Self-Service Store Integration

Self-service technology can enhance the customer experience, but proper integration is pivotal. Learn how smartly deployed technology can unify the shopping experience while adding new customer touchpoints.

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About the sponsors

IBM Corp. is the industry leader in applying technology in new ways to provide solutions for retail that deliver business results faster for clients. IBM offers a comprehensive portfolio of store-optimized solutions, including checkout, self-service/mobility, loss prevention and systems management. Innovative by design and sustainable for the future, these solutions help clients deliver a smarter shopping experience and run smarter operations.

RetailCustomerExperience.com, operated by Louisville, Ky.-based NetWorld Alliance, is a Web portal devoted to helping retailers differentiate on experience, rather than simply on price. It is founded on the understanding that retail today is fundamentally different from any other time in its history, and staying competitive requires a new, holistic understanding of customers and how they want to shop.

Introduction

By Richard Slawsky
Contributing editor ,
RetailCustomerExperience.com

Today's consumers are more enlightened and empowered than ever, and they are placing increasing demands on retailers to either "get it right" or lose their business.

Helping to drive consumers' behavior today are new technologies that allow shoppers access to near-limitless information about retailer products and services. Shoppers — especially younger Generation Y consumers aged 20 to 30 years — also are increasingly using social media and alternative channels to communicate with and about their retailers.

Consumers now expect on-demand access to the information, products and services they want, and those retailers who deliver what they demand will thrive. Those who don't will fall by the wayside.

Such an attitude is having an impact on retailers. According to "Meeting the Demands of the Smarter Consumer," an in-depth study by the IBM Institute for Business Value, 41 percent of people surveyed have either switched from one primary retailer to another or started purchasing some goods from a secondary retailer during the past year.

Technology is reshaping the store, as well. Kiosks now offer the ability for consumers to easily order specialty items that may not be in the store's inventory and have those items shipped directly to their homes. Coded shelf tags allow consumers to snap a photo of a bar code and instantly have information about a particular product downloaded to their smartphones. Self-checkout units allow consumers to scan and pay for their purchases, allowing retailers to redeploy sales associates to better interact with customers, answering questions and offering additional products and services.

This increase in consumer knowledge and desire to interact in a more personalized manner is forcing retailers to rethink how they deliver on the promise of their brand through various self-service touchpoints — all of which must now be fully integrated.

This research guide, sponsored by IBM, looks at retail in-store technology today, how it's being used and where it may be headed. We would like to thank IBM for allowing us to offer it to you at no cost.

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Chapter 1   Integrating the consumer experience

I f there's one example of how the power of self-service has completely changed how services are delivered to customers, that example would be the airline industry.

Ten years ago, checking luggage and receiving a boarding pass for an airline flight meant snaking through a long line in the terminal. Today, consumers take for granted the ability to print boarding passes from their home computer and check their bags via a kiosk. Self-service became a part of the airline industry so quickly and easily that it's difficult to imagine traveling without it.

That same level of convenience, delivered by technology, is quickly making its way into retail.

"Consumers want to complete transactions in faster and more convenient ways," said Norma Wolcott, business line executive for self-service with Armonk, N.Y.-based IBM Corp. "In today's hectic environment, time and energy are valued commodities. Studies show that, on average, four minutes of waiting in line is all it takes for consumer satisfaction levels to drop rapidly."

IBM has more than 20 years of experience in self-service and kiosk solutions, with extensive self-service deployments worldwide. IBM's self-service hardware offerings include intuitive, easy-to-use retail Self Checkout solutions; compact AnyPlace Kiosks that deliver a dynamic interactive customer experience; and the Personal Shopping Assistant — the IBM Mobile Tablet for Retail. In addition, IBM's service organizations offer software,

The airline industry has embraced self-service, and consumers have responded favorably. Now, retailers also are beginning to integrate self-service technology.

middleware and systems management solutions as well as a full breadth of global services and deployment capabilities.

According to the 2009 Self-Service Consumer Survey, conducted by the Self-Service and Kiosk Association (now the Digital Screenmedia Association), the top three reasons why consumers choose to use self-service are that it's faster, it's more convenient and they simply prefer the experience.

Self-service is remaking retail's physical environment as well, opening new opportunities for business owners and reshaping store design.

