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The Future Of Mobile Experiences Is Context

by Julie A. Ask

for Customer Experience Professionals



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The Future Of Mobile Experiences Is Context

Customer Experience Professionals Must Develop Mobile Paradigms

by **Julie A. Ask**

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EXECUTIVE SUMMARY

Consumers will adopt and use convenient services and products. On mobile phones, this means services that offer immediacy and simplicity through a highly contextual experience. Context — the sum total of what is known about an individual at the moment of engagement — is a moving target that will pull consumer perceptions of convenience with it. Successful mobile initiatives will focus not only on what is delivered but also on how it's delivered to each customer. This report outlines the technology changes on the horizon that will affect the ability to gather and understand mobile context. To succeed with mobile, customer experience professionals must design experiences that leverage context to deliver more convenient mobile services.

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NOTES & RESOURCES

Forrester interviewed a number of vendor and user companies; some of them are listed in the Supplemental Material section.

Related Research Documents

["How To Prepare For Mobile Total Product Experiences"](#)

April 14, 2011

["Mobile Is Not Just Another Channel"](#)

February 25, 2011

["The Convenience Quotient Of Mobile Services: A Facebook Case Study"](#)

October 14, 2009

MOBILE PHONES WILL BE YOUR CUSTOMERS' PREEMINENT DIGITAL TOUCHPOINT

Ownership and usage of mobile devices is growing at an unprecedented pace. Customer experience professionals are contending with a new world of mobile popularity marked by:

- **More devices.** In the US alone, Forrester is forecasting nearly 100 million smartphones by the end of 2011.¹ This phenomenon is not limited to the US. Both Apple and Google have sold hundreds of millions of devices globally, with Google activating 400,000 Android devices daily.² Forrester's data shows that urban consumers in China are already more sophisticated mobile users than the average US or European consumer.³
- **More diverse activities.** Consumers are not only texting and surfing the Web. They are consuming media, doing their taxes, and even opening their car doors. Intuit has seen more than 350,000 downloads of its SnapTax mobile tax filing app, while sanofi-aventis offers a blood glucose meter attachment for the phone to collect and process blood-sugar levels in real time.
- **More marketing and shopping.** Forrester forecasts that consumers will spend more than \$6 billion on their mobile phones in the US by the end of 2011.⁴ Mobile is revolutionizing the way that consumers learn about, choose, and buy products of all types.

Contextual Experiences Will Define Mobile Success

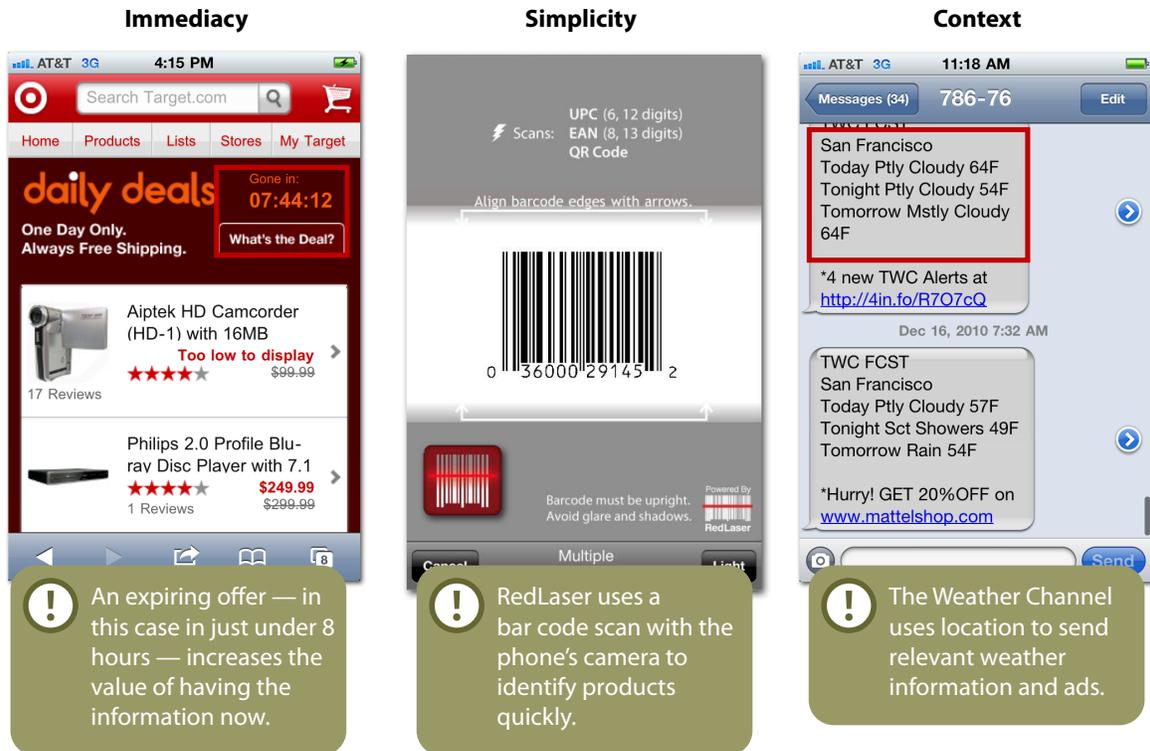
In past research, Forrester has demonstrated that in order for a mobile service to be successful, the benefits of the service must outweigh the inhibitors of adoption. To do that, mobile services must be immediate, simple, and contextual (see Figure 1).⁵ Improving the experiences of mobile services will require using more of the available contextual information to deliver more meaningful content and functionality to users (see Figure 2). Forrester calls this the customer's "mobile context" and defines it as:⁶

