



The Near Future of Retail: Meeting the Demands of the Mobile Consumer

Mobile phones and mobile devices are revolutionizing how people manage their lives. This new, always-connected, always-on lifestyle encompasses just about everything a person wants to do, from entertainment to business to shopping. For many retailers, mobile devices are a new channel—one that may soon dominate all other channels. The challenge will be to understand and keep up with changing consumer expectations. It's an exciting time, and filled with opportunity for retailers prepared to take the mobile plunge.

Seismic Shift for Retail

It used to be that the only way to purchase an item was to walk into a physical store, locate the product, and take it to the clerk to pay for it. Or, you could order to it from a catalog. Then the Internet and the introduction of e-commerce radically changed shopping. Without leaving their home, anyone could explore products, compare pricing, and purchase items.

E-commerce facilitated a global marketplace and sprouted new, online-only retailers who took advantage of this low-cost channel, creating a competitive nightmare for the staid, brick-and-mortar retailers. Even with the success of e-commerce, many companies are still dealing with integrating and managing systems between their online, physical, and catalog storefronts.

Ready or not, retail is about to fundamentally change again.

New Mobile Mindset Changes Everything

People around the world have embraced the mobile lifestyle. New form factors, mobile applications, and intelligent network services have radically changed the mobile experience, which in turn has increased users' expectations. Users now want to communicate, get information, be entertained, and shop whenever and wherever they are, often all at the same time.

Despite the gloomy economic conditions of the last two years, users precipitated a recession-defying growth in the use of high-end smartphones capable of supporting advanced shopping experiences. Worldwide sales of smartphones grew 96 percent from 3Q 2009 to 3Q 2010.¹ IDC, the global research company, predicts shipments of smart mobile devices (phones, tablets, etc.) will even outnumber PC shipments by mid-2012.² This kind of growth is putting smart devices into the hands of most shoppers, and is providing retailers new ways to engage with them. Using advanced mobile applications, retailers can deliver relevant information, discounts, and products that meet a consumer's individual preferences—right at the moment they show signs of interest.

Research shows there's a lot at stake for retailers. Globally, mobile shopping is predicted at over \$163 billion in sales or 12 percent of all e-commerce sales in 2010.³ The mobile retail channel is quickly moving from cutting edge to being a primary means of interacting with consumers.

To build sustainable relationships with consumers based on personal preferences and social networks, retailers need innovative cloud services and mobility advances.

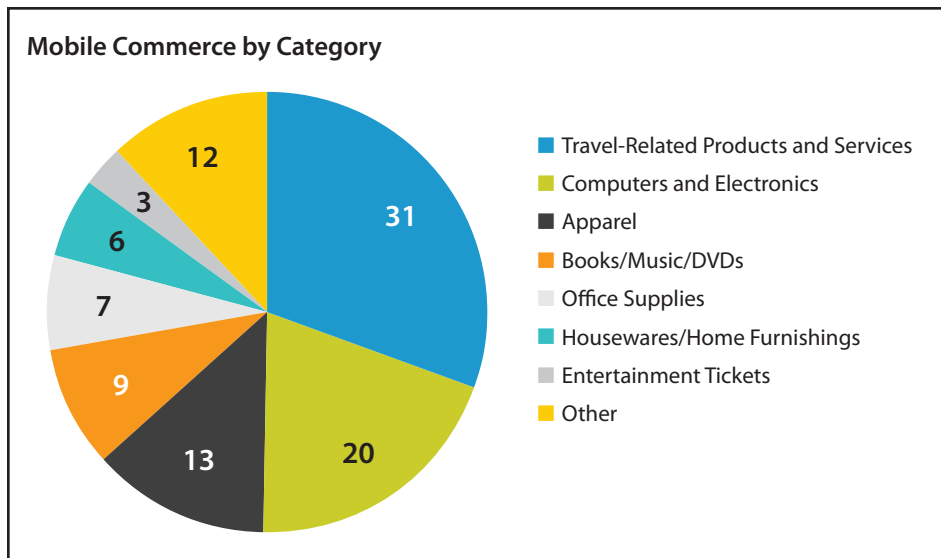


Figure 1. Mobile Marketing Watch, December 2010

Cloud and Mobile Technologies Help Retailers Respond

Yesterday's consumer is disappearing and being quickly replaced by a new generation of end users. The key to the future of consumer engagement—and, ultimately, wallet share—is to meet shoppers where they are. That means delivering a rich, integrated, multimedia experience that is with them 24/7.