> *On average, four minutes of waiting in line is all it takes for consumer satisfaction levels to drop rapidly.*

Consider, for example, the convenience store with its combination of fuel pumps and a miniature grocery store. Years ago, consumers pumped their gas and came inside to pay. Store owners made little profit from fuel, instead relying on the sale of candy bars, cigarettes or the occasional loaf of bread to pay the bills.

With the advent of pay-at-the-pump, however, consumers had little reason to venture inside the store. To meet the challenge of changing times, store owners found it necessary to adapt.

"If you take a look at many of these gas and convenience stores now, they have become a destination for different specialty offerings," said Bruce Kopp, senior vice president of retail sales with Sunnyvale, Calif.-based Fujitsu America, a provider of IT products and services. "Look at how many of these convenience stores now have a Domino's or a Subway attached to them."

The drivers

The primary channel through which retailers today are delivering self-service is via a kiosk-based application. Modeled on the ubiquitous ATM, kiosks offer services ranging from self-checkout, information delivery, gift registry, photo printing or the "endless aisle," where consumers can order items not in the store's inventory and have them delivered to their homes.

"The kiosk solution allows for an unlimited product range inside 4 square feet," said Chris Peter, project manager with Toronto-based St. Clair Interactive, a provider of self-service technology. "When properly

Benefits of self-service in retail

➢ Increased customer satisfaction

➢ Reduced overhead

➢ Increased average basket size

➢ Targeted advertising of specific products or product categories

➢ Enhanced customer service from a redistributed labor force

designed and deployed, this can lead to increased customer satisfaction as well as reduced overhead and increased average basket size for the retailers."

One of the largest drivers of self-service kiosk growth is the fact that retailers are seeing real, quantifiable returns on investment for self-service deployments, says Ken Duffy, offering marketing manager for IBM's Retail Store Solutions.

"Many customer-facing kiosks actually drive increased revenues and sales, in some cases 30 percent or more," Duffy said.

"For example, we have seen deli kiosks that drive 35 percent more spend per order from customers using the kiosk compared to customers ordering at the counter," he said. "We have seen guided sales kiosks targeting a specific product or product category that drove a 20 percent incremental increase or more in sales."

Although the retailer may realize a benefit in terms of labor savings through the deployment of such products, that's a

small aspect of the move to self-service technology.

"Self-service systems are very convenient and easy to use, and that convenience is translated into increased customer satisfaction," Duffy said. "Yes, you save some labor, but often that labor is redistributed to customer service or restocking or whatever."

What retailers need to realize, Kopp says, is that it is the customers themselves who are demanding self-service.

"There are some supermarkets that have resisted moving to self-checkout, but even those holdouts are now putting it in," he said. "[Rochester, N.Y.-based supermarket chain] Wegman's is a prime example. For years they resisted self-service by saying they were a full-service store, but they are realizing that full service can mean customer satisfaction by letting them do it themselves."

The demographics

It might be easy to draw the conclusion that the primary adopters of self-service technology are members of the younger generation.

According to IBM's "Meeting the Demands of the Smarter Consumer" study, Generation Y respondents (those aged 20 to 30 years) are the most willing to use multiple technologies and alternative channels. They also are the most likely to visit a retailer's social networking site.

And the 2009 Self-Service Consumer Survey revealed that of survey respondents

35 years old or younger, 91 percent said they had used a self-checkout device within the previous six months, 88 percent had used a price scanner in a store, 45 percent had used a photo kiosk and 44 percent had used a gift registry kiosk.

But that's not the whole picture. For those survey respondents aged 36 to 50 years, 85 percent had used a self-checkout device within the previous six months, and 89 percent had used a price scanner.

Of those 51 years and older, 82 percent had used a self-checkout device in the previous six months, while 80 percent said they used a price scanner.

"I think self-checkout, especially, is an all-ages phenomenon," Wolcott said.

"There are some studies that indicate older people are more likely to use a self-checkout device because they want to handle their own merchandise," she said. "They want their fruit handled with care instead of having it banged around like airline luggage. They take their time, they watch everything and they are a slower shopper in the sense that they are not rushing in and out. They are in the store two and three times a week because they don't buy in huge quantities."

> *82 percent of survey respondents aged 51 years and older had used a self-checkout device in the previous six months.*
>
> Source: 2009 Self-Service Consumer Survey

Obstacles to adoption

Despite the obvious business case for self-service, however, there are a few concerns that may be hampering widespread adoption. One of those involves integrating self-service technology with a store's existing point-of-sale and back-office systems.

