Unlocking the Business Value of Mobility

Enterprise mobility is much more than wireless enablement of your Web site, intranet and related business processes; it’s about leveraging smart devices and tablets to spur technological innovations that power disruptive change. To make this leap, enterprises must overcome a host of organizational and technological challenges, preparing for the operational benefits that can be achieved along the way.

By Jeff Wallace

Ubiquitous wireless infrastructure and the explosion of smart mobile devices are enabling businesses to leverage mobility in previously unimagined ways. Spurred by workforce virtualization, early adopters have significantly boosted efficiency by enabling wireless operations. Now, enterprises are unlocking business value by leveraging mobility to innovate, and they are disrupting industries rather than letting themselves be disrupted by change.

Mobility first appeared in the business world decades ago, but its progress accelerated dramatically with the appearance of smart mobile devices, including the smartphone and tablet. Whereas enterprise mobility used to focus primarily on making the corporate Web page look good on a mobile device, it is now forging a path to new ways of doing business.

But enterprise mobility forces many changes on an organization, both culturally and technically. Well after the bring your own device (BYOD) movement exploded onto the office scene, IT executives are still grappling with the plethora of security and governance issues introduced by this phenomenon. Now, executives are realizing that innovation in mobility requires both a shift in mindset as well as technical expertise in areas such as middleware and integration, or at least partners that can help fill in the gaps. It also requires precision guidance for managing the organizational and process shifts required to truly transform the business. The key is to be proactive and to effect change rather than let yourself be blindsided by it.

Mobility is one important component of a new master IT architecture – social, mobile, analytics and cloud (the SMAC stack) – that is emerging to help organizations shift from old-world industrial models to more digitally powered ways of working. Mobility is providing reach, ubiquitous connectivity and new ways of interacting – with employees, partners, customers, consumers and prospects. Innovative mobile solutions can radically increase convenience and productivity for various constituencies and provide them with a superior experience, to boot.
Today, mobility is about using smart devices and tablets to spur technological innovations that power disruptive change. Competitive advantage is being achieved by companies that leverage enterprise mobility to create viable new business models (see sidebar).

Levels of Enterprise Mobility

At the first level of enterprise mobility, or Mobility 1.0, companies seek to mobile-enable or mobile-optimize their Web sites, existing Web apps and digital assets to increase productivity for employees and customers. The challenge is to keep ahead of the proliferation and constant state of flux within smart devices, development platforms and mobile operating systems.

With Mobility 2.0, organizations typically look to transform business processes via mobility. For example, expense account reporting has always been a cumbersome process for employees, requiring them to save paper receipts, fill out forms and then send everything to corporate accounts payable for payment. By contrast, a mobile-enabled expense-submitting process is much quicker and easier. Employees need only take pictures of their receipts with their smart device, categorize them with a simple pull-down menu and click a “submit” button to send them to accounting for reimbursement.

Quick Take

The Disruptive Power of Mobility

“Smart mobility,” ushered in with the dawn of smart devices, has disrupted entire industries and product categories — not to mention companies and their business processes — in short order.

Enabled by the Internet, the digitization of content instigated the transformation of industries such as newspapers, music, books and periodicals. But beginning in 2007, the meteoric rise of smart mobile devices dramatically hastened the demise of traditional business models in these sectors. Many companies that were once high-flyers could not make the transition and in some cases have simply ceased to exist.

In just the last two years, small video cameras like the Flip and point-and-shoot cameras have been displaced by smartphones. These devices offer ever-improving image resolution for everything from submitting accident photos to insurance companies, to fixing or assembling equipment with the help of video. The 120-year-old Kodak filed for bankruptcy protection just five years after the smartphone emerged, and Cisco pulled the plug on its once-promising Flip acquisition, a near $600 million endeavor, after less than two years when it became clear that handheld video now solidly belongs to the smartphone.

