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BOSTON RETAIL PARTNERS

POS/CUSTOMER ENGAGEMENT SURVEY

17TH ANNUAL SURVEY | 2016

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"Saddled with legacy systems that are not designed to accommodate today's retail environment, retailers have scrambled to cobble things together in the attempt to deliver the omni-channel capabilities customers expect. The risk of losing customers due to disappointing shopping experiences caused by flawed omni-channel architecture is deadly, which is why 'real' unified commerce is retailers' top priority for 2016."

-Ken Morris, Principal, Boston Retail Partners

Introduction

The digital world is infiltrating brick and mortar stores as consumers have the ability to shop where, when and how they want – using a device they carry in their pocket or purse.

The rapid rise in the use of Internet-connected, shopping-enabled smartphones – now at 77.4% penetration[1] – has completely changed the face of retail. Consumers are always connected with access to unlimited information at their fingertips. Consumers expect their shopping experience to transcend channels so they can shop anywhere, buy anywhere, pick up anywhere and be served anywhere.

The digital world is infiltrating brick and mortar stores, where consumers want full transparency on the products, pricing and availability of the items being sold. Miss a step on any of these data points and your customer can immediately shop the competition, even while still in your store. This is the new normal.

While it has been apparent that consumers expect a holistic shopping experience that transcends channels, it remains a challenge for retailers to meet that expectation. Leveraging IT investments made over many years, retailers try to meet these expectations by piecing systems and processes together. It is reminiscent of the early days of the Web when everyone scrambled to get a Website live but it was usually completed with a 'just get something up' attitude by a separate team with no integration to existing systems, processes, inventory, etc.

According to BRP's 17th Annual POS/Customer Engagement Benchmarking Survey, 85% of the respondents indicate that unified commerce is their top priority. Many retailers have taken the 'just get something done' approach to deliver a seamless customer experience that transcends channels. The unfortunate result of this quick fix approach is a 'faux' omni-channel model that doesn't execute as promised and has the risk of disappointing customers. While 60% of retailers indicate they have implemented 'inventory visibility across channels,' 80% of those retailers indicate that the system 'needs improvement.' According to another recent study, this is a real issue, as 60% of click-and-collect orders placed on Cyber Monday had problems.[2]

What was once an industry based on a simple cash register in the store has now grown to encompass multiple channels, alternative payment options, always-on service and inventory availability, and an extremely well informed consumer. The retailers surveyed this year embrace this 'new' retail environment and realize the need to not only allow, but also encourage, the transcending of channels and personalization of the customer's shopping experience. The challenge is to create and adapt the right foundation to support this new normal.

Engaging the customer to enhance the shopping experience through personalization and relevance is the key to winning and keeping customers, and a unified commerce platform, along with real-time retail, is the solution to support this seamless customer experience.

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[1] "comScore Reports September 2015 U.S. Smartphone Subscriber Market Share," *comScore, Inc.*, November 6, 2015, http://www.comscore.com/Insights/Market-Rankings/comScore-Reports-September-2015-US-Smartphone-Subscriber-Market-Share

[2] "Buy online, pick-up in the Store. Simple, right? Not this Christmas," Washington Post, December 20, 2015

The Top Priorities for 2016

Customer engagement and the evolution to unified commerce are top priorities for 2016 with payment/data security still a key focus area.

In this year's survey, the top three focus areas for retailers are unified commerce, customer experience and engagement, and payment/data security **(Exhibit 1)**. This indicates a slight shift from last year's survey when payment security was a top priority for 63% of retailers.

Many retailers have spent the last year improving payment security and technology as the EMV transaction liability shift deadline loomed on October 2015. While many retailers have still not fully implemented chip-and-signature capabilities to ensure EMV compliance, most are well on their way and have started shifting resources back to the customer experience with unified commerce as the key enabler.

Over the last three years, unified commerce has consistently been one of the top three priorities in Boston Retail Partners' POS/Customer Engagement Survey as retailers evolve their business model to meet the unified commerce expectations identified and demanded by their customers. The continued emphasis on customer experience and engagement reinforces retailers'

focus on delivering the seamless, personalized experience consumers want.

This year's report explores the top three priorities:

- **Enhancing Customer Engagement**
- **The Road to Unified Commerce**
- **Ensuring Payment/Data Security**

This report also addresses the **State of POS** and illustrates what's needed to **Transform Store Technology** to support the new retail environment.

Enhancing Customer Engagement

68% of retailers are focused on improving the customer experience by identifying customers, utilizing customer-facing technology and empowering associates with information in real-time.

68%
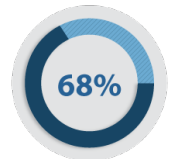
Customers have the ability to search and compare products and prices online, read customer reviews and get instant feedback from their circle of friends via social media. This transparency makes the retailer's job more difficult as they can no longer differentiate on just product or price. In most cases, the customer experience is the key differentiator for a brand and it's what drives customer loyalty. Ever increasing customer expectations, retail transparency and today's anywhere, anytime, anyhow shopping have put the customer experience center stage for most retailers.

In many cases, the physical store is falling short of meeting customer expectations for personalization. Customer expectations have been reshaped by the digital retail experience. They receive personalized offers and recommendations when shopping online or via mobile that they don't tend to receive when they shop in a store. This is an area of opportunity for retailers as digital and physical retail converge and the key to personalizing the experience is identification of the customer as soon as they enter the store. 62% of retailers indicate customer identification is their top customer engagement priority **(Exhibit 2)**.

Exhibit 1

Top 3 Overall Priorities

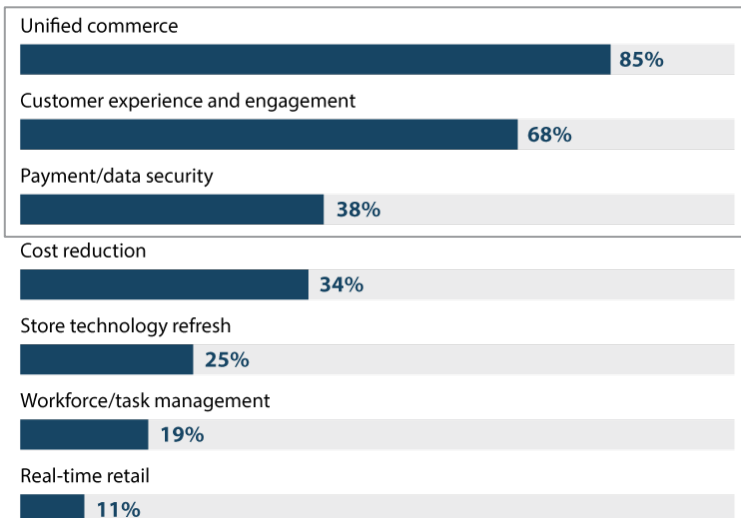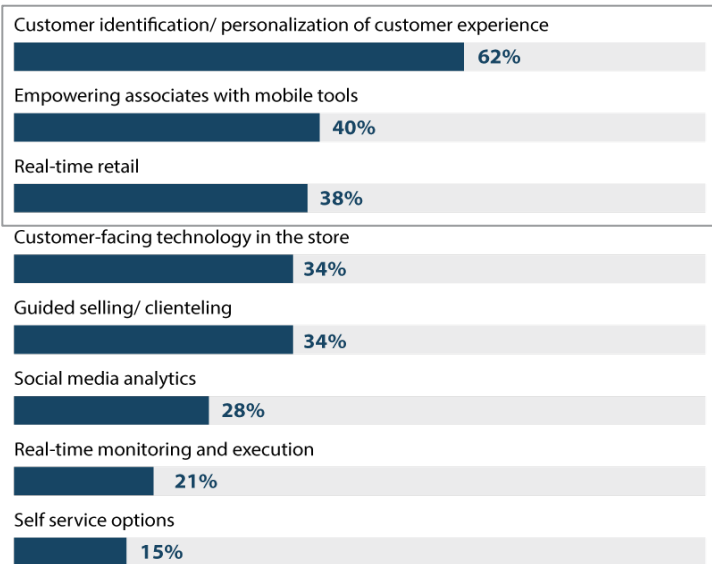| Priority	Percentage
Unified commerce	85%
Customer experience and engagement	68%
Payment/data security	38%
Cost reduction	34%
Store technology refresh	25%
Workforce/task management	19%
Real-time retail	11%

Exhibit 2

Top 3 Customer Engagement Priorities

Customer identification/ personalization of customer experience
62%

Empowering associates with mobile tools
40%

Real-time retail
38%

Customer-facing technology in the store
34%

Guided selling/ clienteling
34%

Social media analytics
28%

Real-time monitoring and execution
21%

Self service options
15%

The next two priorities are focused on arming associates with the information they need to personalize the shopping experience. Empowering associates with mobile tools to access customer information based on previous purchases or their preferences is important to engage the customer. Even more critical though is the need to have this information available immediately so that the associate can access it easily – this is real-time retail.

Customer Identification is Critical for Personalization

Customers and their shopping behavior remain anonymous without some type of customer identification.