"With the possible exception of Walmart, because they are really home-grown, most retailers have grown through acquisition, and so they have all of these different technologies," said Jeff Weidauer, vice president of marketing for Little Rock, Ark.-based Vestcom, a provider of shelf-edge solutions for retailers.

"Companies often have lots of back-end technologies that are different and don't necessarily talk to each other," he said. "There is going to be some pain in getting all of those things to work together."

The days of individual stores, or individual devices, operating as stand-alone devices are over, experts say. Retailers who want to incorporate self-service technology will need to adapt their infrastructure to gain greater control of in-store systems to maximize sales and reduce operational costs.

"It is critical that retailers manage self-checkout from the enterprise and store levels, to automatically distribute software updates down to the lane and to track hardware and software levels and much more," Wolcott said. "This allows self-checkout to become a more intelligent part of store systems to ensure that these self-service consumer-facing devices stay up and available at all times."

Kiosk-based self-service

As mentioned in the previous chapter, much of what's happening in retail self-service is happening at the kiosk.

According to research by Rockville, Md.-based Summit Research Associates, the worldwide base of installed kiosks reached 1.82 million in 2008 and was expected to grow slightly to 1.85 million by the end of 2009. Summit forecasts that number will grow to 1.9 million by the end of 2010 and to 2 million in 2011.

Summit regularly issues a report titled "Kiosks and Interactive Technology — Global Statistics and Trends," which analyzes the state of the kiosk industry. The latest report, released in September 2009, blamed economic conditions for the slowdown in growth.

"We have seen a significant change in the formerly impressive growth in projects across several market sectors," said Summit's founder, Francie Mendelsohn, in the report. "The state of the industry can be characterized as being in somewhat of a 'holding pattern.'"

But Mendelsohn says the future is looking healthier for the kiosk industry. She predicts a return to a normalized level of deployments and pilot projects sometime in 2010.

In the retail sector, Summit reports that an increasing number of auto sales establishments are using product-information kiosks, as well as a number of retailers testing "sommelier-in-a-box" wine-information kiosks.

The popularity of self-service devices

In the 2009 Self-Service Consumer Survey, more than 1,000 consumers were asked which self-service devices they had used in the previous six months. They were able to select as many as they desired. Here are the results:

ATM	86 percent
Price scanner in a store	85 percent
Self-checkout lane at a supermarket or retail store	85 percent
Airline check-in kiosk	43 percent
Gift-registry kiosk	33 percent
Photo kiosk	33 percent
Ticketing kiosk (movies, theater, sporting events)	27 percent
Bill-payment kiosk	13 percent
Hotel/motel check-in/check-out kiosk	13 percent
Product-information kiosk (other than price)	13 percent
Wayfinding kiosk	12 percent
Job-application kiosk	11 percent
Car-rental kiosk	7 percent
Digital music-download kiosk	5 percent
Ordering/payment kiosk in a restaurant	5 percent

The report also examines the quick-service restaurant segment and its hesitancy to adopt kiosk technology. Mendelsohn outlines several contributing factors to this trend, including a lack of effective advanced marketing and employee education, failure to integrate self-service systems with a store's POS network and software platforms that are too complicated.

According to IBM's Ken Duffy, growth in self-service kiosk deployments not only has been improving, it has been explosive.

"The recent economic environment absolutely had a major effect on the self-service industry, but we have now had multiple successive quarters with record-breaking numbers, not just in terms of year-over-year growth, but in actual kiosk units deployed worldwide across retail sub-segments," he said.

In most retail outlets, the gateway to self-service is through self-checkout.

Although cashiered lanes in retail stores currently outnumber lanes outfitted with self-service devices, that's likely to flip in the next few years, says Fujitsu America's Kopp.

"Today it is about two-thirds/one-third in most stores, give or take," Kopp said. "More and more companies are moving to having fewer actual cashiers. You are always going to need a few because things come up and you need a service desk, and there are some people who just don't like self-checkout and never will, but I do think you are going to see self-checkout becoming the dominant front-end mechanism in retail."

On virtually a daily basis, however, enterprising retailers are finding new ways to incorporate kiosk technology into their businesses.