The confluence of mobile and cloud technologies will help retailers respond to this next-generation purchaser. Smarter mobile devices, increased wireless bandwidth, and cloud computing work together to provide ready access to information, products, and services from virtually anywhere any time. The further integration of the cloud and mobility with social networking creates a powerful, new platform that allows retailers to engage at any point in the purchasing cycle—from developing product interest to creating product advocates.

IDC predicts that in 2011, the IT industry will start focusing on the build-out and adoption of a new platform shaped by mobility, cloud-based applications and services, and overlays of social business and real-time analytics. The analyst firm suggests that this new era will transform long-held notions about competition and industry leaders, and create a new mainstream for IT."

"What really distinguishes the year ahead is that these disruptive technologies are finally being integrated with each other—cloud with mobile, mobile with social networking, social networking with 'big data' and real-time analytics," says Frank Gens, IDC senior vice president and chief analyst. "As a result, these once-emerging technologies can no longer be invested in, or managed, as sandbox efforts around the edges of the market. Instead, they are rapidly becoming the market itself and must be addressed accordingly."

Retailers who learn to harness this new platform as a way to serve customers will be greatly rewarded. Organizations need a cloud and mobility strategy that lets them deliver a compelling mobile experience that makes it not only easy, but pleasurable, to do business. That strategy will be driven by useful, fun mobile applications, powered by cloud-based technologies, and fuelled by data—lots of data.

The Engine: Mobile Apps and Cloud-based Technologies

With today's buyers embracing the mobile mindset, retailers need to figure out how to be a part of that mindset in a way that is both engaging and responsive. Mobile applications allow retailers to engage with consumers virtually any place and any time, while cloud technologies help retailers quickly respond to changing consumer expectations with an infrastructure that is both flexible and scalable. Combined, they are the engines that support a retailer's connection with a new consumer.

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Mobile Apps

Mobile applications are evolving at an astounding pace. The first apps offered simple functionality, such as an online catalog or access to a scaled-back version of the company website. But, that is quickly changing. Consumers want to manage their daily lives in the context of where they are at the moment and what they are doing. And, they want to have a little fun while they do it.

IDC predicts that over 25 billion apps will be downloaded in 2011, a 15 billion app increase compared with 2010.^{iv} Many of the mobile applications available today benefit the traditional brick-and-mortar stores by improving the in-store experience or driving traffic to stores with discounts. While it's helpful to provide product information and coupons, shoppers are looking for a more useful, integrated experience.

Consumers have sophisticated expectations often set by the retailer's web presence, so it will be important that retailers provide mobile capabilities that meet such needs. It's no longer enough to offer online catalogs optimized for mobile phones. At a minimum, everyone should be able to access the same 'favorites' lists they created online, see peer reviews, track shipments, and order products directly from their phone.

Because there are many apps now competing for attention, an effective mobile commerce strategy should include creating a compelling experience for the consumer. The mobile app must deliver what a user needs now, in just a click or two, using information they've already provided. To be compelling, the experience needs to not only be useful, but personal, fun, and optimized for mobile devices. It's also beneficial to offer a method to cache information so that user data is saved if the consumer moves out of signal coverage.

Cloud-based Technology

The endeavor to be more competitive and responsive to changes in business requires innovation, experimentation, and agility. However, most of today's existing IT infrastructures can hold back the continuous innovation that is needed to meet the next-generation consumer. The speed of implementation and the cost to add capacity often prohibits experimentation.