The sum total of what your customer has told you and is experiencing at his moment of mobile engagement.

A customer's mobile context consists of his:

- **Situation:** the current time, location, altitude, environmental conditions, and speed the customer is experiencing.
- **Preferences:** the history and personal decisions the customer has shared with you or with his social networks.
- **Attitudes:** the feelings or emotions implied by the customer's actions and logistics.

Figure 1 Mobile Services Should Offer Three Core Benefits To Drive Convenience



Source: Target website; RedLaser (eBay); The Weather Channel daily text alert

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Source: Forrester Research, Inc.

Figure 2 The Benefits Of User Context

	Capability	Business impact
Incremental revenue from existing services	Basic context	<ul style="list-style-type: none"> • More efficient targeting (marketing) • Increase sales/service from brick/mortar locations • Improved customer experiences in mobile
	Layered intelligence	<ul style="list-style-type: none"> • Higher profitability due to increased in-store purchases, higher prices with elasticity in play • High customer satisfaction and loyalty stemming from more intuitive, convenient experiences
Revenue from new services	Break for PC context	<ul style="list-style-type: none"> • Entirely new digital, revenue-generating services • Improved navigation precision
	Motion-based control	<ul style="list-style-type: none"> • Increased usage of mobile offerings due to ease of use and "fun" factor • Deeper engagement with products under consideration in a personal environment