"In Canada, the Metro Grocery chain has a cool application where they are printing out recipes from the kiosk," said Bill Phelps, business development manager for retail with Lincolnshire, Ill.-based Zebra Technologies, a provider of technology solutions, including on-demand digital printing and automatic identification solutions for businesses.

"They have a second screen above the main kiosk screen which can be used to run digital content," he said. "They've actually filmed people cooking those recipes, so as you are walking by you can actually see someone making a recipe, and that leads you to go over and print out that recipe and try it yourself."

Several retailers currently are testing a variation of self-checkout where a cashier helps the customer scan her items, then issues a bar-coded receipt. The customer then takes that receipt to a self-service pay station.

"An experienced person operating the scanner can do it much faster than a novice doing it once a week," Kopp said.

"Those pay stations are never touched by the store," he said. "The banks come in and take out any cash, so it is a real benefit in labor savings and security."

Mobility

If there's one thing that consumers in a retail environment have in common, it's that nearly all of them are carrying mobile phones.

As of the beginning of 2010, nearly 86 percent of Americans subscribe to mobile phone service, according to CTIA–The Wireless Association. Exclude from the calculation those 5 years old or younger, experts say, and that number rises to nearly 99 percent.

It's a safe bet that virtually everyone in the United States will own a mobile phone within the next few years.

Retailers are finding a variety of ways to leverage those mobile phones to increase revenue. For example, the popularity of Apple's iPhone created a market for an endless supply of "apps" designed to aid consumers with the shopping experience.

"From a customer perspective, the best thing about an app versus a traditional website is that you can interact with the business in new ways that were previously impossible," said Aron Ezra, CEO of San Francisco-based MacroView Labs, a provider of mobile software. "If you just want directions to the business, the app will give you GPS assistance to help you find your way, drop a pin down to remember where you parked and more."

Consumers also can make purchases or reservations on the app, talk to other consumers or the business itself, get news updates, vote on what they want the business to do, get pricing and product quality information, interact with that

Smartphone technology is allowing consumers to interact with retailers in new ways.

business' social media info and shop for products.

"From a business owner's perspective, this technology is a huge win-win," Ezra said.

"Not only do consumers love using it, but it becomes a very profitable new revenue channel and source of great PR," he said. "A well-deployed free app gives the business a new mobile point of sale through which to sell merchandise, tickets and digital content, or generate additional revenue through sponsorships and partnerships. Retailers also can get terrific feedback from customers 24/7 and can get very powerful analytics data showing them exactly how their customers are using the app and interacting with their products."

One of the most interesting mobile phone applications on the horizon is something known as "augmented reality."

Augmented reality in a retail environment typically combines a smartphone's camera

with shelf-mounted barcodes. Snap a photo of the barcode and an application on the phone takes the consumer to a website that provides more information about the product.

"Consumers want to be able to do price research and find out where the best price is, but more than that, they want to find out things like country of origin," Weidauer said. "People are coming into the store with an expectation that they are going to be able to find more information."

And one of the most beneficial aspects of mobile in retail, Weidauer says, is that not only are consumers driving demand for the technology, but they're footing much of the bill.

"The nice part about tapping into people's mobile devices is that they have already made the hardware investment, so there is not the up-front Capex cost you would face if you were installing, say, a large-format screen or a kiosk," he said. "There is going to be a little bit of investment needed in the back-end, but that is investment that retailers are undertaking anyway."

RFID

One technology that hasn't yet lived up to its potential is radio frequency identification, or RFID. With RFID, tags mounted on each product in a store enable radio scanners to sense information about that product.

Nearly everyone has heard predictions of being able to fill a shopping cart and walk out the door while an in-store scanner reads information from tags on each item, calculates a total and automatically charges the consumer's bank account by way of a chip embedded in her mobile phone or credit card.

Although the technology is readily available, the stumbling block is determining who, exactly, will foot the bill for its deployment.

"It's all about getting the price of the implementation down; the price of the tags and the price of the hardware, and doing that at a vendor level," Phelps said. "All of your vendors have to put those RFID tags on there unless you plan on doing that yourself at the distribution center. That gets awfully expensive."

Case study: Kiosk and point-of-sale units at SGM empower the customer with self-service options

SGM Distribuzione S.r.l. distributes household appliances and electronic equipment to nearly 70 stores. Based in Forlì, Italy, the company employs more than 1,500 workers and reported revenues of more than US$690 million in 2008.

