inside the firewall	Boundaryless security and manageability

happens to employee IT platforms? Which applications need to be modernized to work with a broader set of employee devices?

9 recommendations on consumerization and enterprise mobility

Nine key recommendations can provide a road map for CIOs contending with the challenges of consumerization in the new era of enterprise mobility.

1. Articulate an end-user workplace and technology philosophy, and use that as a basis for setting consumerization strategy.

Technology philosophy, like business strategy, is specific to the culture and purpose of every organization. When evaluating technology changes, CIOs should consider seven questions that can help them ascertain how far and how fast their organizations can move to embrace the new era of consumerization:

1. What are the demographics of the user population, and what type of work do the user segments perform?
2. Where are employees doing their work?
3. Does the organization take pride in offering innovative benefits and policies to attract and retain employees?
4. How strongly is the organization moving toward flexible working arrangements?

5. Are executives advocating for expanded device usage or trying to prevent it?
6. What regulations and security concerns limit options?
7. How important are the Internet and social media to driving customer engagement?

2. Recognize that IT security and data protection policies that restrict the use of personal devices and social media applications may actually increase security and data-loss risk; begin evolving security policies to protect data in a heterogeneous device environment.

As increasing numbers of applications move to the cloud and devices move off the network and out of the direct control of IT, the framework for end-point security can also benefit from cloud-based delivery. Increasingly, this framework means using managed security service providers to offer cloud-based, end-point protection for distributed devices. According to Gartner, "An increasingly common scenario will be high-value employees accessing critical business and customer information stored in the cloud from employee-owned PCs or smartphones. Gartner believes that delivering security as a cloud-based service will be a key component of how many enterprises will enable this scenario, while achieving a balance of security and manageability."[3]

3. Liberalize rules that prohibit business use of employee-owned technology; start by encouraging the business use of employee-owned smartphones.

Why start with smartphones? There are three key reasons to consider.

- No area of personal technology is growing as fast. According to Ericsson, mobile broadband subscriptions have skyrocketed, growing from 200 million mobile Internet subscribers in 2008, surpassing 500 million mobile broadband subscribers in 2010, and potentially reaching 1 billion subscribers in 2011. The company believes that by 2015, there will be more than 3.8 billion mobile broadband subscriptions globally.[4]
- Smartphones are important tools for managing contacts, e-mail, and calendars, as well as accessing social media, cloud data, and when allowed, the corporate directory.
- Smartphones are expensive, and most organizations do not pay for smartphone voice and data plans for the broad employee population. Because employees are making these investments and bringing their own devices to work, expanded use can benefit end-user productivity.

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[3] "Securing and managing private and public cloud computing," by John Pescatore, Gartner, Inc., September 2, 2010.

[4] "Mobile broadband subscriptions to hit one billion mark in 2011," Ericsson press release, January 11, 2011, ericsson.com/thecompany/press/releases/2011/01/1478480.

4. Launch enterprise applications that replicate the best aspects of consumer communication and social media within the worker community.

The Web offers an ideal vehicle through which end users can crowd-source ideas, collaboratively sorting information. IT organizations can use the power of the Web to harness the trends behind consumerization while increasing employee engagement and productivity.

5. Pilot media tablets with field workers and executives to see if they can replace other devices; look at allowing other populations to bring personally owned tablets to work.

The media tablet market is poised to grow dramatically: expected to go from 19 million units in 2010 to 208 million units in 2014.[5] As a broad selection of new devices hits the market, tablet use is expected to skyrocket based on convenience, high levels of customer satisfaction, and relatively low device prices.

6. Develop a clear point of view on enterprise versus employee cost sharing; develop a business case for incremental investment by linking end-user technology strategy with human-resource planning, facilities planning, and business strategy.

For most organizations, the hidden costs come from management and security changes that can be required to support users and protect the enterprise in a heterogeneous-device environment.

7. Consider desktop virtualization and other leading-edge technologies to reduce security and data-loss risks as the demand for consumerization grows.

Desktop virtualization is expected to become a primary model for organizations to securely drive consumerization. By storing data and applications on the server in controlled, standardized images, desktop virtualization combines the benefits of corporate images, centralized storage, centralized management, and policy enforcement with the freedom to use a wide variety of organization- and employee-provided devices.

8. Understand the software-licensing implications of consumerization.

As organization-issued smartphones and tablets are increasingly used to access e-mail, virtual desktops, and server-based applications, organizations need to look at software-licensing agreements and practices to ensure compliance. The introduction of employee-owned devices further complicates licensing because large vendors like Microsoft make distinctions between these categories of end users in their licensing agreements.

9. Avoid end-user stipends.

In the end, pilots have shown poor end-user satisfaction with the stipend experience, negating the primary benefit that these programs were designed to achieve. An alternative to stipends is to provide employees with a broader selection of IT-supported personal computers and work requirements. When combined with policies that enable employees to bring employee-owned devices to work, this alternative enables organizations to reap the broad benefits of end-user consumerization.

IT consumerization: A foundation for change

In the words of Gary Hamel, a prominent management professor and author, "while no company would put up with a 1940s-era phone system, or forgo the efficiency-enhancing benefits of modern IT, that's exactly what companies are doing when they fail to exploit the Web's potential to transform the way the work of management is accomplished. Most managers still see the Internet as a productivity tool, or as a way of delivering 24/7 customer service. Some understand its power to upend old business models. But few have faced up to the fact that sooner or later, the Web is going to turn our smoke-stack management model on its head."[6]

For organizations with knowledge workers, IT consumerization and the rethinking of employee technology is the foundation for the next wave of business, management, and employee change. Organizations that adapt quickly and actively to change the relationship between IT and end users can be better able to attract talent, execute new business models, and evolve management capabilities to improve competitiveness. PS

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[5] "Predicts 2011: Network capacity and consumers impact mobile and wireless technologies," by Ken Dulaney, Phillip Redman, Carolina Milanesi, Van L. Baker, Monica Basso, and Leslie Fiering, Gartner, Inc., November 18, 2010.

[6] *The Future of Management*, by Gary Hamel (Harvard Business School Press, 2007).