The first step involved in enhancing the shopping experience for the customer is to identify the customer so the dialogue and relationship building can begin. While traditional methods of identification still reign strong, the challenge is that identifying the customer at checkout is too late to personalize the experience. Retailers realize this and interest is growing to implement the ability to identify the customer through their ever-present mobile device tied to beacons, near field
For traditional customer identification, utilizing a telephone number remains the top method of
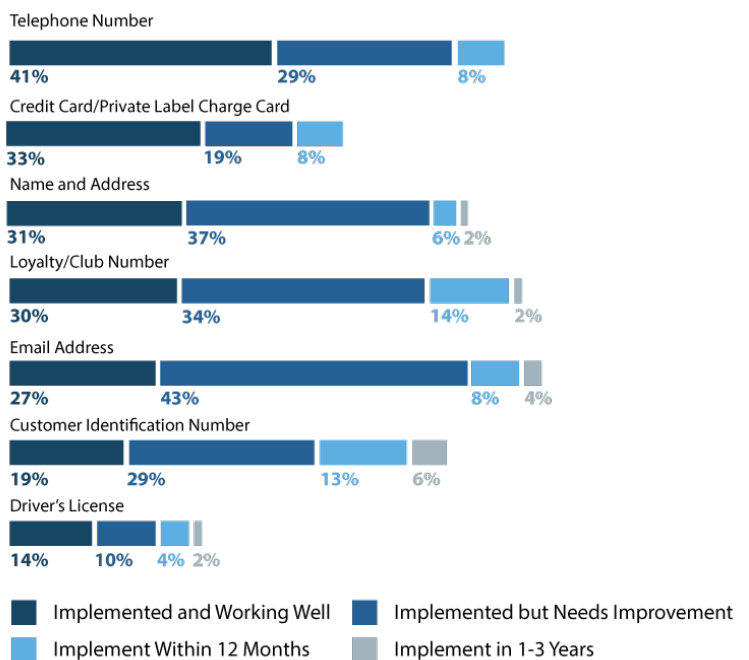
customer identification, increasing from 63% of retailers last year to 70% this year. However, many retailers are not satisfied with this method of identification **(Exhibit 3)**.

We expect some big changes over the next few years in customer identification, as in-store technologies combined with a customer's mobile device become more prevalent. When we asked the question last year about utilizing newer technologies to identify customers in the store, most retailers responded that they still use 'traditional methods' which entail the customer handing over some piece of information at the point of checkout.

This year, however, we are seeing significant progress and interest in newer technology methods utilized in tandem with the customer's mobile phone to identify customers when they enter the store. As an example, last year, no retailers were utilizing NFC as a means of customer identification, while this year we see 10% actually having piloted or implemented this technology **(Exhibit 4)**. The number is even higher if we look just at the Specialty Hard Goods category – 17% have implemented NFC and it is working well. This contrasts with the Specialty Soft Goods retailers

Exhibit 3

Customer Identification - Traditional Methods

Telephone Number
41% **29%** **8%**

Credit Card/Private Label Charge Card
33% **19%** **8%**

Name and Address
31% **37%** **6%** **2%**

Loyalty/Club Number
30% **34%** **14%** **2%**

Email Address
27% **43%** **8%** **4%**

Customer Identification Number
19% **29%** **13%** **6%**

Driver's License
14% **10%** **4%** **2%**

- Implemented and Working Well
- Implemented but Needs Improvement
- Implement Within 12 Months
- Implement in 1-3 Years

that do not have any implementations that are working well and only 6% have implemented NFC at all. There is also tremendous growth planned with 40% more retailers planning to implement NFC technology within three years.

In addition to NFC, retailers are showing interest in many other mobile methods, such as mobile apps, mobile loyalty and Wi-Fi. All of these technologies enable identification of the customer before they make a purchase decision, which allows the retailer to tailor the shopping experience and influence the purchase decision.

Once identified, understanding their profile, location and the current environmental factors (i.e. time, weather, traffic, etc.) enables the retailer to communicate relevant and contextual messages. Geolocation and geo-fencing are two methods retailers utilize to understand where the customer is and automatically provide messaging based on gathered customer insight.

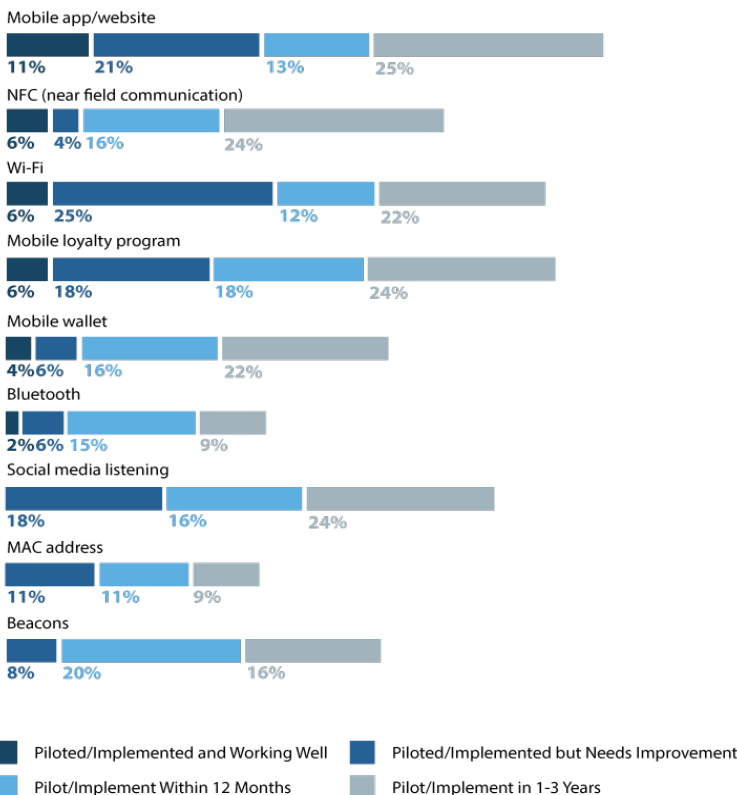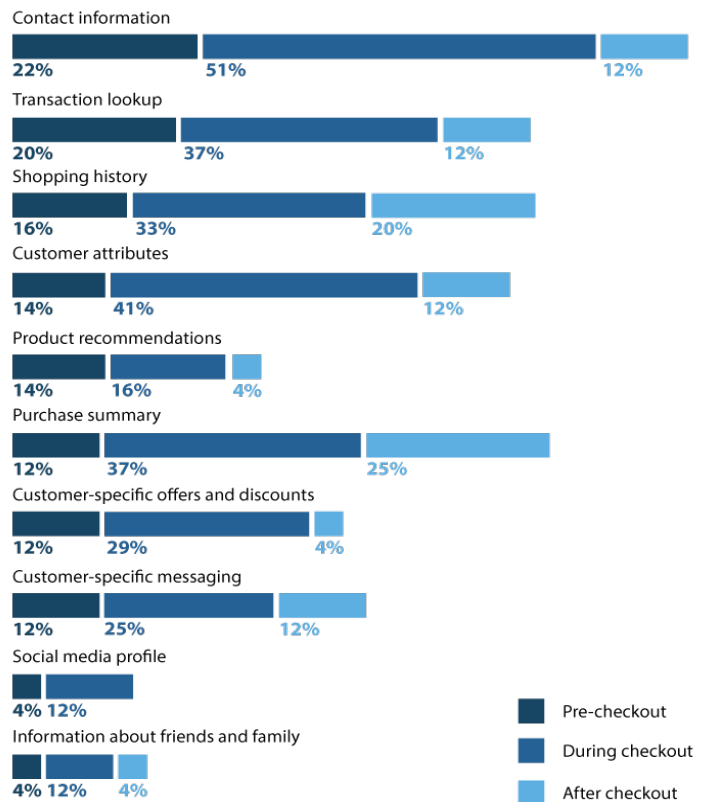## Exhibit 4

Customer Identification - Mobile Device

Mobile app/website
11% 21% 13% 25%

NFC (near field communication)
6% 4% 16% 24%

Wi-Fi
6% 25% 12% 22%

Mobile loyalty program
6% 18% 18% 24%

Mobile wallet
4% 6% 16% 22%

Bluetooth
2% 6% 15% 9%

Social media listening
18% 16% 24%

MAC address
11% 11% 9%

Beacons
8% 20% 16%

- Piloted/Implemented and Working Well
- Piloted/Implemented but Needs Improvement
- Pilot/Implement Within 12 Months
- Pilot/Implement in 1-3 Years

Exhibit 5

Customer Information Availability

Contact information
22% 51% 12%

Transaction lookup
20% 37% 12%

Shopping history
16% 33% 20%

Customer attributes
14% 41% 12%

Product recommendations
14% 16% 4%

Purchase summary
12% 37% 25%

Customer-specific offers and discounts
12% 29% 4%

Customer-specific messaging
12% 25% 12%

Social media profile
4% 12%

Information about friends and family
4% 12% 4%

- Pre-checkout
- During checkout
- After checkout

Geolocation uses a combination of indoor location-based technologies and a customer's mobile device to transmit their location within the store. Geo-fencing defines geographical boundaries as a form of virtual barrier. Once a customer crosses the barrier, relevant alerts are sent to the customer or to notify an associate, based on that location.
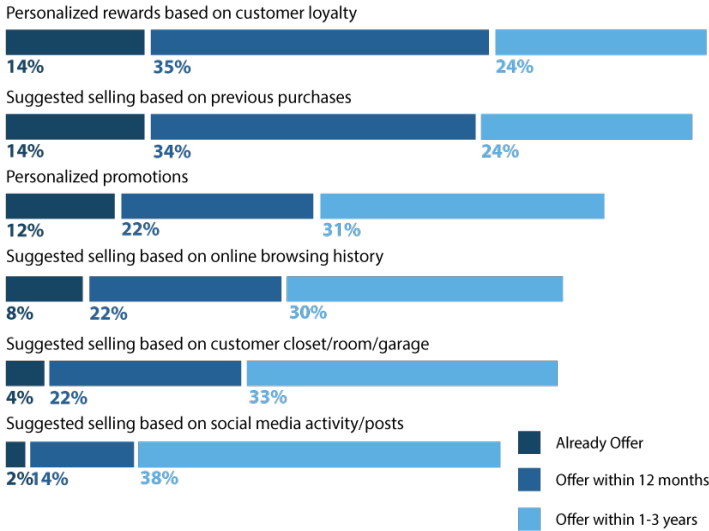
The big story in customer identification really lies in the plans that most retailers have to implement these technologies within the next three years. Another interesting point is that there does not seem to be one technology choice that is 'winning' – retailers are embracing a number of different technologies to cast a wide net and identify and track as many customers as possible as soon as they enter the the store.