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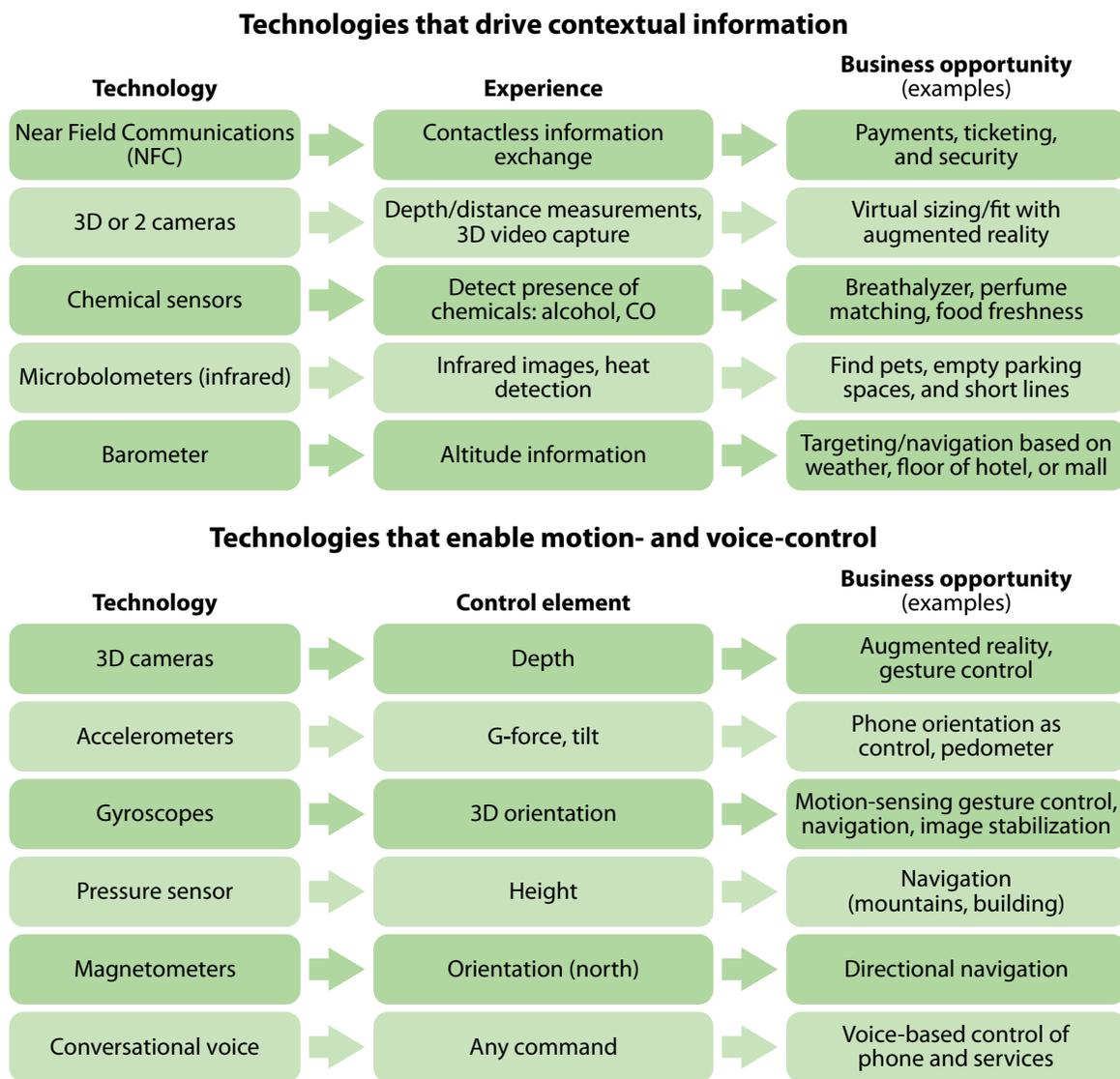
Source: Forrester Research, Inc.

Technology Innovations Will Drive Contextual Capability Forward

New processing capabilities and sensors are changing how users control their devices and display content — quickly changing “what is possible” in mobile context (see Figure 3). Our interviews with technology leaders at more than a dozen device manufacturers reveal that the following technology trends will push the evolution of context and with it convenience (see Figure 4).

- **Today’s fancy features will become commonplace.** Technologies found in high-end phones will migrate into lower-end phones as the cost of components comes down through scale and consumer demand beyond early adopters grows. Mobile phones are already packed with phenomenal technology that firms underuse, including GPS, accelerometers, gyroscopes, magnetometers, Near Field Communications (NFC), and high-resolution displays. With the use of networks and other tools, firms can also collect contextual information.
- **New sensors will reveal more about the user’s environment.** Barometers, microbolometers, and chemical sensors will find their way into phones as both the use case and business case evolves. The phones will also act as modems, relaying or interpreting information from other machines or from attachments with sensors. They will offer new information ranging from a consumer’s altitude, speed, temperature, and presence of relative lightness or darkness to orientation to the North Pole or gravity. Dual cameras have already appeared in phones, enabling depth perception and the creation of 3D content.
- **Motion, voice, and touch will redefine the user interface.** A combination of improved display technologies and simplified development tools for motion sensors will shift the control of mobile phones from touch to motion and voice. In the near term, the responsiveness of touchscreens will improve. Going forward, however, the phone will be controlled evermore by voice, gestures, speed, pressure, or the presence of light.⁷
- **Blistering multicore processors will enable responsiveness.** Ever mightier microprocessors, faster graphics accelerators, and increased memory will continue to improve the performance of mobile devices. This will allow for high-definition (HD) audio and video capture as well as displays. But don’t just picture the audio and video we hear and see today. In the future, mobile phones will shoulder the complexity of interpreting conversational voice or directed commands — tasks that are offloaded to servers today due to their computational complexity. Embedding complex voice and motion control along with HD media will fundamentally change what is possible with a mobile device.

