POINT-OF-SALE SYSTEMS: GOING MOBILE

Increased sales, improved customer service and greater productivity lead organizations to invest in anytime, anywhere point-of-sale systems.

Retailers know it, so do restaurant managers, field service reps and train conductors: *There's a disruptive force at play in the use of point-of-sale systems.*

Once fixed POS terminals, where consumers paid for their goods and services while a clerk at the counter completed the transaction with them, are giving way to mobile POS or mPOS.

The forces shaking POS foundations are smartphones and tablets, both industrial-grade for professional use and consumer-class devices. Sales associates and service reps now use portable gear to communicate wirelessly with transaction systems and beyond — to inventory management and financial systems, as well as to any relevant mobile applications available.

Mobility lets sales and customer service staffs quickly answer questions about price and availability, accurately discuss product and service options, access reviews and recommendations from third-party experts and accept payments to close a sale.

The combination of information access and convenience can forge closer relationships with customers and boost revenues for businesses.

Interest Across Industries

Retail is leading the mPOS charge, fueled by companies that want their physical stores to stay relevant in the age of e-commerce.

"Make no mistake, this is a major trend," says Ray Carlin, vice president and general manager for retail solutions at HP. "Some retailers are reporting that by better serving customers they are increasing sales and average order sizes. And it's important to recognize that mobility is not just for the biggest organizations. It's beneficial for large and small organizations alike."

The mobile point-of-sale solution allows for a non-wired, point-of-purchase payment of products or services, offering a paper or electronic receipt. In addition, such systems can be used to streamline a variety of processes (i.e., line-busting, order-taking and up-selling, bank transactions, management functions, delivery applications, traffic ticketing and much more).

"POS is not a 'point' anymore," says Ed Weiser, principal consultant for retail solutions at Motorola. "There isn't always a set physical location where interactions between customers and sales people take place, which is making POS part of the overall shopping experience."
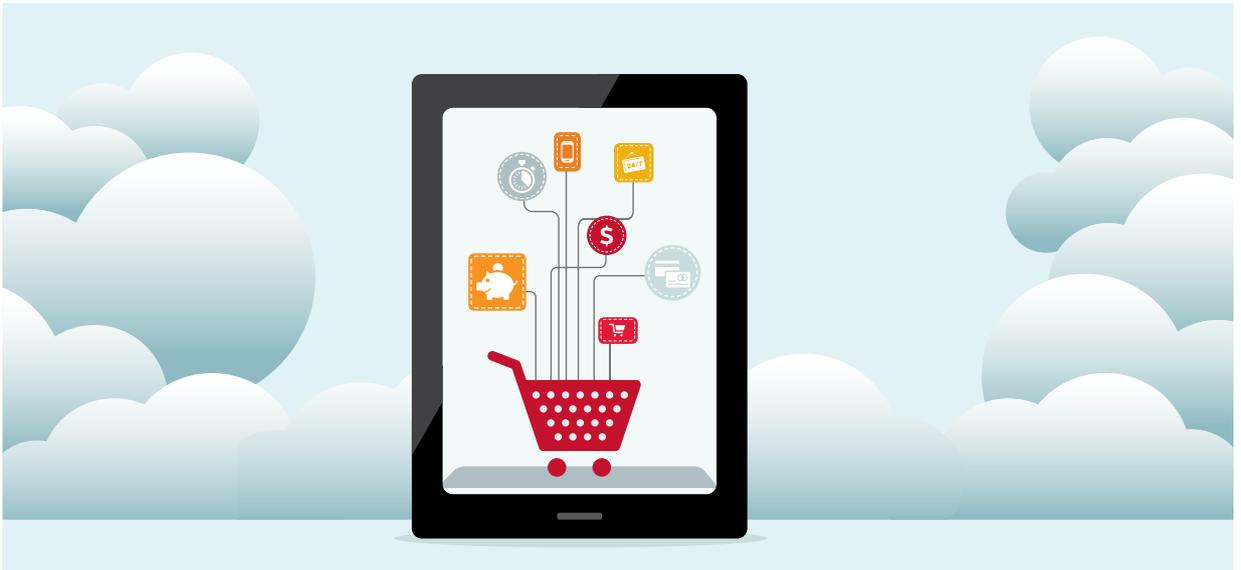
New data shows the extent of mPOS adoption. In a recent survey by VDC Research Group, 54 percent

MORE THAN 50%

The percentage of transactions that retailers expect customers to do via self-checkout on mobile devices by 2017

SOURCE: *Retail Vision Survey*, Motorola Solutions, May 2012

of retailers reported that they are currently supporting mPOS, and 31 percent are planning to implement it in the near future, says Eric Klein, senior analyst for mobile software.

"For the past two years, we've seen people in retail conducting small pilots," says Michelle Tinsley, director of transactional retail for Intel's Retail Solutions Division. "Now, this interest is reaching critical mass."