Empowering Associates with Real-time Information

Identifying and understanding the appropriate in-store technology to personalize customer service and empower associates is necessary for customer engagement.

Exhibit 6

Tailoring the Shopping Experience

Personalized rewards based on customer loyalty

| 14% | 35% | 24% |

Suggested selling based on previous purchases

| 14% | 34% | 24% |

Personalized promotions

| 12% | 22% | 31% |

Suggested selling based on online browsing history

| 8% | 22% | 30% |

Suggested selling based on customer closet/room/garage

| 4% | 22% | 33% |

Suggested selling based on social media activity/posts

| 2% | 14% | 38% |

■ Already Offer
■ Offer within 12 months
■ Offer within 1-3 years

Customer identification is critical, however, in most cases it is happening at the point of checkout, which is too late to empower the associate to influence the current purchase decision. Without early identification of the customer, retailers can miss customer engagement opportunities such as clienteling and guided selling.

Unfortunately, we still see a lack of customer information available pre-checkout **(Exhibit 5)**. Most associates can't access customer data until the customer is at the checkout, which means there are missed opportunities to increase sales by personalizing promotions and offering purchasing suggestions to their customers.

Delving deeper into how associates are able to tailor the customer's shopping experience based on the information available to them uncovers that the capabilities are still very limited **(Exhibit 6)**.
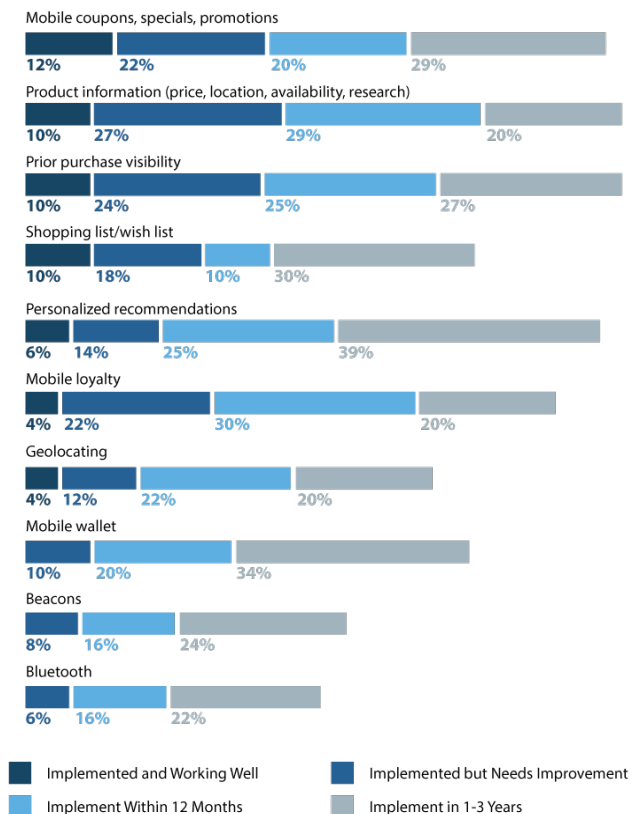
The most prevalent customer personalization capabilities involve offering personalized rewards based on customer loyalty and suggested selling based on previous purchases – both with a mere 14% of the retailers. The bigger story is that retailers are focused on personalization of the shopping experience with more than 50% of retailers planning to offer this personalization within three years.

The challenge to retailers is understanding and providing the tools to associates and customers so that associates can be freed from the constraints of a traditional cash wrap station to interact with customers on the sales floor where suggested selling can be used to influence purchasing decisions. This means arming associates with customer data on past interactions, as well as creating an easy way to view and act upon a customer's complete profile.

Many shoppers want personalized attention from retailers, but only as long as marketing messages aren't too intrusive and it is something they can choose to opt-in to receive. Most customers appreciate receiving a digital personalized offer sent directly to their phone when they walk into their store or when they are driving in the area, enticing them to visit the store. The key to getting customers to opt-in and create loyalty is to give customers something of value.

Exhibit 7

Customer-Facing Mobile Services

Mobile coupons, specials, promotions

| 12% | 22% | 20% | 29% |

Product information (price, location, availability, research)

| 10% | 27% | 29% | 20% |

Prior purchase visibility

| 10% | 24% | 25% | 27% |

Shopping list/wish list

| 10% | 18% | 10% | 30% |

Personalized recommendations

| 6% | 14% | 25% | 39% |

Mobile loyalty

| 4% | 22% | 30% | 20% |

Geolocating

| 4% | 12% | 22% | 20% |

Mobile wallet

| 10% | 20% | 34% |

Beacons

| 8% | 16% | 24% |

Bluetooth

| 6% | 16% | 22% |

■ Implemented and Working Well   ■ Implemented but Needs Improvement
■ Implement Within 12 Months   ■ Implement in 1-3 Years

While retailers are slowly implementing services such as mobile coupons and promotions, product information and personalized recommendations via mobile devices, there are issues with how well these processes are really working. In all cases, the 'implemented but needs improvement' category is larger than the 'implemented and working well' category, which likely indicates that many of the processes currently in place have been manually pieced together **(Exhibit 7)**. We expect this to improve as retailers embrace unified commerce and work on implementing a single commerce platform with real-time capabilities.

Real-time Retail to Personalize the Customer Experience

Real-time retail is the ability to deliver a seamless experience to a consumer whenever, wherever or however they choose to shop by gathering, analyzing and disseminating customer, product, pricing and inventory data across all channels – instantly.
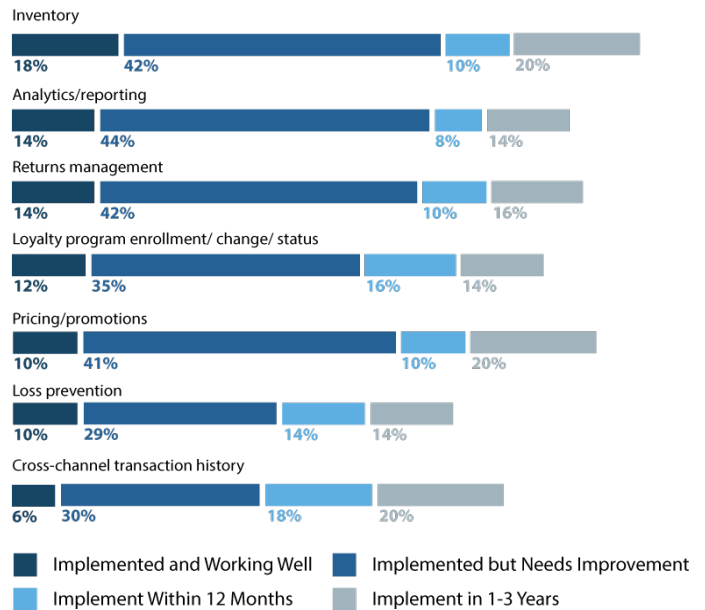
Consumers have become more demanding – driven by new technology and the real-time capabilities it enables. A customer can shop at a store for a specific model of computer, take a photo and get instant access to prices from multiple competitors and the closest store that has it in stock – in real-time. This is why 'real-time retail' is the new imperative.

Real-time capabilities and analytics enhance the customer experience based on customer context. Customer context – the interrelated factors of customer insights and environmental conditions the make the shopping experience relevant - allows retailers to personalize the shopping experience based on preferences, purchase history, their closet, their most recent online browsing history, time of day, weather and their physical location – all based on real-time information.

Information must be instantly available to store associates for the process to be successful. Without real-time data, information provided internally and externally is out-of-date and, therefore, risks being inaccurate and out of context.

Exhibit 8

Real-time Features

Inventory: 18% | 42% | 10% | 20%
Analytics/reporting: 14% | 44% | 8% | 14%
Returns management: 14% | 42% | 10% | 16%
Loyalty program enrollment/ change/ status: 12% | 35% | 16% | 14%
Pricing/promotions: 10% | 41% | 10% | 20%
Loss prevention: 10% | 29% | 14% | 14%
Cross-channel transaction history: 6% | 30% | 18% | 20%

■ Implemented and Working Well ■ Implemented but Needs Improvement
■ Implement Within 12 Months ■ Implement in 1-3 Years

Many retailers are still struggling with effectively executing real-time retail. More than half of retailers are able to access inventory, analytics and returns management in real-time but most of the processes need improvement **(Exhibit 8)**. Again, this is likely because these processes are pieced together from disparate systems.
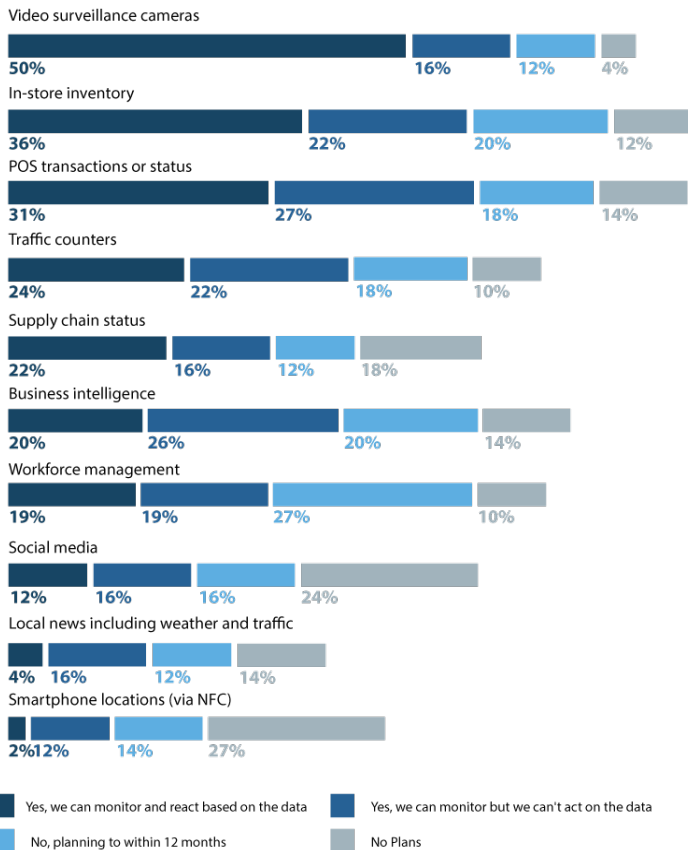
Suggestive and guided selling are key enhanced services enabled by the implementation of a real-time retail environment. Once data and information is collected on the customer across channels, it can be analyzed and utilized to personalize her experience, thereby promoting sales and customer loyalty.