Figure 3 New Technologies Enable New Opportunities

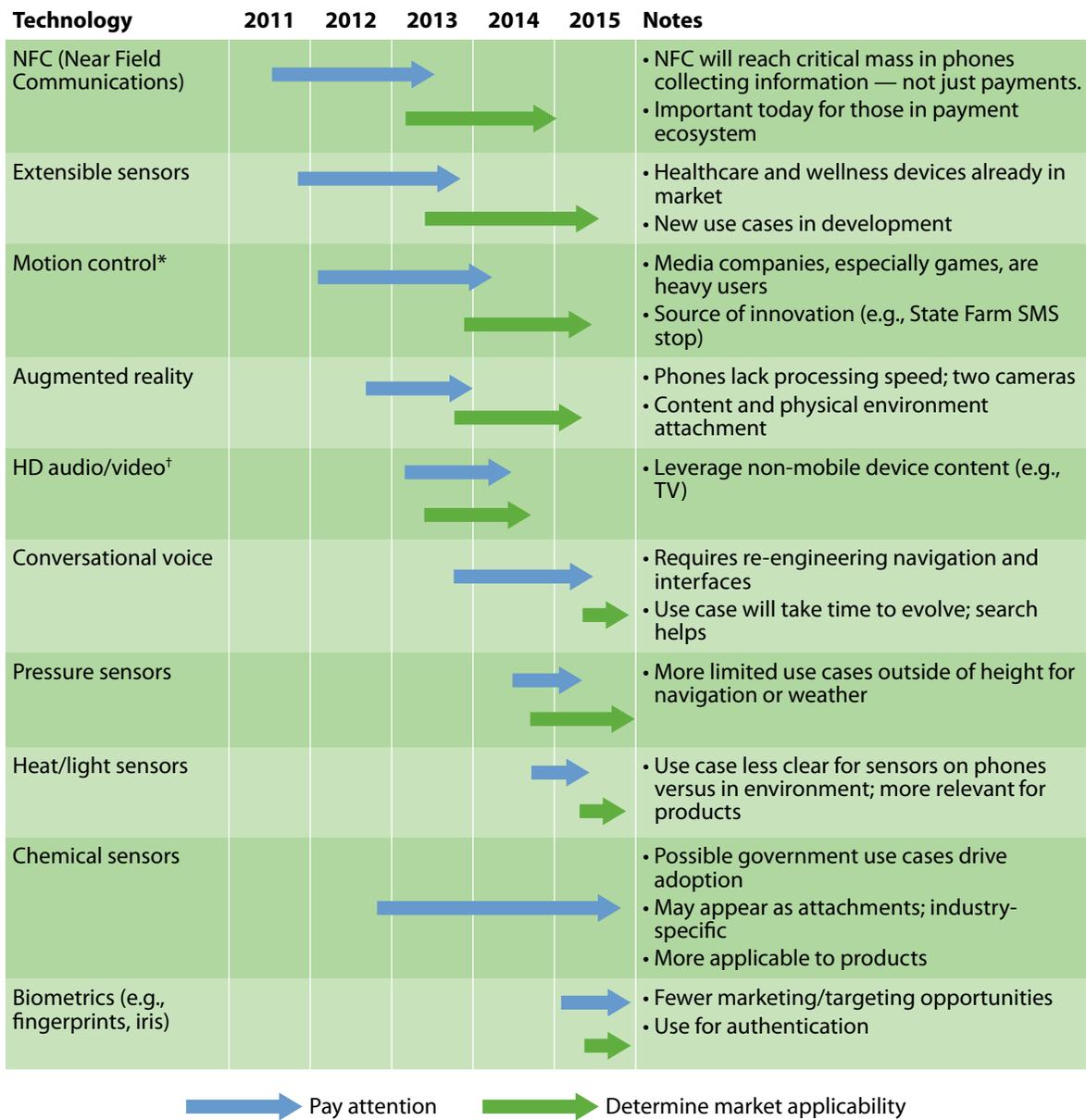


Source: interviews with A.M. Fitzgerald & Associates and Yole Développement

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Source: Forrester Research, Inc.

Figure 4 Marketers Must Wait For Available Technology To Hit Critical Mass



*Includes accelerometers, gyroscopes, and magnetometers
†Includes HD displays, HD audio, picoprojectors, and silicon microphones

RECOMMENDATIONS

ENSURE YOUR DIGITAL CUSTOMER EXPERIENCE STRATEGY INCORPORATES MOBILE

Digital experiences of the future will be customized by the end user, aggregated at the point of use, relevant to the device and the moment, and social.⁸ To ensure that experiences are relevant to the device, customer experience (CXP) professionals must use their knowledge of a consumer's context to deliver the right information at the right time and in the right place. To do this in a consistent and sustainable manner, you must:

- **Ensure mobile is a key component of your digital customer experience strategy.** A digital customer experience strategy is a plan that guides the activities and resource allocation needed to deliver experiences that meet or exceed customers' expectations within and across digital interaction points. A good strategy not only guides the right channel investments but also describes the intended experience, one that is consistent with the larger company and brand strategy. To narrow the field of available mobile experiences they could provide, CXP professionals must use their digital strategies to: 1) guide decisions about what elements of mobile context provide them with the most relevant insights to deliver the right experiences to their customers, and 2) establish how soon they must invest in these capabilities to design and deliver these experiences.