The need

For electronics retailers, competing on price is limiting. For SGM Distribuzione, sustainable differentiation means providing exceptional customer service in every interaction, whenever and wherever they occur. To unify the customer experience across channels, increase customer loyalty and satisfaction and reduce costs, SGM needed technology that could automatically sense, measure and respond to customers in the buying experience.

The solution

IBM Global Business Services provided the strategic framework to develop a retail store format that would unify and optimize the buyer experience. At the core is a point-of-sale system using the IBM Anyplace Kiosk family of products with the IBM Anyplace POS Hub feature to automate pricing, offer personalized promotions and digital coupons, empower the customer with self-service options and deliver the information SGM needs to continuously improve performance.

What makes the solution smarter

➤ Facilitates greater customer satisfaction and loyalty by enabling customers to browse, research and shop how and when they want

➤ Increases the availability of information, so marketing activities can be optimized based on what customers are doing in the store and online

➤ Delivers the tools needed to reduce costs by automating product pricing and providing customer self-service kiosks

Chapter 3   Best practices

Lessons learned

When planning a self-service project, retailers need to start by asking themselves a few simple questions: What do they hope to accomplish, and by what criteria will they measure the success or failure of the project?

"If you are going to try and save money, that is one thing," said IBM's Wolcott. "If you are going to try and speed checkout, that is another and if you are trying to improve customer satisfaction, that is another."

When it comes to technology, too often retailers try to change the shopper's behavior. Approaching self-service with such an attitude is likely to spell failure.

"As you are thinking of how technology can help the shopping experience, you have to start with the shopper and look at how they shop today," said Vescom's Weidauer. "Fit the technology in to what shoppers are doing already and provide value to that."

Once the decision is made to deploy a self-service project, it's time to call in a partner who has experience in the self-service industry and can help a retailer achieve its goals.

Issues to consider before embarking on self-service integration

Placement. It would seem like common sense, but having the kiosk in the right place, with the right signage alerting customers to the kiosk, is extremely important.

Touch screen-optimized user interface. Customers often take an existing application or website and stick it on a touch screen. These fail 100 percent of the time. The user interface can use the same logos, color schemes, imagery, etc. from existing assets, but it must be optimized for a touch screen interface.

Integration. This means physical integration into the store or integration into existing databases/back-end systems. Failure to do so is disastrous.

Preparing for growth. Whether or not a retailer intends to incorporate mobile devices, websites, etc., it needs to plan for it up front so it doesn't have to duplicate its efforts.

Employee training. There have been great examples of employee training (fast food kiosks, airline kiosks) and examples of terrible employee training (car rental kiosks, bill pay kiosks at mobile phone stores). If employees don't understand the value of the kiosk to their role, if they feel threatened by the kiosk or if they are competing with the kiosk for commissions, then the kiosk is doomed to failure.

The importance of quality. Lots of retailers go with inexpensive PCs or low-cost touch screens for their kiosks and they end up paying the price down the road. Only 30 percent of the total cost of ownership comes from the up-front acquisition cost. Retailers need to use hardware platforms that are designed to withstand the harsh retail environment and that are both reliable and durable.

Source: IBM Corp.

"That partner can help set up the metrics and design a kiosk that is going to do that job for them," said Phelps, from Zebra Technologies.

It's important not to try to pinch pennies by buying equipment that's not designed to handle the rigors of constant use, Phelps says. While it's tempting to save money up front, doing so could end up sabotaging the entire effort in the long run.

"It is understandable that someone would want to go on the cheap because they are concerned about ROI; this is a new application for them and they aren't sure if they are going to get their money back," Phelps said. "The problem with going cheap with self-service is that it is going to ultimately fail because the hardware isn't holding up."

Even though it could be a great application, if the printer is always jamming or the keyboard is sticking or other equipment glitches are occurring, the self-service device will be a failure, he says.

"The customer will go to the kiosk once," Phelps said. "If it's down, they'll come back a second time. If it's down a second time, they won't come back again. Reliability is extremely important in a self-service device."

After that application is deployed, it's important to work with shoppers to help them become comfortable with the new technology. If they aren't comfortable, they'll become frustrated.

"With self-checkout, for example, you have to have very well-trained associates who not only can direct people to the units but also can assist them through the process until you have a critical mass of customers," Fujitsu America's Kopp said.