Real-time retail incorporates more than just customer transactions; it also encompasses loss prevention, merchandising, workforce management and external factors that may have an impact on store performance and the customer experience.

Half of the respondents monitor their video surveillance cameras in real-time and can instantly act on what is viewed. One use of this technology is viewing a thief in action and having the ability to contact a security guard to apprehend the thief before they leave the store **(Exhibit 9)**.

Exhibit 9

Real-time Monitoring and Execution

Video surveillance cameras
| 50% | 16% | 12% | 4% |

In-store inventory
| 36% | 22% | 20% | 12% |

POS transactions or status
| 31% | 27% | 18% | 14% |

Traffic counters
| 24% | 22% | 18% | 10% |

Supply chain status
| 22% | 16% | 12% | 18% |

Business intelligence
| 20% | 26% | 20% | 14% |

Workforce management
| 19% | 19% | 27% | 10% |

Social media
| 12% | 16% | 16% | 24% |

Local news including weather and traffic
| 4% | 16% | 12% | 14% |

Smartphone locations (via NFC)
| 2% | 12% | 14% | 27% |

■ Yes, we can monitor and react based on the data   ■ Yes, we can monitor but we can't act on the data

■ No, planning to within 12 months   ■ No Plans

More than a third of the respondents are able to monitor and act on in-store inventory issues in real-time. Real-time monitoring of in-store inventory allows for the identification of inventory anomalies and alerts a manager to react and investigate the issue to find a timely solution. Real-time inventory is an essential component for enabling customer engagement and meeting the customer's 'buy anywhere, pick-up or deliver anywhere' expectations.

Within three years, 26% of retailers plan to implement the ability to monitor and react to traffic and weather information in their area. With this information, retailers can offer promotions on umbrellas or free delivery based on an upcoming storm, or encourage customers to drop in and shop the store until rush hour traffic clears. This type of information is key to personalizing the shopping experience based on 'customer context.'

Opportunities for Further Customer Engagement

With the focus on customer engagement and the objective of unified commerce, retailers are continually looking for ways to increase loyalty and provide a better shopping experience for their customers.

Future technologies such as digital touch screens, virtual mirrors and virtual reality offer possibilities for further personal interaction and a more immersive environment. 'Smart' fitting rooms utilize virtual mirrors or motion sensors to interact with customers to offer product information, suggest complementary products or notify an associate that a different size is needed. Virtual mirrors allow shoppers to easily envision themselves in different garments, glasses or cosmetics. These technologies coupled with a personal digital assistant can make recommendations based on customer information, purchase history and current promotions within the store. Currently, 8% of the retailers surveyed offer virtual mirrors to their customers **(Exhibit 10)**.

Customer engagement in the future may allow a customer to videoconference with their favorite store associate – from home. The customer could request to see different products and even get a better understanding of size and color options based on interaction with an associate. 6% of the retailers surveyed already offer this service to their customers.

As a means of increasing inventory options for customers, retailers realize that their brick-and-mortar locations can sell products without actually carrying the inventory within the stores. Rather than sourcing and warehousing large levels of inventory for each store, they can provide stores access to **virtual inventory**, which keeps customers in the store and away from the competition. Currently, 38% of the retailers utilize virtual inventory – up slightly from 33% last year. However, most of those retailers realize their current processes need improvement. An additional 26% plan to implement virtual inventory within the next three years, further supporting omni-channel and unified commerce initiatives.

Exhibit 10
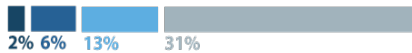
Potential Customer Services

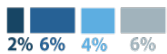Virtual inventory - ability for store to sell items without carrying the inventory in the store

8%   30%   8%   18%

Electronic receipt with personalized suggestions

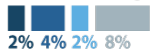6%   20%   30%   30%

Persona-based user interface for POS

2% 6%   13%   31%

Virtual mirrors - allow customers to envision themselves in different garments, glasses, or cosmetics
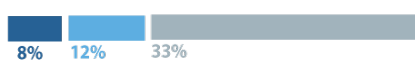
2% 6%   4%   6%

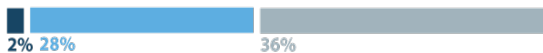Videoconferencing - customer shops from home via videoconference with associate in store

2% 4% 2%   8%

Scan and deliver - customer purchases item by scanning barcode with actual item delivered to their home (or other desired location)

10%   4%   33%

Transaction suspension - customer begins transaction in store and then completes transaction from home

8%   12%   33%

Personalized promotions based on real-time location, weather or other analytics

2% 28%   36%

■ Implemented and Working Well   ■ Implemented but Needs Improvement
■ Implement Within 12 Months   ■ Implement in 1-3 Years

A majority of retailers plan to offer **electronic receipts** with personalized suggestions for their customers. The use of personalized receipts has increased from 10% of retailers offering them last year to 26% this year. Another 60% of retailers have placed this on the roadmap for implementation within the next three years. Offering customers an electronic receipt after a purchase in a brick-and-mortar store gives them the peace of mind that they'll have a copy that won't get lost by the time they get home. In addition, retailers can use electronic receipts as a means for suggested selling by offering recommendations for potential purchases based on what they have already purchased, elevating the customer's current and future shopping experience.

The Road to Unified Commerce

85% of retailers are focused on unified commerce to eliminate individual channel silos and offer a seamless experience across all customer touch points by leveraging a single, unified platform for all commerce, inventory, customer and transaction data.

85%
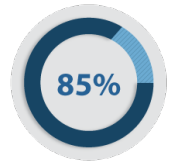
Driven by the ubiquitous use of mobile devices, the customer journey transcends channels and the customer expects the shopping experience to be seamless. Consumers think in terms of a brand – not channels.
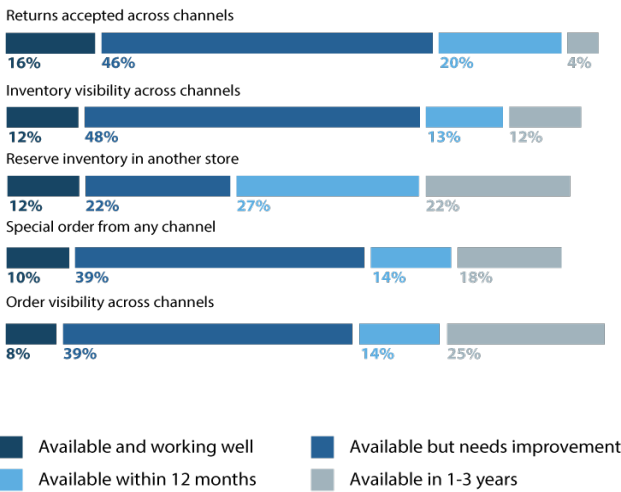
Retailers are responding and shifting their focus to unified commerce because it is a requirement in today's retail industry. Retailers can't afford to operate from within channel silos, and must transform their organization, business processes and technology to align with their customers' expectations.

For example, let's say a customer is shopping online, puts items in her online shopping cart and then abandons her cart, choosing to visit the brick and mortar store instead. Unified commerce means that when the customer enters the store and identifies herself, the associate can easily and immediately view her shopping history, including that abandoned cart. Unified commerce transcends channels and enables the opportunity for an associate to sell to a customer based on her digital footprint.