The news industry has been forever wounded by consumer perception that Web-based content is “free,” while journalism has been upended by the advance of consumer-generated content and reporting combined with social media, all fueled by the smart device revolution.

Meanwhile, the rise in social content and crowdsourcing are profoundly altering the way companies develop and go to market with new products. Clearly, companies need to look at enterprise mobility as an opportunity to innovate, and to do so now. Better to obsolete your own cash cow before someone else does, which in the world of mobility is a very definite possibility.
Businesses are also mobile-enabling processes (e.g., order management) for their customers. The payoff here is fewer errors, greater convenience, boosted productivity and higher satisfaction levels among customers, partners and employees.

To be sure, at this early stage of the smart mobility era, most companies are still at mobility levels 1.0 and 2.0. Few have yet ventured into Mobility 3.0 territory, in which organizations leverage mobile technology to create entirely new business models and revenue streams. In Mobility 3.0, both B2B and B2C companies have greater opportunities to reach their target markets directly to improve profitability or add new customers. Mobile payments on feature phones, as well as smartphones, are enabling access to whole new continents of consumers (see sidebar, page 75).

Square: Mobility 3.0 Innovator
Square is a good example of a company and revenue stream that was born from mobile technology. With Square, anyone – consumers and businesses alike – can accept credit card payments, thanks to the addition of just a tiny device installed in the headphone jack of a mobile device. Square breaks the barriers that constrained traditional credit card use – there is no cost for someone to obtain the device, there is no intermediary financial institution, and fees to the payee are often less than those for traditional cards.

And the ability to accept credit cards is exciting and fun for individuals, enabling them to extend their business, often in unforeseen ways. For example, it used to take a major investment for taxi cabs to obtain credit-card processing equipment. Now, drivers just need a smartphone and the Square device to instantly increase their value to customers. In an age where the use of cash is disappearing, this is a major innovation.

Near Field Communication (NFC) is another example of a technology with the potential to revolutionize whole industries. NFC allows a device, usually a smartphone, to collect data from another device or NFC tag at close range. It’s similar to short-range networking technology like Bluetooth, except that instead of programming two devices to work together, they can simply touch to establish a connection.

One possible NFC application is in public transportation. Under a pilot program, commuters in Germany and Spain already pay for their train and bus fares using NFC-equipped devices. Consumers can also use their NFC devices to make transactions at Peet’s Coffee and other retailers. The user swipes a payment device with an NFC-equipped smart device; transaction data is immediately sent to the bank or card issuer’s payment service, which first authenticates user identity and then authorizes payment. NFC works with most contactless smart cards and readers, meaning it could easily be integrated into the public transit payment systems in cities that already use a smart card swipe.

Augmented Reality: Manufacturing’s Secret Weapon
On the B2B front, manufacturers are using mobility to revolutionize the way their field forces access parts and repair documentation. Traditionally, it would have taken several individuals with specialized training to repair a piece of equipment with guidance from a massive paper manual. Now, a repair person with general training can use a three-dimensional augmented reality (AR) iPad app to move step-by-step through the repair, identifying all the parts and seeing exactly what actions to take via animated video clips. This approach was not created *sui generis* from mobility, but it is a significant improvement over the
paper-based world. A manufacturer that successfully creates this type of app could even sell it to other manufacturers, creating a new line of business for itself.

Oil and gas producers are exploring the idea of using an AR application that would leverage mobile-based sensors to detect leaks, possibly helping to avoid explosions. Another example of mobile AR is the Merlin Mobility app, which delivers AR-based tech support to smart mobile devices. So, if a consumer needs help assembling an IKEA POANG chair, the Merlin Mobility app can interact with the paper-based instructions, making them much easier for the individual to follow. The same tool can be used to ensure that a mistake has not been made.

Mobility 3.0 requires a mental shift from seeing mobility as a pathway to convenience and efficiency, to viewing it as a potent driver of innovation. Smartphones are no longer primarily communication devices; they can assist organizations in delivering experiences to numerous constituencies. As the Square example illustrates, mobility becomes the computing environment, as opposed to just a useful adjunct to it.