- **Investigate new ways to deliver experiences.** A good digital customer experience strategy is not immutable. Instead, CXP pros must constantly consider new technologies, services, and capabilities that might allow them to better address core customer needs in a manner that might better drive business objectives. For example, USAA first offered its remote deposit capture service via webcam to help service men and women stationed abroad deposit checks received when they were nowhere near a branch. They found that most people using the service had issues with their webcam; the company's service center was inundated with calls requesting help to get hardware working. As mobile phones began to integrate cameras, the company began designing the same service for smartphones — a device that customers had fewer troubles using; users could snap a picture of a check and send it to USAA. USAA was one of the first to offer this service because of its focus on customer needs and its awareness of the importance of using the right technology to meet those needs.
- **Conduct the right research to inform your experience.** Simply having access to information from sensors and enhanced user interface capabilities won't ensure that a customer's experience will be improved. CXP pros must become adept at using enhanced features and functionality to deliver more relevant, usable experiences to their customers. Start by understanding customer needs — not just by asking customers what they want but by observing the struggles they have today, their workarounds for current tasks, and the other tools they use to accomplish their goals. Some firms, including Boeing, Harley-Davidson, PayPal, and Wells Fargo, use ethnographic research techniques to uncover customer needs that customers often can't communicate or don't consciously know; this can help firms improve experiences and differentiate their offerings from their competitors.⁹

WHAT IT MEANS

THE COST OF CONVENIENCE IS PRIVACY

Your mobile phone will know more about you than you, your spouse, or your family. Why? Your mobile phone will become *the* device you use to interact with the world around you — your hotel room, your shopping cart, your TV, your fitness plan, your bank, your parking meter, your refrigerator, your car, your running shoes, and many other aspects of your life. You won't be able to keep anything private from your mobile phone. For some, this conjures up serious privacy concerns.