Many retailers have started down an omni-channel path by offering services that emulate the seamless holistic shopping experience that the customer expects, but in most cases the process to offer customers the seamless shopping experience is manual and involves complex integration across multiple systems and processes, and often doesn't work very well in real-time **(Exhibits 11/12)**. Unfortunately, most retailers are finding it much harder than they thought to implement omni-channel services.
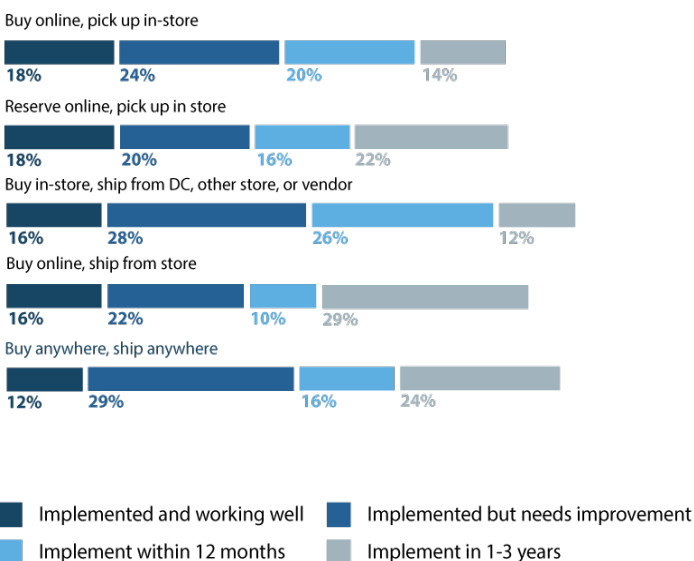
Exhibit 11

Cross-Channel Services

Returns accepted across channels

| 16% | 46% | 20% | 4% |

Inventory visibility across channels

| 12% | 48% | 13% | 12% |

Reserve inventory in another store

| 12% | 22% | 27% | 22% |

Special order from any channel

| 10% | 39% | 14% | 18% |

Order visibility across channels

| 8% | 39% | 14% | 25% |

- ■ Available and working well
- ■ Available but needs improvement
- ■ Available within 12 months
- ■ Available in 1-3 years

As retailers focus on the customer experience, they are realizing that integrating disparate systems and processes in real-time is not a successful strategy. Quick fix solutions have driven the industry for the last 20 years as retailers said "we need to have a presence on the Web" and teams scurried off to make it happen (with little to no integration with existing processes and systems). The same thing happened with mobile and now with omni-channel. In many cases, retailers are trying to offer customers the services they desire but at a high cost to the retailer as these processes are

Exhibit 12

Fulfillment Services

Buy online, pick up in-store

| 18% | 24% | 20% | 14% |

Reserve online, pick up in store

| 18% | 20% | 16% | 22% |

Buy in-store, ship from DC, other store, or vendor

| 16% | 28% | 26% | 12% |

Buy online, ship from store

| 16% | 22% | 10% | 29% |

Buy anywhere, ship anywhere

| 12% | 29% | 16% | 24% |

- ■ Implemented and working well
- ■ Implemented but needs improvement
- ■ Implement within 12 months
- ■ Implement in 1-3 years

inefficient and ineffective. The greatest cost to the retailer is actually the poor customer satisfaction as a result of over-promising and under-delivering on cross-channel services.
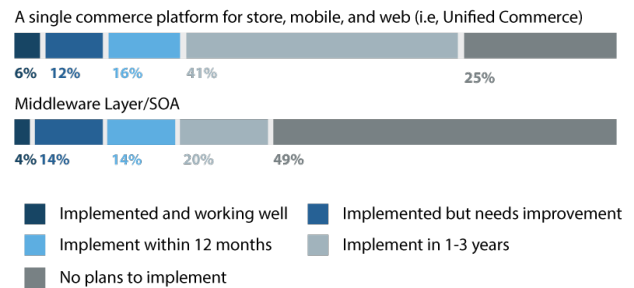
So what's the solution? Unified commerce with a single commerce platform supporting all customer touch points and channels – this eliminates integration issues and supports real-time visibility, allowing the company to work together for a unified view of the customer, inventory, fulfillment, etc.

Working Towards a Single Commerce Platform

Integral to unified commerce is a unified commerce platform, meaning a single centralized commerce platform for all channels.

Exhibit 13

System and Infrastructure Plans

A single commerce platform for store, mobile, and web (i.e, Unified Commerce)

| 6% | 12% | 16% | 41% | 25% |

Middleware Layer/SOA

| 4% | 14% | 14% | 20% | 49% |

- ■ Implemented and working well
- ■ Implemented but needs improvement
- ■ Implement within 12 months
- ■ Implement in 1-3 years
- ■ No plans to implement

This single commerce platform promotes high efficiency by combining traditional point of sale, mobile, Web, clienteling, order management and fulfillment into a consolidated, real-time platform. A single commerce platform provides a single version of the truth across all channels to enable visibility and availability of accurate inventory and customer information.

Retailers realize the importance of having a 'single view of the cart' but have not quite reached it yet. Processes and systems are pieced together, leaving much room for failure. 18% of the retailers surveyed indicate they have implemented a unified commerce/single commerce platform, although 12% indicate a need for improvement **(Exhibit 13)**. Retailers still have a long road ahead to achieve a successful unified commerce platform, but it will be worth the effort.

Ensuring Payment/Data Security

38% of retailers are still focused on improving data security and implementing EMV, as they have made progress in the past year but not as much as expected.

38%

Ensuring payment and data security will always be critical for retailers. Additionally, as further personal information, such as identification when entering the store, prior purchase history and browsing likes and dislikes, are requested from the shopper to personalize the shopping experience, retailers must ensure that the data gathered is secure and not misused. When a shopper enters the store they must 'opt-in' to enable identification and personalization, but if they don't feel that the messages are worth their trust, the effort fails.

While the liability shift associated with **EMV** (Europay, MasterCard and Visa) occurred in October 2015, many retailers have still not enabled EMV-capable transactions. Last year 10% of the retailers surveyed indicated that they supported EMV-based transactions while this year (after the liability shift deadline) 22% support these transactions **(Exhibit 14)**. With another 53% of

Exhibit 14

Payment Security Technology Plans

End-to-end encryption (E2EE)
37% | 12% | 29% | 10% | 13%

Tokenization for single sales channel
25% | 16% | 22% | 14% | 24%

Single token solution across enterprise
16% | 4% | 28% | 24% | 28%

Mobile payment acceptance
12% | 4% | 37% | 33% | 14%

EMV-enabled transactions
10% | 12% | 53% | 10% | 16%

■ Implemented and working well   ■ Implemented but needs improvement
■ Implement within 12 months   ■ Implement in 1-3 years
■ No plans to implement

retailers still planning to implement this capability within 12 months, this will have a significant impact on retailers' efforts and resources in 2016.

EMV technology is one of the steps that retailers can take to reduce the fraud associated with secure card-present transactions. By using a built-in security chip containing customer-and issuer-specific information, an EMV-compliant terminal authenticates the physical card used in the transaction and defeats card skimming and counterfeit reproduction.
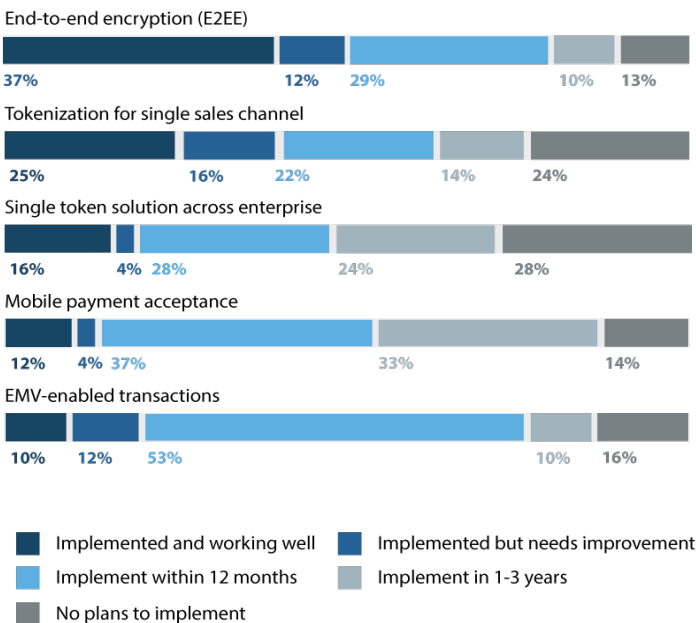
End-to-end encryption (E2EE) is the next line of defense in the fight for data security with a reported 49% of retailers utilizing it – up from 35% last year.

The next protective layer involves **tokenization**, which enables retailers to remove sensitive information from the network. One-fifth of the respondents have implemented a single token solution across the enterprise, another step towards a single commerce platform.

Payment security will remain a concern for retailers for the foreseeable future. Most of the retailers involved in our survey reported moving towards a security plan with multiple layers to protect sensitive customer and organization data.
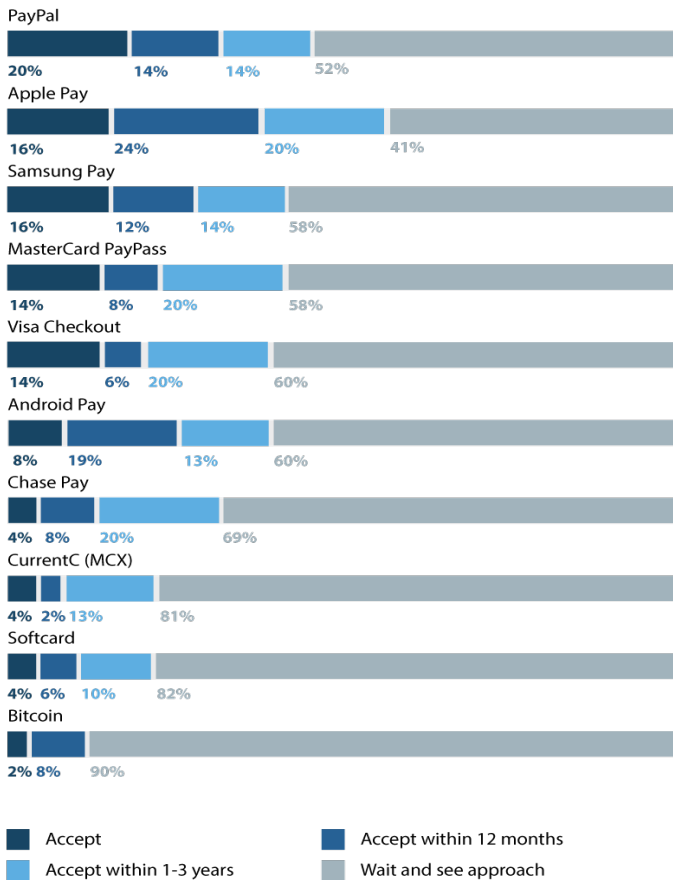
Mobile payments and NFC technology bring another layer of payment security risk. Mobile payment technology continues to be big news with the introduction of Chase Pay earlier in the fall and Walmart's jump (with speculation that Target is following close behind) into the fray with its own mobile wallet app. This is yet another way to personalize and enhance the customer shopping experience by bundling loyalty and other features with a branded mobile payment app.

