

Business Benefits of the Mobile Internet

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As wireless broadband services become ubiquitous, true mobility in Internet access will enable enterprises to interact with remote employees, partners, and customers as a matter of course. Entering, storing, sharing, and searching for data from remote locations will be as straightforward as doing so at the office.

The development of advanced mobile devices and mature mobile access technologies are fostering the rapid growth of Internet mobility, promising to untether the enterprise. The following mobile technology analysts take a closer look at the road we'll be traveling over the next few years and what you'll need to consider to get the most from the mobile Internet as it evolves.

Today, most employees work away from the office at least some of the time. Jack Gold, principal telecommunications analyst at J. Gold Associates, ⁽¹⁾ expects 75 percent of enterprise workers to be mobile at least 25 percent of the time by the end of next year. Compass Intelligence LLC, a global consulting and market analytics firm, anticipates that U.S. businesses will be spending around \$9 billion on mobile applications by 2011.⁽²⁾ And technology research firm Yankee Group puts the current global market for mobile Internet services at \$9.5 billion.⁽³⁾

Benoît Felten, an enterprise mobility senior analyst at Yankee Group, sees email as the mobile Internet's first major application. "We estimate the penetration of mobile email solutions at around 11 percent of businesses above 250 employees in Europe and slightly higher in the U.S. We're talking about the more mature businesses, which gives you some idea of the potential for growth simply in mobile email."

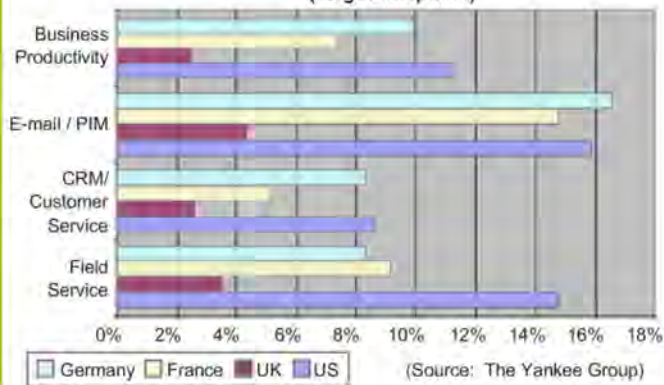
Other than email, there are two important areas where mobile Internet applications offer solutions for the enterprise:

- > *The sales force:* using mobile Internet access to boost sales productivity by making it easier to check inventory, check production capabilities, and enter orders on the road at anytime without needing to find a WiFi hotspot.

- > *The field force:* using mobile Internet access to boost field force productivity by cutting data entry time, improving billing accuracy, reducing the time to payment, and slashing the amount of time historically lost to paperwork.

"These applications are used by people whose job is, by definition, to be on the road and who need to access or update information that is stored centrally," Felten says. "Such reactivity is an increasingly crucial edge for businesses everywhere."

Applications Deployed Over Cellular Mobile Devices
(Large Enterprises)



The help desk is another enterprise activity that can be improved. Remote employees who can get to corporate resources using mobile Internet Protocol access need less help from call center/help desk personnel to connect to corporate networks and retrieve data.

Terms of Endearment

3G – The third generation of mobile communications standards, based on International Telecommunications Union standards, enabling wide-area cellular telephone networks to evolve to incorporate high-speed Internet access and video telephony. There are several 3G technologies, including CDMA2000, 3GSM, and EVDO, offering speeds in the 2-3 Mbit/s range. 3G claims about 200 million subscribers worldwide — approximately 7 percent of all mobile phone users.

4G – The fourth generation of mobile communications that will be able to provide an IP-based wireless broadband solution with voice, data, and streamed multimedia to users anytime, anywhere at much higher throughputs — around 50 Mbit/s.

700MHz tranche – This is the communications spectrum space being vacated by analog broadcast television, which has been mandated into oblivion. The 700MHz band is ideal for 4G mobile transmissions, and in the United States, it is currently being auctioned by the FCC. It will take the winning bidder several years to make the 700MHz band marketable, but when it does, 4G will gain immense momentum.

CDMA – Code Division Multiple Access. A mobile communications technology used by more than 500 million subscribers worldwide. Major U.S. CDMA operators are Sprint and Verizon.

EVDO – Evolution-Data Optimized. A 3G evolution of the CDMA2000 standard that supports high data rates and can be deployed alongside voice services, EVDO has been adopted by many mobile service providers around the world, especially those with CDMA networks.

GSM – Global System for Mobile Communications. A mobile communications technology used by roughly 2.5 billion subscribers worldwide. Major U.S. GSM providers are AT&T (formerly Cingular) and T-Mobile.

What's Next?

The emerging third-generation (3G) mobile cellular systems and fourth-generation (4G) telecommunications will usher in mobile Internet opportunities with enhancements in roaming capability and the broader bandwidths that speed mobile downlinks and uplinks. "The key to expanding the scope of mobile application deployment is bandwidth," says Philippe Winthrop, Aberdeen Group's research director, wireless and mobility. "3G is still not pervasive, but the true promise comes when 4G services will ultimately be deployed."