"Unlike self-service at a fuel station where you only have one thing to do, you may be scanning things such as fruits and vegetables that may not have a tag on them, so there are a lot more avenues of self-checkout than in a non-fuel environment," he said. "We have had a tendency over the years to think that we can just throw it in there and people will gravitate to it and use it."

The not-so-successful applications

Despite the rosy outlook for self-service in retail, there have been a few applications that just didn't make the grade.

Some failed simply because the retailer didn't spend enough time working to educate consumers on how the technology was meant to be used.

Photo from matsuyuki

Biometrics at the checkout seemed like a good idea, but concerns about security and the need for 100 percent up-time doomed the concept.

"I have seen situations where it is either too complex or not enough direction given, either through digital signage or some other method of communication, what is required of the customer to go through a self-checkout," said Bill Vetter, general manager/senior vice president of sales with Bay Shore, N.Y.-based Lawrence Metal Products.

Lawrence, part of the U.K.-based Tensator Group, designs queue management systems for retail stores.

And belted self-checkout applications haven't lived up to expectations either, Fujitsu America's Kopp says.

"Those were done in the early days of self-checkout, and what it was was an adaptation of the traditional cashiered lane," Kopp said. "The problem with it was that No. 1, it is a little bit clunky and slow, and No. 2, the mechanisms to cover weight and recognition in a belt are extremely complex in terms of the algorithms as well as the maintenance. People just throw things on them and they get out of kilter, no matter how durable or ruggedized the unit is."

Another application that failed to live up to expectations, Kopp says, was the store wayfinding kiosk.

"It was touted as the store entry unit that would show you where to go if you wanted to go to a particular department," Kopp said.

"As far as I know I have not seen one that was effective chain-wide," he said. "People know what they want for the most part, and if they have shopped there regularly they know where to go. It is one of those things that sounds good but I don't know if it has ever really panned out."

One of the biggest self-service flops, Weidauer says, was biometrics at the checkout.

"I like to think of it as an answer to a question that no one asked," he said.

"The promise was that you could come into the store and not need your wallet or your purse, and you could go through the checkout and swipe your finger, and it would all be tied into your financial information," Weidauer said. "There were a couple of issues with that. No. 1, people are very sketchy about giving up their fingerprints even though there was a lot of promotion that it was really a digitized image and not your fingerprint. And No. 2, it requires 100 percent up-time. If a shopper comes in one time without her purse and she is expecting that to work and it doesn't, then you've created a bigger problem."

Case study: Kiosks help shorten lines at the deli

Quincy, Mass.-based Modiv Media is finding success with its DeliVision kiosk, a grocery-store deli queue management system.

The solution currently is deployed in about 475 Giant, Landover and Stop & Shop food stores in the Northeast.

DeliVision users place their order, which is then submitted to the deli. Customers can then receive a printed ticket listing their order, and overhead digital displays show which order is currently being served and the estimated wait time.

"A lot of people have tried putting in deli kiosks with varying success, but what we found was that deli orders were not being integrated with the counter orders," said Matt Volpi, director of product management for Modiv Media.

"You would end up with people placing orders at the kiosk and having those orders be ignored," he said. "With the DeliVision, they all go into a first-in, first-out order management system. The associates have touch screens behind the counter, and they hit their names and it tells them fill the next order."

The kiosks are outfitted to accept loyalty cards, and loyalty customers are presented with the option of repeating their previous order or entering a new order.

The kiosks can generate reports ranging from average wait times to products ordered, all of which can be accessed from the corporate office.

Depending on the layout of each particular store, kiosks are located in the deli area as well as near the front entrance. Customers can place their deli order as they enter the store, complete their shopping and pick up their completed order on the way to the register.

In most cases, about 20 percent of deli orders are placed at the kiosk. In some stores, though, the percentage of deli orders placed at the kiosk is much higher, Volpi says.

"A lot of it depends on how busy the overall deli is, because if you have a slow deli most people are just going to walk up to the counter," he said. "In other areas, where people are more technology or self-service savvy, or they just do a really high volume, we see usage as high as 60 percent."

According to the 2009 Self-Service Consumer Survey, 83 percent of respondents said they would be "somewhat more" or "much more" likely to use self-service technology now than they did in the previous five years. Only 2 percent said they used self-service technology "less" or "much less."