PayPal is still accepted more than any other alternative payment type, with 20% already accepting it – up from 13% last year **(Exhibit 15)**. This year more retailers are adopting a wait and see approach – likely because of the new options available (Chase Pay) or available soon (Walmart and Target).

What is interesting to see is that the numbers of retailers accepting Apple Pay for payment has

Exhibit 15

Alternative Payment Types

PayPal

| 20% | 14% | 14% | 52% |

Apple Pay

| 16% | 24% | 20% | 41% |

Samsung Pay

| 16% | 12% | 14% | 58% |

MasterCard PayPass

| 14% | 8% | 20% | 58% |

Visa Checkout

| 14% | 6% | 20% | 60% |

Android Pay

| 8% | 19% | 13% | 60% |

Chase Pay

| 4% | 8% | 20% | 69% |

CurrentC (MCX)

| 4% | 2% | 13% | 81% |

Softcard

| 4% | 6% | 10% | 82% |

Bitcoin

| 2% | 8% | 90% |

■ Accept ■ Accept within 12 months
■ Accept within 1-3 years ■ Wait and see approach

doubled since last year (16% from 8%) with 44% more planning to accept it within three years. The Apple name seems to be strong enough to counteract any questions people have had about the viability of Apple Pay usage.

One of the critical factors for any mobile payment success going forward is education. We have found repeatedly that not only are consumers unsure of how and when mobile payments can be used, but even more telling, associates are unsure. For mobile payments – or mobile wallets – to succeed, there must be further education at the point of sale to ensure that a transaction using a mobile device is not longer or more complicated for either the customer or associate. The other critical factor is tying mobile wallets to loyalty rewards programs. Customers need to feel that utilizing mobile payments enhances the shopping experience and that they are being rewarded for

the experience – this will enable a win-win experience for retailers and customers.

While the pros and cons of each of these payment types – and future payment types – can be debated, what is most apparent is the number of retailers who are adopting a wait and see approach.

The State of POS

The right technology foundation is essential to support the customer experience across channels.

Retail paradigms are changing, forcing retailers to become more innovative to captivate and engage their customers. The new leaders will be the ones who innovate to form a deeper connection with their customer and distinguish their brand. Many retailers indicate they are not innovators but mainstream or slow adopters waiting until others have tested the technology before venturing forth. Unfortunately, the current retail environment may not wait for the late adopters as consumers continue to expect more from their retail experiences.

Exhibit 16

Information Technology Adoption

■ 2016 ■ 2015 ■ 2014 ■ 2013

Innovator
| 0% | 12% | 5% | 0% |

Early adopter
| 21% | 17% | 23% | 16% |

Mainstream adopter
| 38% | 44% | 30% | 57% |

Slow adopter
| 36% | 24% | 36% | 23% |

Late adopter
| 6% | 2% | 7% | 5% |
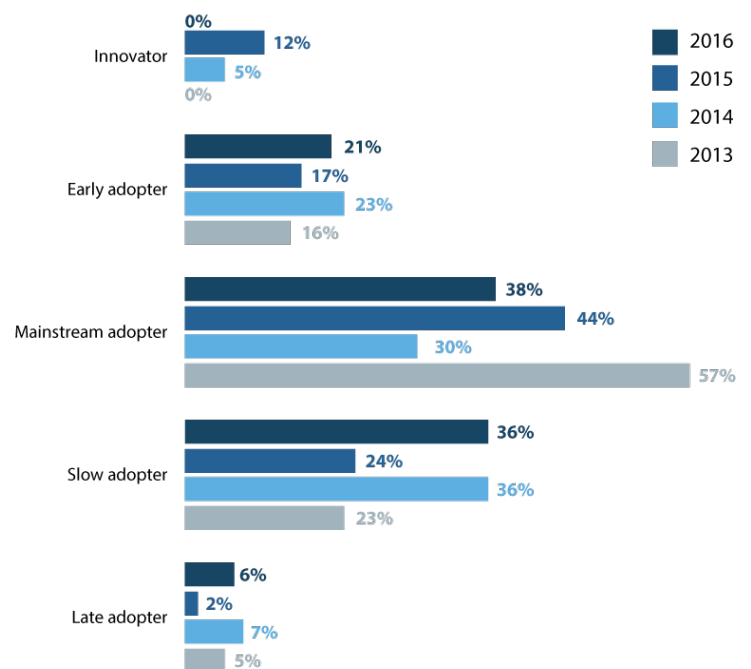
Compared to last year, fewer retailers consider themselves early adopters or innovators – 12% of the respondents last year indicated they were innovators but no one this year **(Exhibit 16)**.

The Changing POS Landscape

Changes in consumer shopping behavior and the advent of digital technology have radically changed the nature of the point of sale.

Instead of a simple point of checkout device, the POS needs to serve as the link to customer information, shopping history and purchasing behavior across channels. Unfortunately, many retailers are utilizing old, outdated hardware and software that can't support today's requirements. This leads to associate and customer frustration because of slow transactions, lack of accessible information and potentially, increased theft and fraud. The challenge is to identify and implement POS solutions that address these issues and avoid being obsolete in a year or two.

Retailers not yet ready to replace their POS systems are trying their best to deliver omni-channel services through integration with POS and adding capabilities to their systems, including mobile, rather than implement a new system **(Exhibit 17)**.

However, many retailers realize that the future of POS is part of a unified commerce platform that hosts a single shared cart across all channels and

Exhibit 17

Top 3 POS Priorities

Omni-channel integration	58%
Add capabilities to current POS	58%
Mobile POS	47%
PCI compliance	38%
Software upgrade	28%
Hardware upgrade	25%
POS system replacement	23%

Exhibit 18

Current Age

	< 2 years	3 to 5 years	6 to 8 years	9 to 11 years	> 12 years
POS terminals	27%	35%	13%	15%	8%
Mobile devices - POS	24%	22%			
Store network	23%	44%	15%	4%	10%
POS software	23%	38%	10%	17%	10%
Mobile devices - back-office	21%	33%	2%	6%	2%

Legend: < 2 years, 3 to 5 years, 6 to 8 years, 9 to 11 years, > 12 years
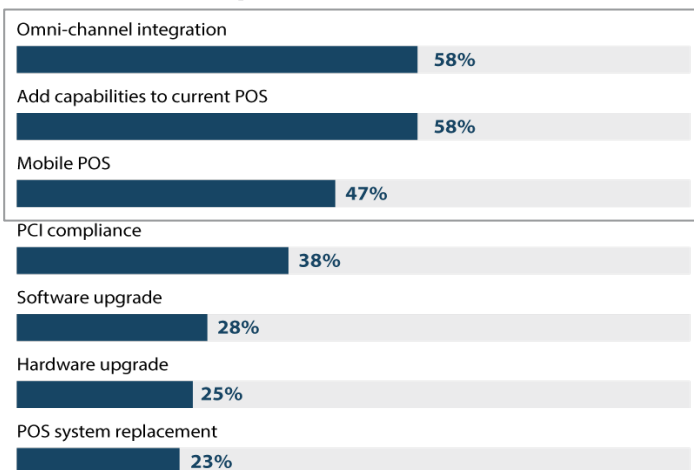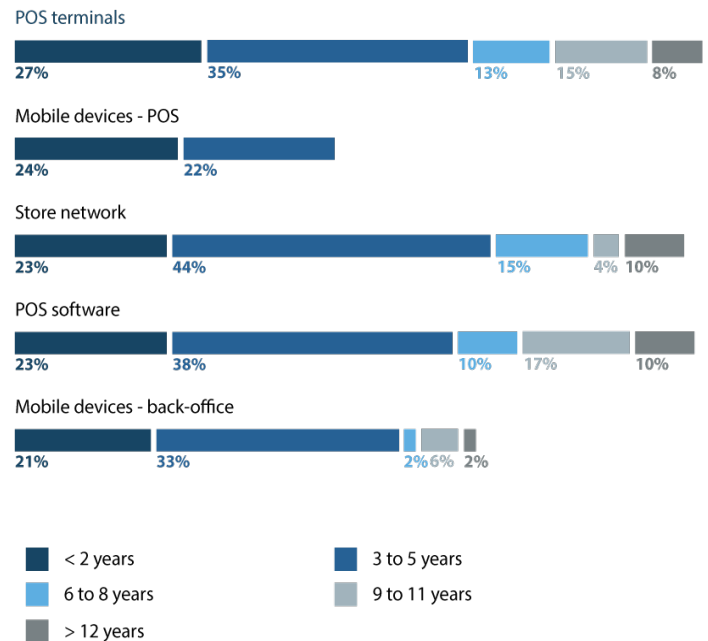
is integrated with order management. This is the game changer and is fundamentally changing how retailers think about POS and is driving much of the activity we are seeing in the solution marketplace.

With an increased focus on customer engagement and a convergence of the physical and digital retail worlds, POS and supporting technology play a critical role in shaping the customer shopping experience. With continuous changes in new technology, a POS system that is only a few years old may already be obsolete. There is a major paradigm shift forming within the POS industry as retailers modify their thinking from the implementation of a traditional POS system to the implementation of a unified commerce platform.

Traditional POS Hardware in Decline

The transition from retail-hardened POS to non-traditional offerings is underway, but it is a slow process.