Yankee Group's Felten believes mobile Internet innovations will come from the consumer side and trickle toward the enterprise. "There's a good chance that the next wave of mobile applications for businesses will be centered around collaboration/unified communications and/or business-focused social networking, because these are trends we're seeing overall," says Felten.

Tole Hart, Gartner's research director, consumer services, technology & service provider research, predicts that with additional bandwidth and better devices, "you'll see an opening of the mobile Internet and mobile advertising where brands will get a more direct relationship with consumers over mobile phones."

Traver Gruen-Kennedy, managing director of the Mobile Enterprise Alliance, expects enterprises to slowly but steadily shift to an application service provider model. "Its not just

Salesforce.com, Google, and social marketing driving the shift," explains Gruen-Kennedy. "It's now inevitable that enterprises will eventually switch to using the Internet as their systems bus, enabling ever more powerful devices to be used by mobile users."

Wireless Internet: A Natural Extension of Living

Written by [Alan Reiter](#)

An Internet Evolution Thinkernet contributor
12/25/2007

The Internet has become so integrated into our lives that almost every application seems appropriate for wireless. Instantaneous access to information isn't just a natural extension of the Internet; it's an extension of our existence.

Gruen-Kennedy offers an example: the combination of Citrix's Zen Client loaded onto a PDA, which allows the enterprise user to be directly connected to her virtual desktop. The user gets to her enterprise-class applications from nearly anywhere with the option of using both the PDA screen and a large monitor, standard keyboard, and mouse. This flexibility is matched by the IT administrator's ability to securely deploy applications to users anywhere, since data isn't vulnerable to sniffing or artifacts left behind on a shared resource or stolen laptop.

"Imagine no longer having to carry a laptop, yet having access to more applications than ever by using your handheld as your key enabling device," proposes Gruen-Kennedy. "All your state and desktop personalization remains, no matter where you go. If the device is lost or stolen, it's of little value from a data-availability perspective. This is a win for the user and for the IT department, and it drives costs ever lower."

How to Mobilize the Right Applications

As 3G begins to become pervasive and 4G awaits, the promise of unleashed Internet mobility looms. These mobile technology analysts offer their recommendations on what sort of enterprise applications are worth mobilizing.

Philippe Winthrop, research director, wireless and mobility, Aberdeen Group:

"Spend significantly more time looking at business processes to glean information on how mobility can improve workflows. Technology for technology's sake is a recipe for failure — particularly in mobility. Organizations need to understand the kinks in their business processes, how mobility can help that, and, most importantly, they need to assess whether employees will want to use those new technologies."

Traver Gruen-Kennedy, managing director, Mobile Enterprise Alliance:

"Talk to your users! Learn about mobility solutions that are being used in adjacent industries. Improvements on the margins only yield incremental change. Try to reinvent your business process with a customer-centric point of view."

Benoit Felten, enterprise mobility senior analyst, Yankee Group:

"Identifying the best applications is the wrong way to go about it. Mobile penetration in an overwhelming majority of businesses has been a haphazard process, dictated by VIP whims as much as by procurement pressure."

Felten warns that businesses cannot spare reassessing mobility before they decide to mobilize applications, or they risk failure and/or less-than-optimal spending. He suggests:

1. Auditing existing business processes and identifying where and how a mobile interaction can help improve reactivity or accuracy.
2. Targeting the employees or machines at the core of the selected interactions.
3. Characterizing the nature of the selected interactions.
4. Deriving which applications need mobilizing and determining who can be equipped with which device.

The Challenges

Untethering the enterprise does have its challenges. A 2007 study by The Economist's Intelligence Unit (based on 2006 data)⁽⁴⁾ identified several of the struggles companies face when implementing mobile technologies. These include:

- The costs of acquiring and deploying technology
- Difficulties in integrating mobile applications with existing infrastructure
- Problems with interoperability between different mobile technologies
- Difficulties in ensuring adequate employee training and support

But the various forms of security issues — among them, network security risks from proliferating access points and data security risks from notebook computers, PDAs, and BlackBerrys — top the list.

Aberdeen Group's Winthrop sees a prior issue. "Before IT managers worry about security—and believe me, security is critical—they need to get a sense of what's even out there."

Often employees buy their own devices or get them through corporate procurement departments, so IT has limited visibility into what devices are accessing from corporate networks and data. Yankee Group's Felten recommends IT needs to begin "by rationalizing the mobile fleet in terms of devices, subscriptions, and operators."

Since today's mobile devices can access core corporate applications remotely, they represent a significant potential security breach that should be addressed with basic security protection, such as antivirus software. According to Aberdeen Group's *2008 Enterprise Mobility Benchmark Report* survey, currently just 29 percent of respondents have antivirus software on their mobile devices.