And 78 percent of respondents said they would use such technology "somewhat more" or "much more" within the next five years. Again, only 2 percent said they expected to use self-service "less" or "much less" in the future.

Clearly, self-service is here to stay.

"I see more and more retailers putting their toe in the water and emphasizing things like self-checkout as a larger priority to the store," said Lawrence Metal Product's Vetter. "They are dedicating more queues and more registers to self-scan."

And in the past few years, retail giants Walmart and Kohl's have launched initiatives to deploy gift registry and "endless aisle" kiosks in their stores.

"When Walmart and Kohl's do it, it is just a matter of time before it filters down to everyone else," said Zebra Technologies' Phelps. "We're seeing this more and more."

Mobile applications are projected to continue to become more popular, although there is plenty of room for growth. According to "The 2010 Holiday Marketer: Benchmark and Trend Report," produced by Experian Marketing Services, the percentage of consumers who purchase products via their mobile phones is projected to grow from 10 percent in 2009 to 13 percent in 2010.

The percentage of consumers who use their phone to check prices and research products is growing as well. In 2010, 22

In five years, do you believe you will use self-service devices more or less than you do now?

Somewhat more 42%
Much more 37%
No difference 20%
Somewhat less 1%
Much less 1%
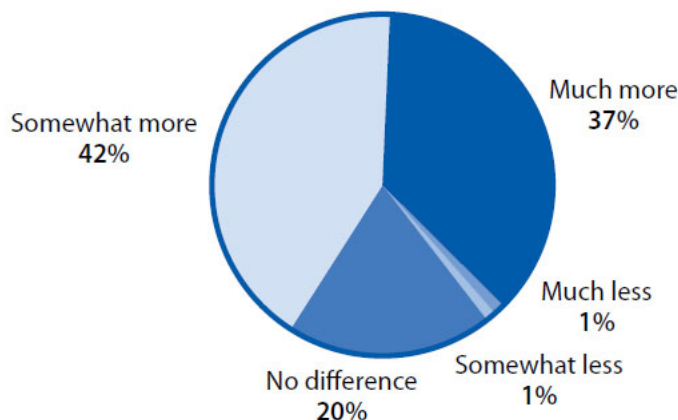
According to the 2009 Self-Service Consumer Survey, 78 percent of respondents plan on using self-service technology even more in the next five years.

percent of consumers are using their phones to check prices, according to the report, compared with just 16 percent in 2009, while 21 percent use their phones to research products, compared with 16 percent the previous year.

Social media also is expected to play an ever-increasing role in shopping decisions as retailers use Facebook and Twitter as another channel to deliver messages to consumers.

"One of the fastest-growing segments of social media users are 30-something women with kids," said Vestcom's Weidauer. "They are the target shopper and the target customer of virtually every supermarket today."

And as the retail world makes increasing use of digital screens to assist consumers, retailers are going to become savvier in the way they communicate with those customers. Websites such as Amazon.com already make use of customers' personal information to make recommendations based on past purchases, and such techniques are likely to make their way to the brick-and-mortar store.

Customers with infants, for example, are likely to see an ad for diapers on the kiosk screen, while pet owners will see an ad for dog food.

"For me, the biggest driver when I think about engaging shoppers can be boiled down to a single word, and that is targeting," Weidauer said. "The shopping experience is going to become more and more targeted and more and more based on our actions, our activities and our history."

> *In 2010, 22 percent of consumers are using their phones to check prices, compared with just 16 percent in 2009.*
> Source: Experian Marketing Services

The marketplace will continue to see growth in both mobile and kiosk technologies, says IBM's Duffy, but how retailers deploy those technologies will have to change.

"What I think we're going to see is an evolution," he said.

"Up until now, we've seen what I refer to as the 'airline syndrome' of self-service where companies take self-service technology and shove it into existing space like airlines have done," Duffy said. "What we're seeing now, however, are retailers who design or redesign the entire layout of the store around digital technology as opposed to shoving the technology into the existing store environment."

But even with changes in physical layout, Duffy says the real keys to success are found under the covers.

"With the advent of e-commerce we used to talk about multichannel this and multichannel that," he said. "Well, multichannel is here. Most retailers have a website, are experimenting with kiosks and mobile apps and may have some sort of self-checkout. The key now is cross-channel — how are retailers integrating all these different channels to deliver a consistent experience for consumers. That is the real goal and where retailers will be able to really transform how they interact with customers."