Many consumers will voluntarily give up privacy in exchange for the benefits of mobile convenience. This will be the cost associated with convenience. Companies selling media, services, and products will use the contextual information collected about consumers to deliver highly personalized experiences that consumers view as too convenient to pass up. In turn, disruptive business opportunities will emerge. We are hopeful that consumers will view these services as more of a "Big Mother" than a scary, Orwellian "Big Brother." Imagine these scenarios:

- **A new ecosystem of trusted aggregators of data.** Marketing, eBusiness, and product strategy leaders will want to create unified views of consumers to deliver the highly contextual services consumers seek, but different companies and different industries only see particular slices. For instance, wireless carriers or device manufacturers see a wide breath of data — but they lack the deeper view enjoyed by retailers or media companies, which also have an offline perspective. As the real power lies in combining all of this data to create views of individuals, a new class of third-party aggregators will arise. These information brokers could come from existing players in the credit monitoring business (like Experian), from a Google spinoff, or from an entirely new company. They'll change the way organizations ensure relevant experiences for customers and will create an entirely new business model for information exchange.
- **Walking through an individualized Internet.** Mobile consumers will receive more and more individualized content based on their current context — like RSS on location-based steroids. As a result, fewer consumers will receive the same content experience. Over the course of a day, a consumer will receive individualized, targeted, atomized content as she walks around town doing her daily tasks. She's literally walking through her own Internet experience.
- **Products become services (with incremental revenue streams).** Let's take an example of self-help books. People do what is easy. People don't exercise, get marriage counseling, plan for retirement, or develop the "seven habits of highly effective people" because it is difficult and requires coaching or phenomenal self-awareness. The phone's sensing capabilities and 24x7 presence will enable the collection of information to help monitor and correct behavior in real time. Through analysis of conversation, your phone can offer feedback, for example, on whether you seek first to understand and then to be understood. An analysis of your schedule and behavior will show how proactive you are and if you are focusing on what is important or what is urgent.

- **Democratization of services — globally.** Two hundred years ago, doctors, long-distance travel, and education were only available to the wealthy. Today in the US, even the poorest of individuals has access at an affordable price. Mobile phones are already democratizing education, healthcare, and banking services for consumers in emerging economies. Here in the US, what is rare is different: Cholesterol tests, detection of contamination in foods or exposure to disease, and access to specialists are either very difficult or prohibitively expensive. Mobile phones have the ability to eliminate the barriers to services like these, across the globe.

SUPPLEMENTAL MATERIAL

Companies Interviewed For This Document

360i	Intercontinental Hotel Group (IHG)
Akustica Bosch Group	Intuit
American Century Investments	J.C. Penney
A.M. Fitzgerald & Associates	Kimberly-Clark
Atmel	Layar
Behr Process Corp.	Lufthansa
Best Buy (Canada)	MEMs Industry Group
British Airways	Nuance Communications
CIBC	Nvidia
Citi	Polaris Wireless
Continental Airlines (United Airlines)	Procter & Gamble
Debenhams Retail	Progressive Casualty Insurance
Deezer (France)	Sharp Electronics
Dollar Thrifty Automotive Group	The Home Depot
eBay	VTI Technologies
E-Trade Financial	WiSpry
Gemalto	Yelp
IBM	Yole Développement

ENDNOTES

¹ Forrester's annual handset forecast includes a new smartphone forecast reflecting the rapid adoption of higher-end devices. Adoption of smartphones is driven by lower price points, affordable data plans, and consumer demand for the functionality they offer. See the March 9, 2011, "[Crafting Products For The Next Smartphone Owners](#)" report.

² On April 21, 2011, Apple announced that it had sold more than 189 million iOS devices. Source: Wesley Yin-Poole, "Total Apple iOS sales: 189 million," *Eurogamer.net*, April 21, 2011 (<http://www.eurogamer.net/articles/2011-04-21-total-apple-ios-sales-189-million>).

On May 10, 2011, Google announced at its annual developer conference in San Francisco that it was activating 400,000 devices daily, with more than 100 million already activated. Source: Vlad Savov, "Google reaches 100 millionth Android activation, 400,000 Android devices activated daily," *Engadget*, May 10, 2011 (<http://www.engadget.com/2011/05/10/google-reaches-100-millionth-android-activation-400-000-android/>).