Gruen-Kennedy advocates another approach to securing mobile devices. "We're better off authenticating devices and users, securing the connections and pathways, and closely watching user activities as they approach the firewall and once they're permitted access," explains Gruen-Kennedy. "Keeping apps and data on the inside and managing access to them allows you to do this. Forget the device and liberate the user."

The Difference Mobility Already Makes

Despite the challenges, some enterprises are leveraging mobility very well. Even at this early stage, it's possible to identify key best practices that pay off when it comes to untethering the enterprise.

Internet's Future:

Catalyst for Workplace Sea Change

Written by [Ralph Szygenda](#)

An Internet Evolution Thinkernet contributor
10/2/2007

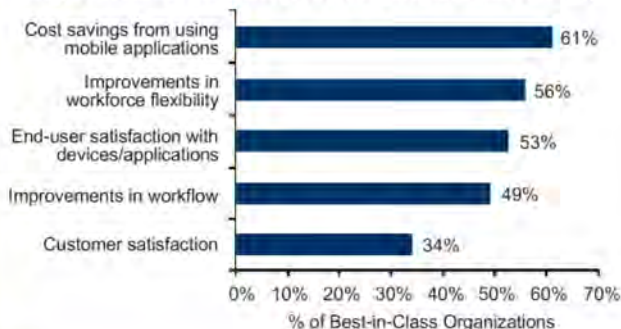
For GM, the Internet is a vehicle, a veritable turbo-charged one that helps us race toward becoming a fully globalized, digitally-based business...

Such globalization of business will help give rise to a broadband mobile Internet as ubiquitous as today's landline phone network — rendering remaining geographical boundaries ever more meaningless...

Comprehensively planning now for these changes is an absolute imperative. Just leisurely thinking ahead will be grossly inadequate, and possibly very costly.

Aberdeen Group's *2008 Enterprise Mobility Benchmark Report* survey of more than 580 organizations shows that those applying enterprise mobility the best take a holistic, strategic approach. These best-in-class organizations have developed a strategic vision and maintain high visibility in their mobile initiatives. It's likely that in these organizations, both the CEO and the CFO are involved in the strategic planning of mobility initiatives 50 percent more frequently than in all other organizations.

Key Performance Indicators for Best-in-Class Enterprise Mobility



(Source: Aberdeen Group, Nov. 2007)

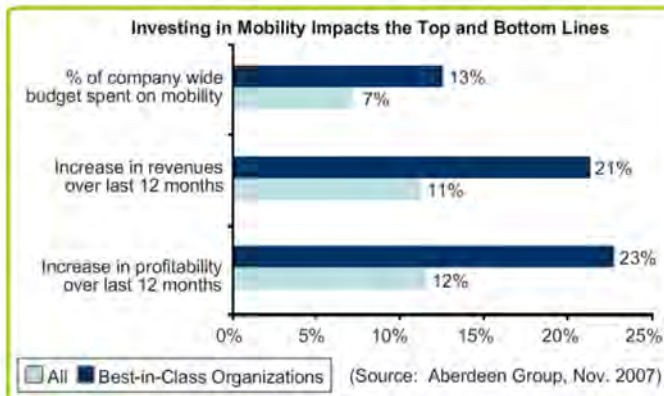
So what are these best practices? They involve strategic management of:

- **Processes:** evaluating new mobility projects using policies that ensure appropriate use of processes and devices. Aberdeen Group notes that, compared to all others, best-in-class organizations are 43 percent more likely to have processes for evaluating new mobility applications — and these processes make best-in-class organizations 93 percent more flexible.
- **Organization:** maintaining an enterprisewide focus on stakeholder collaboration. Best-in-class organizations are 36 percent more likely than "laggard" firms to have cross-functional teams that include line-of-business staff to test new mobility initiatives and are 57 percent more likely to have a mobility guru.
- **Knowledge:** establishing processes to document mobility implementations and train staff in the use of mobile applications. Twice as many best-in-class organizations document their mobility implementations as laggard companies, and best-in-class firms are 44 percent more likely to have training programs.
- **Technology:** choosing appropriate tools and deploying those tools intelligently. Best-in-class organizations are ahead of the curve here, too. They're 70 percent more likely than laggards to use WiFi smartphones.

- **Performance:** measuring the benefits of deployments and using the findings to further improve key processes. More than three quarters of best-in-class organizations regularly review and monitor their mobility policies, and 83 percent review and monitor the overall progress of their mobility strategies.

Does such devotion to vision and strategy pay off? Yes, indeed. And best-in-class organizations aren't finished yet. They'll be developing policy-driven, standardized mobile device platforms to ease the IT department's support and security burdens. And you can expect them to leverage the influx of intelligent mobile devices, too.

The mobile Internet really will untether the enterprise. Are you ready?



Notes:

- (1) Jack Gold, J. Gold Associates, Northborough, MA
- (2) Compass Intelligence LLC, Scottsdale, AZ
- (3) Yankee Group, Boston, MA
- (4) *Enterprise IP Goes Mobile, An AT&T Survey and White Paper in Cooperation with the Economist Intelligence Unit, 2007*

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Opinion on the Future of the Internet

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