

Opportunities for Action in Consumer Markets

# Competitive Advantage from Mobile Applications

THE BOSTON CONSULTING GROUP



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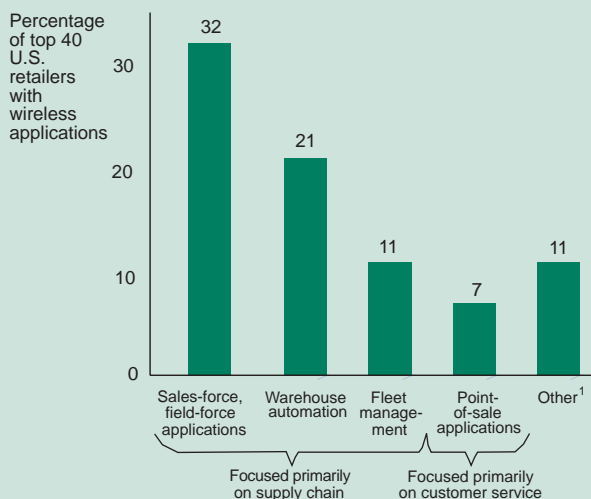
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The mobile commerce revolution, heralded periodically since the late 1990s, has yet to occur in most retail markets. Consumers have shied away from increasingly complex handsets and from bandwidths that are still too slow. As a result, predictions of huge retail profits from m-commerce remain unfulfilled. Yet inside the supply chains of many cutting-edge retailers and their partners, a true mobile revolution has begun. Consumer-focused companies are already using wireless technology to get closer to their customers and improve their efficiency by cutting cycle times and costs.

Nearly three-quarters of the top 40 retailers in the United States have deployed or tested at least one wireless application, although only 10 percent are offering consumer applications. (See Exhibit 1.) We expect wireless business applications to grow twice as fast as consumer applications: supply chain applications are quickly becoming a requirement for every company. Yet businesses can still differentiate themselves through improved consumer applications.

Organizations that have embraced relatively simple wireless tools for sales force automation or customer relationship management have seen productivity gains ranging from 5 to 30 percent. PepsiCo/Frito-Lay, FedEx, and UPS mobilized distribution processes for a cost savings of 10 to 20 percent thanks to productivity gains, increased asset visibility, and improved decision-making capabilities. The Home Depot is saving \$22 million a year by providing floor employees with the ability to check and order inventory using wireless technology.

## Exhibit 1. Most Top Retailers Use Wireless Applications



SOURCES: BCG interviews; literature search.

NOTE: Some companies use more than one type of application.

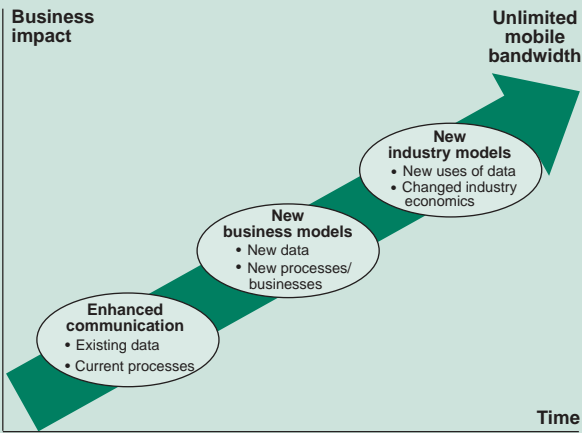
<sup>1</sup>Includes electronic signage, wireless shelf-tag pricing, and wireless online prescriptions at pharmacies.

## How the Development of Applications Will Unfold

As consumer companies embrace wireless applications, three significant stages of development will occur. First, communication between organizations and their employees, customers, and suppliers will be radically enhanced, in effect mobilizing business operations. Second, companies will use new data from consumers and equipment to reshape business models. And third, previously untapped data will be processed in ways that will change the rules of competition and even redefine industries. (See Exhibit 2.)

**Business operations will be mobilized.** To date, most wireless activity within organizations has accelerated and simplified communication with field employees, suppliers, and customers—thereby enhancing existing business processes. Office Depot, for example, is using wireless technology to reduce operating costs and improve customer service. Fleet drivers are given a PDA with an embedded bar-code scanner to read each delivery item as it is loaded onto the truck. That information, along with the truck’s location en route, is transmitted wirelessly to the company’s back-office systems, automatically creating a manifest that’s viewable on the company’s Web site. Upon delivery, payment can be processed remotely and signatures captured electronically, eliminating millions of dollars in costs per year from reconciliation errors.

**Exhibit 2. Increasing Opportunities for Wireless Applications**



SOURCE: BCG analysis.

Other leading companies have found creative ways to employ wireless applications:

- Federated Department Stores is testing electronic-ink solutions to reduce the \$250,000 it spends every month manually changing its signage. Now, through a radio connection, an operator can make tiny two-sided balls embedded within paper flip to their black or white sides to form letters.
- Sears, Roebuck has transformed the mobility of its 15,000 sales associates into a competitive advantage by equipping them with hand-held devices connected to wireless LANs in its 860 mall stores. This technology has enabled associates to check and change prices, receive inventory, and even print pricing labels.
- To eliminate long checkout lines, The Home Depot is piloting a wireless point-of-sale program in which roaming cashiers process transactions right at the shopping cart for customers paying with credit or debit cards.