But retail is not the only sector that's keen on mPOS. New implementations are coming to the transportation industry too, where digitally empowered train conductors in Europe are selling tickets via their mobile devices, for instance. At hotels around the world, agents roam lobbies to check-in guests and send them to their rooms without a stop at registration desks.

Field service personnel are capturing orders, scheduling follow-up visits and taking payments armed with mobile devices. Diners at mPOS-powered restaurants are ordering meals using tablets, playing game apps while their food is being prepared and then paying their tabs via these same devices before they leave.

So what are the drivers most critical to mPOS expansion? Here are the business truths about this technology implementation:

Use of mPOS empowers sales associates: Tablets and smartphones give salespeople anytime, anywhere access to data about product availability, pricing and third-party reviews and recommendations. This creates what some retail industry experts call "endless aisles," where if a customer needs a particular size and color sweater that isn't available in an individual store, for example, an associate can locate the desired item on the company's website or in a different facility.

Handheld devices enable line-busting: Store employees can complete transactions on the fly when queues at checkout counters grow too large, which helps keep customers satisfied with their in-store experience.

The technology provides an antidote to show-rooming: A lingering fear among retailers is that their physical locations will become venues where consumers examine products first hand, but then shop the web for the lowest prices at competitors. A mPOS approach, combined with an omni-channel sales strategy that integrates brick-and-mortar facilities, e-commerce sites and call centers, means that associates can negotiate and close deals before customers buy elsewhere.

Mobility encourages new and bigger sales: The use of mPOS can spur additional sales through what Weiser calls "creeping commitment." As they're advising customers on a new purchase, associates can suggest additional items for the shopping basket. The upselling of extras might include an extended product warranty for a household appliance, new cables for an electronic device or a leather handbag that complements a new dress.

Security can be increased: Because added security may be required for implementation, retailers may need to beef-up security guidelines.

Organizations can manage costs closely: Store layouts often include multiple checkout lanes for peak traffic periods that remain idle during less-busy times. Store managers can avoid the expense of implementing excess hard-wired registers — and their associated hardware, software and retail space — with the right mobile strategy.

Floor space can be freed up: Mobile POS can help retailers reclaim floor space that was previously used for cash registers.

Mobility enhances marketing activities: As associates use mobile hardware to have close interactions with customers, they create opportunities to collect data about buying preferences, service needs and contact information for future communication. When retailers combine this data with sophisticated analytics, they can

develop detailed profiles of their most valuable customers and strategies for staying in close contact with them.

Key Components

When assembling a mPOS solution, IT administrators should first focus on the mobile devices themselves. End-user hardware comes in two chief form factors — smartphones and tablets — each serving different use cases.

"We joke that it depends on the size of their pockets when it comes to which form factor people choose," Tinsley says. "If they're an associate at a home store and wear an apron with large pockets, they typically want a bigger screen, tablet–sized device. If they work for a specialty retailer, such as a jeweler or clothing store, they'll likely prefer a smaller model so they can put it away and have two hands free when necessary."

A CHECKLIST FOR mPOS SUCCESS

✓ Develop an overall strategy that identifies goals, requirements and budget concerns.

✓ Assess your existing IT environment, including the wireless infrastructure, to identify technology gaps.

✓ Conduct detailed evaluations of potential mobile POS solutions.

✓ Run a pilot project as part of a larger proof of concept.

✓ Procure, configure and deploy the full solution.

✓ Perform ongoing assessments to document benefits, costs and service problems, so that you can address any bugs and create a regular improvement cycle.

Examples of tablets for mPOS solutions include the HP ElitePad, a commercial–grade device that runs Microsoft Windows 8 and offers a 10–inch multitouch display. It can slip into a new jacket option that further enhances the tablet's durability and provides a barcode and magnetic–stripe reader, the latter for completing payment card transactions. The ElitePad is designed to work easily with Windows–based POS applications, which run natively on the tablet.

"This gives retailers the ability to fully integrate the device into a single software platform that is easier for the IT department to deploy and support," Carlin says. "Other approaches require retailers to run a separate mobile POS application that must be interfaced with the main solution."

The Motorola ET1 Enterprise Tablet runs the Android operating system with proprietary enhancements for better security, device management and data capture support. It uses a 7–inch Gorilla Glass Display and supports Motorola's RhoMobile Suite developer tools for deploying apps across iOS, Android and Windows OSs.

In addition to size, retailers must also choose between industrial–grade and consumer–class devices. The industrial hardware offers tighter security, including support for payment–processing protocols developed by the PCI Security Standards Council. Some hardware solutions encrypt data as the card reader captures credit–card information from the magnetic stripe.

Many commercial units also are built to resist damage after being dropped and come with replaceable batteries. "If the battery dies when the evening rush is starting, you may not have time to charge a unit and battery replacement is the best option," Weiser says.

For these reasons, ruggedized devices have so far ruled the mPOS market, but that may be changing. More than 67 percent of retailers say they are considering non–rugged mobile units for next–generation mPOS solutions, says Klein at VDC Research.