Cloud-based technology can break down barriers to innovation, significantly reducing the cost and speed of experimentation. It is a natural fit for retail, given the fast pace of change and seasonal demand spikes of the business. Retailers can experiment with new applications and campaigns to reach mobile consumers by turning up or down services as needed, avoiding the expensive and time-consuming capital investments of in-house services.

Specifically, Computing as a Service (CaaS) can help retailers avoid the large cost of capital expenses involved in technology projects and reduce project operational costs and time to delivery. CaaS can offer integrated security, automated provisioning, storage, and automated backup services to support business continuity.

Cloud-based technology also takes advantage of mobile and public networks for connectivity and service delivery. When data, information, and services live in the cloud, they can more easily follow an individual wherever and whenever that information is relevant or most needed. Information no longer needs to reside on the device but can be served up dynamically through any Internet connection. This is especially important as more real-time information is required.

The Fuel: Data

Most companies are well aware that to provide customized and targeted products and services requires a deep analysis of customer data. Unfortunately, many companies today rely solely on limited point-of-sale (POS) data to do this. It's like using a tombstone to review a life lived—the epitaph of a buying decision. POS data only allows retailers to look backward and guess what motivated consumers to buy what they did.

Retailers are rewarded with loyalty when consumers feel they understand and respond to their individual needs and desires with customized content and offers. However, creating a targeted and personalized experience takes more than just sales data. The real power will come from leveraging data from the complete buying cycle—from the moment consumers consider a purchase to the point at which

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Offering compelling services. Building loyalty. What do they mean? They mean using all of the data and information you have to understand what motivates each individual consumer.



they influence other potential shoppers. This phenomenon requires sales data to be augmented with behavioral, demographic, predictive, and sentimental data.

The collection of multichannel customer data is becoming critical. It is important to understand how customers interact with companies, whether it's through mobile phones, web, mail order, or in store. Mobile shopping adds a new twist as buyers may be triggered to make a purchase based on where they are and what they are doing. Retailers will need to understand the location, proximity, context, sequence, and relative influence of buying behaviors. With this data, retailers can build predictive, real-time analytical engines, turning data into information that then can be used to shape future interactions with the purchaser. These activities will create large datasets that may exceed the current in-house capacity for storage and processing power, making the cloud a logical next step.

Powering the Retail Supply Chain

In addition to connecting retailers to consumers, cloud technologies offer significant benefits on the supply-chain side. By paying only for the technology that is needed, the cloud helps control infrastructure costs by dynamically adding capacity and resources on demand. More important, but often difficult to do, the cloud can ease system and data integration and collaboration across the supply chain by offering technology standards and removing the complexity of legacy systems. Integrating systems and suppliers is imperative for effective cross-channel retailing.

Cloud-based services can help retailers meet the supply-chain demands of cross-channel and multi-enterprise retailing by providing access to applications and data across the various retail departments including warehousing, distribution, marketing, finance, and store operations. The cloud also helps facilitate collaboration between partners and suppliers up and down the supply chain by simplifying information sharing and unifying processes.

The benefit of an aligned and cohesive supply chain is the ability to respond to sales trends in real-time by making inventory adjustments to prevent stock-outs. Once systems are integrated and data is easily shared between the retailer—and its distributors and manufacturers—the data can be analyzed and run through predictive models to suggest actions each may need to take.

The benefits of the cloud can be extended with mobile access. Mobile devices bring the supply chain to life with real-time input and access to inventory, shipment status, and sales data. A mobile inventory and sales system operated from the cloud provides the real-time integration and collaboration retailers are looking for with the dynamic system configuration and scalability they require. This lets everyone in the supply chain know what the hottest sellers are or will be, and helps them make inventory and pricing adjustments immediately.