These companies are not just benefiting from better customer service, streamlined operations, and improved pricing accuracy. Their use of wireless technology is also preparing them for the day when customers will make mobile payments or simply beam their wish lists and contact information to a sales associate.

Of course, retailers aren't the only consumer businesses to benefit from wireless technology. Nabisco uses a wireless LAN in its warehouses and provides staff with a portable, voice-directed computer that is linked to a bar-code-scanning inventory system. Picking speeds have improved by 12 percent, with a

measurable increase in quality. At Frito-Lay, mobile sales reps can update order information wirelessly at the retailer, thereby reducing stockouts and improving inventory control. Orders are now processed up to seven hours earlier than they were in the past, and trucks are loaded five hours earlier.

**Business models will be reshaped.** The second wave of wireless applications, now starting to appear, promises to be more far-reaching than the first. Rather than merely accelerating or improving information flows, these applications will also drive changes in an organization's core processes and pave the way for fundamentally new business models.

In Japan, for example, NTT DoCoMo has partnered with vending machine manufacturers and soft-drink companies to equip vending machines with wireless capability. In addition to accepting payments from wireless devices, the machines use wireless technology to transmit information on inventory levels and maintenance problems. Beverage companies use perishable data such as information on point-of-sale inventory—information that could not be captured previously—to improve distribution and product selection, and reduce the number of out-of-stock items. Those moves have increased profits per machine by as much as 70 percent.

**The rules of competition will change.** As businesses capture and process remote data from a greater variety of sources, some will find opportunities to revamp their cost structures, increase market share, and even create new ways of competing. Progressive Casualty Insurance Company, a U.S. auto insurer, provides an intriguing example. It is piloting a new underwriting system that uses wireless technology to track customer behavior behind the wheel. By equipping cars with

relatively low-cost locating devices, Progressive collects information such as where individuals drive, how fast, how often, and when, as well as where they park. It uses the information to price monthly premiums on the basis of specific usage, not actuarial data. Over time, drivers with good records and few claims are likely to remain with Progressive, whereas higher-risk drivers may move to other insurers. If this system is implemented on a large scale, it could change the face of the auto insurance industry.

## **A Call to Action**

In the excitement over the future of m-commerce, many companies are forgetting that real opportunities are available today that can significantly improve their competitive position. Although a surprising number of retailers and consumer goods companies are advanced in mobile technology, most have failed to realize the full potential of wireless. It's not too late to capture the benefits or to develop new business and industry models for long-term gains.

Companies that have yet to use wireless technology should immediately begin to screen opportunities for wireless applications in order to improve in-stock rates, promotional modeling, sales force productivity, and the exchange of supply-chain information. To decide whether a given business area will benefit from wireless technology, a company must determine whether it has the right combination of mobile employees, remote goods and equipment, and perishable or dynamic data—and whether the technology will have a significant impact on the business. (See Exhibit 3.)

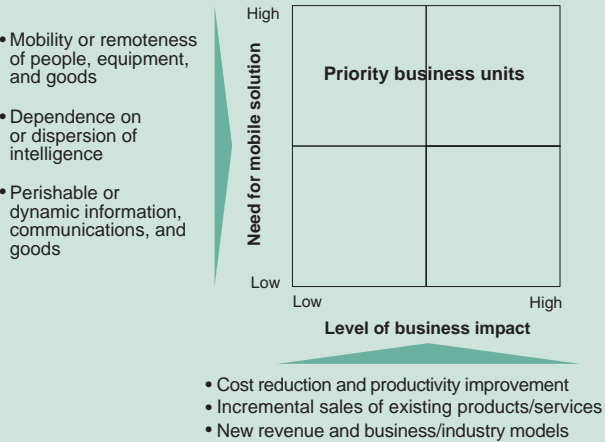
We recommend the following four-step process to get started:

**Develop m-awareness.** Begin a campaign to help the organization understand all that m-commerce can do. Then build a network of people committed to meeting the challenge of implementation.

**Generate ideas for realizing the goal.** Assign a team to lay out the business system and potential opportunities. Then formalize the ideas into initiatives to be investigated further and track each of them.

**Conduct m-triage.** Develop a business case for each initiative and evaluate it on its potential to attract additional revenues, reduce costs, unlock opportunities, and offer strategic advantage. Then prioritize your initiatives, identifying those you want to pursue immediately, those that need further study, and those you will shelve.

**Exhibit 3. Determine Where Wireless Applications Will Offer the Best Opportunities**



SOURCE: BCG analysis.



**Don't delay in launching wireless initiatives.** Start with the projects that are easy to execute—messaging, e-mail, dynamic scheduling—and focus on customer-oriented initiatives. Then add the new generation of mobile applications. Partner with mobile suppliers and form joint ventures. Tie it all to your logistics network, customize it, fine-tune the interface, and get ready for unlimited mobile bandwidth.

Few truly wireless companies exist today. Yet the technology can provide companies with improved productivity, lower costs, and more control over the supply chain. If you do the spadework and become m-enabled, you will reap benefits when the m-commerce revolution finally arrives. Get ahead of your competitors and lay the groundwork for a world that will be connected, informed, and rich with data.

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