"The decision boils down to the cost benefit companies see with consumer mobile platforms, which are much cheaper than ruggedized devices," he says. VDC Research found price was the top selection criteria for retailers evaluating mobile devices.

Even so, the lure of ruggedized hardware may remain strong. This is because the second most important set of criteria are quality and reliability — two characteristics that play into the success of industrial–strength equipment.

Technologies that function behind the scenes are also essential for mPOS success. Most notably are the POS applications for powering transactions and providing access to product data.

Cloud–based mPOS solutions offer a number of advantages, including the cost savings from avoiding capital expenditures for server and storage infrastructure upgrades. Other benefits include the ability of staff members to access data anywhere there's an Internet connection.

The latest versions of POS software, whether designed for on–premises implementations or the cloud, include mobile capabilities. But industry veterans say a large number of retailers still run legacy programs that may require custom interfaces and perhaps middleware to help them communicate easily with mobile devices.
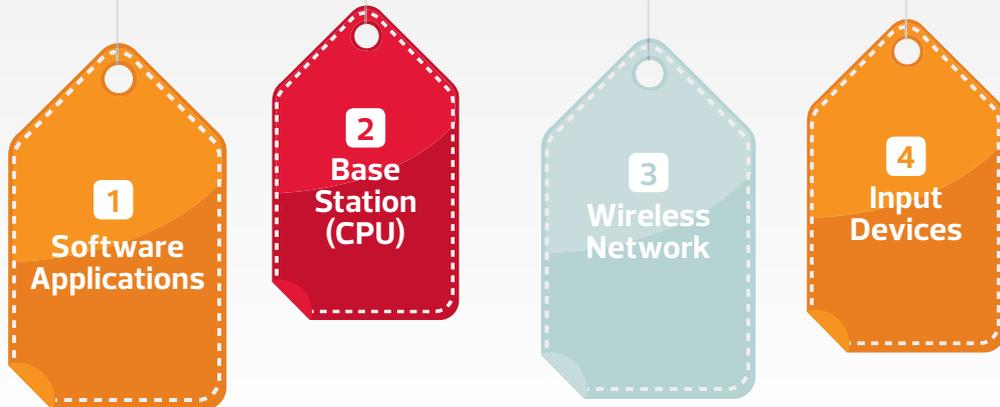
"POS applications may not be written to interact with a mobile device; the software thinks it's talking to a regular register," Weiser says. "The middleware knows what the device is and its capabilities, and knows what the POS server application is expecting."

WHAT COMPRISES A MOBILE POS SOLUTION?

Effective mPOS systems require multiple integrated components and applications, such as:

1 Software Applications

2 Base Station (CPU)

3 Wireless Network

4 Input Devices

Base stations are also important. Various designs exist, but the typical unit includes a dock for charging mobile gear, along with secure Bluetooth and Wi-Fi connectivity. Base stations also may hook into small printers for generating receipts, as well as supporting barcode readers and credit card readers.

Finally, retailers should make sure their in-store wireless networks provide full Wi-Fi coverage. It's critical that associates don't encounter dead zones while serving customers. A key component of the mPOS development phase should therefore be network performance testing.

Start with a Strategy

When evaluating the potential of mPOS, IT managers should first decide how a solution would dovetail with their organization's broader mobile strategy.

"The companies that are doing mPOS right are the ones that think about their business processes," Tinsley says. "They come loaded with data about how the shopping experience happens in their facilities today and how they want to shift it in the future. The mobile device becomes a way to facilitate that new vision."

Pilot programs provide a useful way to gather such insights, she says. "Companies learn in a pilot what behaviors and use cases are most relevant for their particular businesses."

Next, consider total cost of ownership or TCO. "Too often organizations focus on specific devices and their price points," Tinsley adds. "It's important to think about the entire implementation, including any software coding that may be necessary and what mobile device management and mobile application management you'll need. A lot of organizations don't have an army of IT people to manage mPOS, so the solution they choose needs to just work."

Evaluating the reliability of each solution is also essential. All POS applications must be engineered with redundancy to avoid even short periods of downtime. "You can't sell anything if the system is down," Weiser says.

IT managers also will want to consider how mPOS will integrate with back-office systems, such as accounting, enterprise resources planning (ERP) and customer relationship management (CRM) applications.

Finally, company executives must look beyond technical considerations. For example, resources must be in place to serve customers who pay with cash, and mobile associates need the ability to remove physical security tags from merchandize as well as wrap or bag purchases. One option is a series of small checkout stations scattered throughout stores to handle these tasks and to house mobile printers for creating paper receipts.

Fortunately, companies that gravitate to mPOS don't have to address these considerations by themselves. "A number of systems integrators and third-party experts are skilled in mPOS from both a technical and business process perspective," Carlin says. "With their help, organizations can ensure they have the right infrastructure and operations in place to succeed with mobile POS." ■

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