Get Ready: the Future is Here

Mobility and smart devices have changed consumers' experience of the buying cycle. These devices blur the lines between work, entertainment, shopping, gaming, and social networking. Consumers expect to move between these activities and interact in a way that feels seamless. Furthermore, these interactions can no longer be episodic in nature, but must now be persistent and pervasive, based on personal preferences and behaviors. This development has spawned some innovative thinking in cloud services and mobile applications. What was just science fiction yesterday is now today's reality.

Community-of-Interest Apps

Even though Amazon.com is considered one of the premier Internet shopping malls, future virtual shopping malls will not be owned or managed by any one company. Instead, the new virtual shopping malls will be multipurpose mash-ups of company products and services based on a community of interest. This means retailers will need to create partnerships in new ways and think a little differently about how they offer their goods.

A likely place for a multipurpose, community-of-interest app might be a sports venue. It's hard to find a more dedicated community of interest than those at a sporting event. Like-minded fans could use a mobile app that allows them to get directions to the stadium, find open parking spots, locate their seats, view instant replays, participate in fan games, order food and merchandise, and get tickets for the next event. With a little imagination, this model could be extended to many different communities of interest.



Near-Field Communications

Another innovation is near-field communications (NFC), one of the latest wireless technologies to gain traction in the retail space. It provides very short-range (about 10cm), wireless communication between devices and is similar to bar codes and Radio-frequency identification (RFID), but more dynamic. With NFC, shoppers can hold their phone near a tagged item on a store shelf, get information about the product, and then even download coupons.

One of the most recent and perhaps the largest NFC initiative is ISIS™, a joint partnership between Verizon Wireless, AT&T Mobility, and T-Mobile USA. ISIS uses NFC to incorporate payment functionality into a mobile phone. This function creates a mobile wallet that replaces the need to carry cash, credit and debit cards, transit passes, tickets, coupons, and reward cards. The three carriers combined have the ability to enable over 200 million potential consumers between them. As NFC matures, there will be countless possibilities for its use in retail.

Augmented Reality

Augmented reality (AR) allows information to be layered over the physical world. Today, the few available AR mobile apps use the functionality of the in-phone camera to display information over a live view. Nearest Tube, for example, is an app that overlays information about the closest tube, or subway, over a live view of London based on the direction the user is facing. In another example of using AR, a large furniture retailer received a lot of press for its app that allowed furniture images from its catalog to be displayed into a live camera view of the user's room.

In the future, everything in the real world will be indexed and identifiable in the digital environment, forever changing the way people shop. Imagine using a mobile phone pointed at the shirt of a man walking by and having the phone overlay the product information with discounts, the ability to purchase, or just get more information. While AR technology needs to mature and practical applications may still be a few years away, retailers can start preparing today for how they will use this technology.

Final Thoughts

The new mobile consumer will require retailers to explore solutions that give consumers instant access to the tools and information that will shape their buying decisions. Cloud technologies and mobile applications will empower the retail supply chain to respond immediately to changing trends through shared data and processes. Just as the emergence of e-commerce gave retailers who quickly adopted the online shopping model an advantage over those who resisted, cloud-based mobility solutions will create a new group of leaders in retail.

"The retail industry is rapidly evolving," said Ravi Bagal, vice president of retail and distribution for Verizon Business. "Consumers are challenging the industry to adapt to the ways they live and shop today. Supported by emerging technologies, consumers will be more focused than ever on price and convenience."

Consumers have increasingly high expectations for mobile commerce and that demand will outpace the ability of most retailers to deliver solutions. Cloud-based mobility solutions provide the platform to experiment with new ways to meet consumer demand and reach consumers at critical moments in the buying cycle. Pilot programs that enable retailers to understand where and how consumers encounter brand and product information can start retailers on the journey into the mobile marketplace.

What seemed so futuristic just a short time ago is now here, with capabilities like augmented reality and near-field communication. Consumers continue to raise the bar for mobile commerce and expect a rich, integrated experience that meets and even exceeds their needs. It's a new mindset that retailers cannot ignore. To resist would be a failure of the imagination and would fly in the face of a shift in technology relationships that are dominating the buying behaviors of the next-generation consumer.

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