³ Forrester uses its Mobile Technographics® analysis to classify consumers in a given market by their level of sophistication in their use of mobile devices. The most sophisticated category is labeled SuperConnecteds. These consumers own smartphones. They are not only regular users of SMS, mobile browsing, and email, but they also use their phones for a plethora of other services. See the January 18, 2011, "[Asia Pacific Mobile Technographics®: 2010](#)" report.

⁴ Mobile commerce is expected to reach \$31 billion by 2016. While this represents a compound annual growth rate of 39% from 2011 to 2016, mobile commerce is only expected to be 7% of overall eCommerce sales by 2016. While more consumers will purchase more products and categories on their mobile devices over time, retailer investment in the mobile channel continues to remain modest as companies struggle to value the ROI around mobile investments and cautiously navigate many difficult questions, such as how many devices to bet on, whether to partner with third parties, whether to develop an app, how to integrate mobile into store operations, and how to value the impact of mobile on overall sales. See the June 17, 2011, "[Mobile Commerce Forecast: 2011 To 2016](#)" report.

⁵ Although a majority of consumers still prefer the traditional PC to a mobile phone when performing any task related to eBusiness, our research shows that mobile penetration continues to rise. According to the Forrester Research Mobile Adoption And Sales Forecast, 2010 To 2015 (US), 91% of people in the US own cell phones, and Forrester forecasts that there will be 99.6 million smartphones in the market by the end of 2011. However, cell phones are still not among the most prevalent purchase methods. Knowing this, eBusiness professionals need to be smart in how they implement a mobile strategy and must focus on delivering the three core benefits (the "convenience quotient") that mobile services must deliver: immediacy, simplicity, and context in the eCommerce space. A service that hits the mark on all three has a greater chance of driving mobile service adoption. eBusiness professionals across all verticals who want to capitalize on the opportunity need to make sure that their mobile experiences consistently serve the convenience quotient. See the May 27, 2011, "[How eBusiness Professionals Can Use The Convenience Quotient To Prioritize Mobile Services](#)" report.

- ⁶ The observation of behavior and collection of information triggers images of George Orwell's "Big Brother" from his book *1984* and government concerns about consumer privacy. Consumers, however, have a long history of forgoing privacy in exchange for value and convenience. Examples range from the use of credit cards online to Google or Yahoo's free email services to Mint.com for managing personal finances. The use of context in the delivery of mobile services should be thought of as helpful — conjuring images of a caring mother rather than a spying government or profit-hungry corporation.
- ⁷ Accelerometers, gyroscopes, and magnetometers are already in some phones on individual chips. They will migrate to a single chip. With the addition of a barometer, a single chip will have 10 degrees of freedom. The significance of a single chip lies in the speed of calculations and ease of development. Device manufacturers will be the first to leverage these technologies. Source: interviews with Yole Développement.
- ⁸ Forrester believes that four attributes will characterize the next phase of development of the Web. Online experiences will be customized by the end user, aggregated at the point of use, relevant to the moment, and social as a rule — not an exception. In this report, we highlight companies that are providing online experiences that already exhibit one or more of these characteristics. To prepare for the future, customer experience professionals should develop multichannel personas, include social media behaviors in ethnographic research, prepare atomized content, establish an environment for testing new experiences, and seek out highly skilled interaction designers. See the January 28, 2010, "[The Future Of Online Customer Experience](#)" report.
- ⁹ At Forrester's Customer Experience Forum 2011, panelists from Bentley Design and Usability Center, frog design, and Wells Fargo shared their experiences using exploratory research techniques. While these firms have long used qualitative ethnographic methods to understand how customers actually behave, what motivates and drives them, as well as what opportunities exist to better meet their needs, these firms have realized additional benefits from their exploratory research. Customer experience professionals who want to get the most from their ethnographic research should include stakeholders in the process of research and develop experience models to widely share their findings. See the August 22, 2011, "[What Three Companies Learned From Conducting Ethnographic Research](#)" report.

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