Retailers are looking to refresh their hardware with the latest offerings to take advantage of faster processor chips and larger storage needed to efficiently run more advanced software.

Exhibit 19

Years of Continued Use

Mobile devices - back-office

14% 30% 2% 18%

Store network

12% 43% 14% 27%

POS terminals

10% 55% 10% 22%

POS software

10% 49% 10% 27%

Mobile devices - POS

6% 20% 6% 20%

- ▪ < 12 months
- ▪ 4 to 5 years
- ▪ 1 to 3 years
- ▪ > 5 years
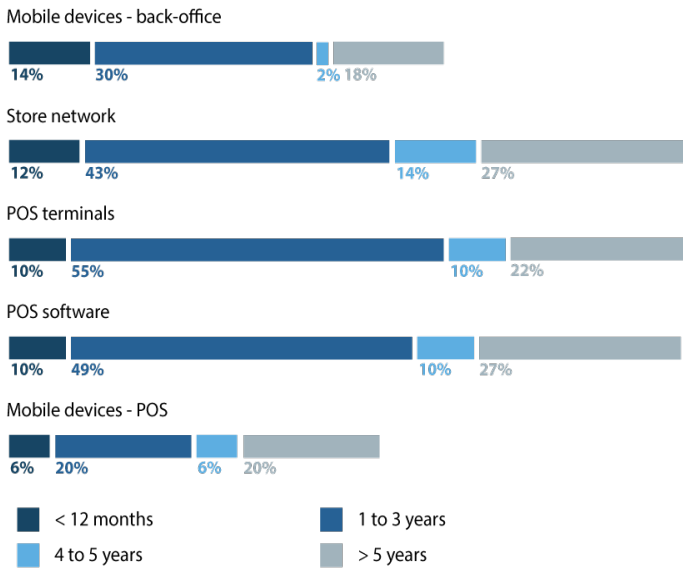
62% of retailers have refreshed their stationary POS terminals in the last five years **(Exhibit 18)**. Mobile device usage continues to grow, but at a slower rate than projected in prior surveys. It appears to be tied to the trend of retailers replacing a portion of their current devices with mobile devices when they perform a hardware refresh. It is also partially driven by retailers realizing the shorter life cycle for mobile devices compared to traditional stationary POS terminals. Another contributing factor may be retailers putting mobile strategies on the back burner over the last year as they focused their attention on improving payment security.

According to this year's survey, 20% of the retailers are planning to keep their mobile devices as a POS in use for more than five years, which similar to the response in last year's survey (21%). This seems a little unrealistic, considering the speed of technology change and the wear and tear on mobile devices is much greater on mobile than on stationary devices **(Exhibit 19)**.

POS Software Needs to be Replaced

Retailers realize that POS software should be replaced regularly to take advantage of better, faster and more reliable technology.

However, budgetary constraints and the complexity of a POS replacement project drives the age up,

with 37% of retailers reporting POS software that is more than five years old. Retailers are planning some big upgrades in the next three years with half of the retailers surveyed planning to replace their current POS software.

As retailers focus on engaging the customer and enhancing the in-store experience, choosing and utilizing the right software is important. As we have seen over the life of this survey, the POS software market is fragmented with a number of players with small pieces of the pie. With its recent acquisitions, Oracle currently holds the top spot with 27% of our respondents indicating they utilize point of sale software that falls under the Oracle umbrella. The number of retailers utilizing a proprietary/ homegrown system remained relatively constant from last year's survey with 13% of the retailers **(Exhibit 20)**. We expect this mix to change as the solution marketplace for unified commerce evolves and matures.

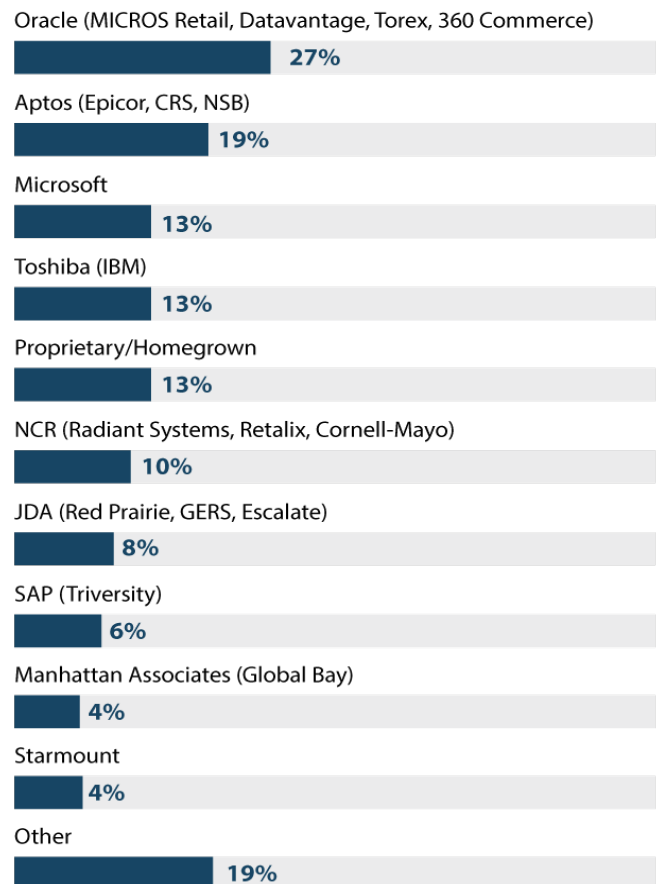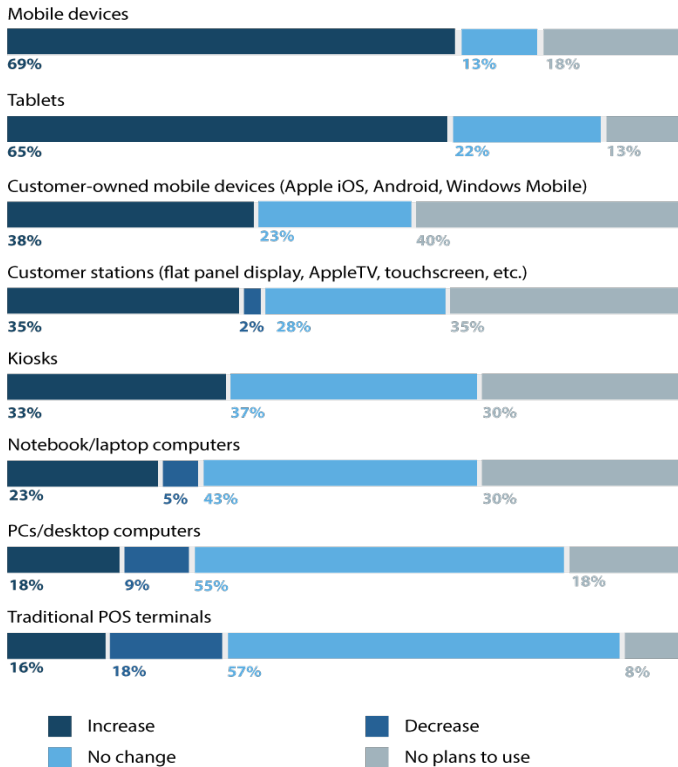## Exhibit 20

Point of Sale Software

Oracle (MICROS Retail, Datavantage, Torex, 360 Commerce)
27%

Aptos (Epicor, CRS, NSB)
19%

Microsoft
13%

Toshiba (IBM)
13%

Proprietary/Homegrown
13%

NCR (Radiant Systems, Retalix, Cornell-Mayo)
10%

JDA (Red Prairie, GERS, Escalate)
8%

SAP (Triversity)
6%

Manhattan Associates (Global Bay)
4%

Starmount
4%

Other
19%

The Transformation of Store Technology

The physical store is the foundation of retail; however, we are on the cusp of significant and fundamental transformation in the store environment.

The digital world is infiltrating brick and mortar stores, where consumers are equipped with smartphones and a new set of expectations. Much of this retail disruption stems from the ability for consumers to research, communicate and purchase throughout a fragmented shopping journey.

Stores must now encompass both worlds - the sensory experience generally available in the physical world, such as touching and feeling merchandise and personally interacting with a knowledgeable associate, married with the unique and personalized shopping experience common to the digital world. The physical and digital worlds will be forever intertwined as we look to the future.

The physical store is still the critical point of shopping. However, the role of the store is quickly changing. The advent of the digital world offers consumers new ways and 'places' to research and shop. These digital possibilities, along with mobility, have modified consumer expectations and behaviors, and retailers must transform to succeed.

Exhibit 23

System and Infrastructure Plans

A single commerce platform for store, mobile, and web (i.e, Unified Commerce)

6%   12%   16%   41%

Mobile solutions for associates

4%   27%   27%   29%

Mobile POS

0%   20%   27%   31%

- ■ Implemented and Working Well
- ■ Implemented but Needs Improvement
- ■ Implement Within 12 Months
- ■ Implement in 1-3 Years

The good news is that many retailers are working towards these requirements **(Exhibit 23)**:

- **18% have implemented a unified commerce platform and 57% more retailers plan to within three years**

- **31% have implemented mobile solutions for associates and 56% more retailers plan to within three years**

- **20% have implemented mobile POS and 58% more retailers plan to within three years**

Retailers are making progress in these areas, but the challenge remains to get these processes and systems unified and working well. The solution for many retailers is the implementation of a unified commerce approach and platform with cloud-based technology and a strong mobile presence.

Conclusion

Delivering a seamless customer experience is the driver, while technology allows customers and associates to uniquely tailor the experience. Leveraging technology, unified commerce provides the platform and real-time retail is the key to enabling this experience.