**BYOA (Bring Your Own App)**

Companies are already struggling with the burden to secure and support the wide range of mobile devices that employees bring into the workplace. The simple act of employees accessing the corporate network with their devices introduces a host of control and security issues that IT had not previously considered and, as a result, is now just catching up with. BYOD happened before IT even had time to identify the phenomenon.

Now, mobile apps are the next frontier for IT departments – both from the perspective of employees wanting to use consumer apps for work (messaging, telecom and file storage/sharing apps are top examples), as well as companies that want to host their own enterprise app stores. Companies that act quickly enough in their respective industries stand to gain first-mover advantage – read: new revenue streams – if they can create and host cloud-based enterprise apps that can be delivered across the spectrum of mobility platforms and device formats.

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For our associates, we deliver a wide range of enterprise apps for use on Android and Apple iOS devices via a homegrown apps hub. Our hub not only allows for app discovery and distribution, but it also provides a full suite of security and management services. We recommend organizations take a similar approach and make these apps available to their users by working with third parties that have already invested in such repositories and delivery models. In this way, companies can take advantage of the more flexible and lightweight IT infrastructure that mobility enables, including continuous functional improvements without prolonged release cycles. Most organizations will find it quicker and easier to take this approach than creating their own app repositories.

**Transforming Your Business and Innovating via Mobility**

Embracing the innovations that can result from enterprise mobility requires some fundamental changes at the organizational level. Most existing IT infrastructures, for example, are not equipped to deliver mobile apps. For one thing, mobility is so much faster-paced than the traditional IT world. Organizations that have mastered mobility might move from concept to deployment of an app in six weeks using a new generation of tools, including middleware and related integration systems. Traditional developers, on the other hand, may try to create and maintain mobile apps using older tools and timeframes.
Once a mobile app is developed, it can be a major challenge to extend its functionality. Due to the diversity of platforms, changes in mobile device operating systems happen so frequently that features and functionalities that work one day on one device may not work the next day on the same device, mandating code re-writing and extensive regression testing across platforms.

User expectations are causing another major shift. Consumers set the bar in the mobile world, expecting an engaging and – yes – fun experience on their smartphones and tablets. Traditional metrics for usability and interactivity do not apply in the slick, new world of mobility. Many companies provide a more entertaining and fast-paced user experience via their mobile apps; LinkedIn, for example, is more engaging in its mobile format than its old-school Web site (see Figure 1). Today’s developers need to think like movie or video game producers as they develop apps, and the race is on to see which companies will understand and embrace this first.

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Moving an IT organization along the learning curve for enterprise mobility may take much longer than expected. Indeed, the technical challenges are just the start. On the organizational side, Mobility 3.0 demands that companies rethink everything from governance, to legal provisions, to work-at-home policies. Since mobility enables increased productivity and efficiency, companies will need to rethink how they measure performance and compensate employees, emphasizing outcomes delivered as opposed to hours worked. Traditional measures, such as utilization, fly in the face of newer efficiency-oriented mobility tools. HR organizations will have to tackle performance and compensation management challenges with steadfast determination to reap enterprise mobility’s vast benefits.

**LinkedIn: Web vs. App**

![LinkedIn: Web vs. App](http://cognizanti.cognizant.com)
Some pundits believe employee compensation issues led Microsoft Corp. to squander its early mobility lead, pointing to the company’s “stack” system of employee ranking as a particular culprit. This system of performance assessment — in which every group includes one exceptional performer, one unacceptable performer and many in the middle of the pack, regardless of outcomes — stifled innovation as employees fought to outperform other internal groups rather than competitors.⁴

Creating an adaptable plan — one done in pencil, not ink — is your best shield against the many disruptive forces at work.

Change management issues such as employee compensation and resistance to change can arise with any technology initiative, but they happen more quickly with mobility. Mobility has the potential to make you fail faster (which in some cases, like Agile software development, is a good thing), but can be deadly if your organization falls further behind earlier adopters or market leaders. Creating an adaptable plan — one done in pencil, not ink — is your best shield against the many disruptive forces at work.

Getting Closer to Customers

Advanced mobile apps enable companies to provide a much richer customer experience than old-style mobile apps. Information from location-specific services can be merged with personal/device information and device data, for example, to deliver a uniquely tailored user experience that would not have been possible in the browser-based world. For example, Target allows customers to opt in to a mobile coupon program in which coupons are sent to their smartphone based on where they are located in the store.⁵

Mobile devices invite users to perform “micro” transactions (i.e., check a bank balance or find an ATM quickly rather than settle in for a half-hour session of paying bills online). This usage pattern — multiple touches for specific information — gives companies a chance to redefine their customer relationships and engage with customers much more frequently than with the traditional channels of the call center and

Freedom Within a Framework

IT can develop an ecosystem for enterprise mobility that enables both freedom and control.
Five Steps on Your Enterprise Mobility Journey

As exciting as it is to contemplate unlocking the value of mobility, it can be difficult to know where to begin. Here are the five things you should do now to work toward a successful implementation of enterprise mobility.

1. **Develop an enterprise mobility strategy.** This involves asking the big questions, like, “What is your business objective for mobility?” “What will be your competitive advantage and ROI?” Identify the processes and technologies that will be affected. Most importantly, don’t forget to define your success factors so you will be able to demonstrate success.

2. **“Future-proof” your investments.** Let your service provider worry about supporting new platforms and operating systems – do not take on that risk for yourself. Build apps within mobile application development platforms (MADP) and leverage mobile device management (MDM) and mobile application management (MAM) solutions. And don’t forget to establish a comprehensive testing strategy to ensure top-quality apps and user experiences.

3. **Ensure both business freedom and IT control** (see Figure 2, previous page). Essentially, this is our prescription for refereeing the tug of war being waged in nearly all companies between IT and the business units regarding who has ultimate ownership of the enterprise’s mobility initiatives. We call this “Freedom within a Framework.” The business can have the freedom to build market-driven applications to support core initiatives, including innovation, while IT can maintain the control (including governance, compliance and security) required to ensure the stability and security of the initiatives across the board.

4. **Create an approved BYOD strategy.** As we see it, enterprises have two choices when it comes to BYOD – do it now or do it later. One thing is for certain, though: You will not stop employees from constantly bringing in new devices and asking IT to “make it work.” Each organization should make the appropriate decisions about the BYOD policy, including a list of approved devices, liability, reimbursement, etc.

5. **Find an enterprise mobility partner.** Select a partner that understands IT and the business, preferably with expertise in integration, security and cross-platform mobile development. Make sure your team can stay ahead of constant evolution. And ensure that you are confident in the long-term stability of your chosen partner. Many younger companies might not survive or will be acquired by larger entities as the marketplace consolidates, potentially jeopardizing your solutions and engagements with them.

Quick Take
Web site. Exchanges on mobile devices afford companies more opportunities to understand customer wants and needs, as well as to share how the company might be able to meet those needs.

Although companies will likely need to make some changes to their IT infrastructure to deliver advanced mobile applications, the good news is that the costs are comparatively much lower. To try to deliver this sort of high-touch, intimate customer experience in the traditional world would be a costly endeavor indeed.

The entire computing realm is going mobile. Mobility allows much greater efficiency of computing tasks and makes life easier for users. Of course, Mobility 3.0 is a disruptive technology for companies that serve businesses and consumers alike, across industries. Along with social media, analytics and cloud, mobility will form the basis of a more flexible, agile IT infrastructure. For enterprises that can harness this disruptive force to create entirely new ways of delivering products and service to both existing and new segments of customers will find that mobility is a welcome gateway to the future.

Footnotes


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