The customer experience in the store is being reengineered from beginning to end. Associates can no longer work from behind counters; they need to identify and engage customers when they walk in the store and they must be enabled through information and tools to offer suggestions to their customers based on prior purchases or even online browsing histories. Customers will no longer be constrained by the physical inventory in the store or by whether their car is large enough to carry their item home – they want to shop, ship and pick-up anywhere. This is unified commerce.

Retailers realize the need to provide a unified commerce experience. 85% of retailers indicate that unified commerce is their top priority. However, many retailers have taken the "just get something done" approach to deliver a seamless customer experience that transcends channels. The unfortunate result of this quick fix approach is a
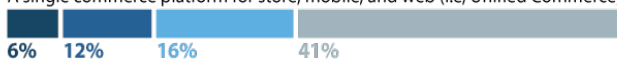
"The future of POS is part of a unified commerce platform that hosts a single shared cart across all channels and is integrated with order management. This is the game changer, as it fundamentally changes how retailers think about POS and is driving much of the activity we are seeing in the solution marketplace."

-Brian Brunk, Principal, Boston Retail Partners

'faux' omni-channel model that doesn't execute as promised and has the risk of disappointing customers.

The future of POS is part of a unified commerce platform that hosts a single shared cart across all channels and is integrated with order management. This is the game changer, as it fundamentally changes how retailers must think about POS and is driving much of the activity currently taking place in the solution marketplace.

To be successful, retailers need to invest in infrastructure, networks and service oriented architecture (SOA) layer and do unified commerce 'right'. The risk of losing customers due to disappointing shopping experiences caused by a flawed omni-channel architecture is deadly and that is why 'real' unified commerce is retailers' top priority for 2016.

The rules of retail are being thrown out the window yet again as we move into this real-time unified commerce world.

Survey Methodology

Boston Retail Partners conducted the 17th Annual POS/Customer Engagement Benchmarking Survey in November and December of 2015 by contacting more than 500 top North American retailers.

Through an online survey system, BRP gained insight into retailers' planned initiatives, priorities and future trends.

This paper summarizes the results and key findings of the survey, offers insight based on our client engagements and overall retail experience, and identifies current and future trends in the industry. These insights are intended to help retailers compare their customer-facing operations and technology and identify opportunities to enhance their customers' experience.
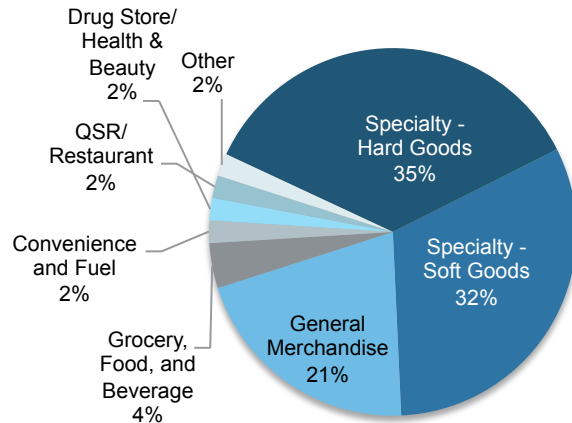
The primary retail segments of the survey respondents were specialty hard goods with 35% of respondents and specialty soft goods with 32% of respondents **(Exhibit 24)**. The remainder fell into various other categories such as general merchandise and drug store/ health and beauty. Last year's survey also focused on the specialty retail segment with 34% falling into the specialty soft goods category and 24% in the specialty hard goods category.

Of the retailers surveyed, the breakdown in size based on gross annual revenue included a broad selection of Tier 1, 2 and 3 retailers, with 44% of the retailers having more than $1B in sales **(Exhibit 25)**. Overall, the retailers that responded this year were slightly smaller than last year when 58% of the respondents had more than $1B in sales.
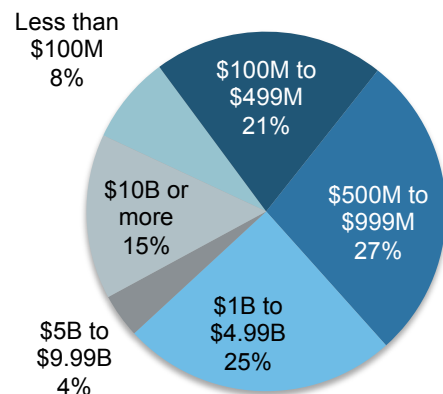
This year's survey recognizes the challenges that retailers face as they shift from a single channel environment towards an omni-channel environment as most of the respondents (66%) are multi-channel retailers **(Exhibit 26)**.

The specific respondents for each company were primarily vice presidents and directors of store systems or IT and C-level executives.
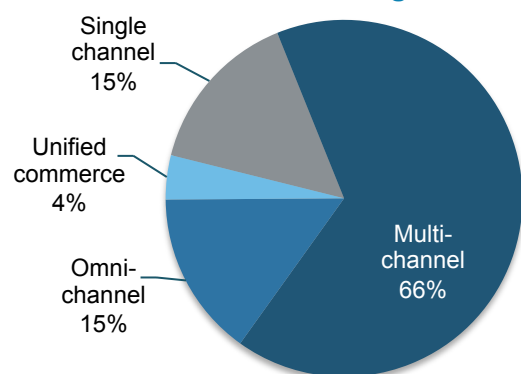
**Exhibit 24
Company Category**

Drug Store/Health & Beauty 2%
Other 2%
Specialty - Hard Goods 35%
QSR/Restaurant 2%
Convenience and Fuel 2%
Specialty - Soft Goods 32%
Grocery, Food, and Beverage 4%
General Merchandise 21%

**Exhibit 25
Annual Revenue**

Less than $100M 8%
$100M to $499M 21%
$10B or more 15%
$500M to $999M 27%
$5B to $9.99B 4%
$1B to $4.99B 25%

**Exhibit 26
Channel Integration**

Single channel 15%
Unified commerce 4%
Omni-channel 15%
Multi-channel 66%

About Boston Retail Partners

Boston Retail Partners (BRP) is an innovative and independent retail management consulting firm dedicated to providing superior service and enduring value to our clients. BRP combines its consultants' deep retail business knowledge and cross-functional capabilities to deliver superior design and implementation of strategy, technology, and process solutions. The firm's unique combination of industry focus, knowledge-based approach, and rapid, end-to-end solution deployment helps clients to achieve their business potential.

BRP's consulting services include:

Strategy	**Business Intelligence**	**Business Process Optimization**
Point of Sale (POS)	**Mobile POS**	**Payment Security**
CRM	**Unified Commerce**	**Customer Experience & Engagement**
Order Management	**E-Commerce**	**Merchandise Management**
Supply Chain	**Information Technology**	**Private Equity**

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Manhattan Associates®

supply chain **commerce** delivered™

About Manhattan Associates

Manhattan Associates makes commerce-ready supply chains that bring all points of commerce together so you're ready to sell and ready to execute. Across the store, through your network or from your fulfillment center, we design, build and deliver market-leading solutions that support both top-line growth and bottom-line profitability. By converging front-end sales with back-end supply chain execution, our software, platform technology and unmatched experience help our customers get commerce ready—and ready to reap the rewards of the omni-channel marketplace.

Omni-Channel Order Management and Next-Generation POS: Better Together
As you move towards modernizing your legacy point-of-sale, you have an opportunity to make your stores—and most critically, your store associates—a true counterpart of the digital experience.

Our solutions can help you provide:

• A consolidated view of customer interactions across channels, to help your associates personalize the in-store experience in a way that feels natural.

• The ability to capture online and in-store transactions in a single swipe, removing friction from selling your full network of inventory.

• Mobile tools to help your store associates handle a wide variety of tasks, from selling to service to fulfillment, anywhere on the store floor.

Learn more at www.manh.com/OMSPOS

Gold Sponsor – Aptos

About Aptos

In an era of virtually limitless choice, sustained competitive advantage only comes to retailers who engage customers differently – by truly understanding who they are, what they want and why they buy. At Aptos, we too, believe that engaging customers differently is critical to our success. We are committed to a deep understanding of each of our clients, to fulfilling their needs with the retail industry's most comprehensive omni-channel solutions, and to fostering long-term relationships built on tangible value and trust. More than 500 retail brands rely upon our Singular Commerce platform to deliver every shopper a personalized, empowered and seamless experience…no matter when, where or how they shop.

Learn more: www.aptos.com and info@aptos.com.

Silver Sponsor – Demandware

demandware
move faster, grow faster

About Demandware

Demandware believes that in order to provide consistent and seamless interactions wherever and whenever consumers shop, retailers need to transform the physical store, which helps provide a single view of customers, orders and products across all retail channels. Retailers need this now and in real--time. This spans digital, store, fulfillment and customer service. To remain competitive, retailers must also take the shopping experience to the next level with personalization and branded innovations. Nowhere is this more important than where the majority of transactions take place, the store.

Success in retail today requires that stores be part of the unified commerce experience. However, disparate commerce systems between the store and other channels make a seamless shopping experience difficult to achieve. It is simply not sustainable or realistic to innovate on legacy store technology. Demandware can help retailers' achieve the store of the future by following three principals:

1. **Cloud:** Bring POS into the cloud to drive store innovation
2. **Unified:** Merge the physical and digital experience together to support a unified customer experience
3. **Mobile:** Empower associates to become mobile and engage with customers where decisions are made– on the sales floor

At Demandware, the store is an integrated part of the Demandware Commerce Cloud, the cloud--based, enterprise platform for unified commerce. Through the platform, both store operations and digital commerce share strategic capabilities such as merchandising and promotions management, as well as a single view of customers, products, prices, orders and other critical data elements. While traditional and mobile POS options empower sales associates to engage customers wherever they are with full tendering, inventory lookup, and assisted selling capabilities. With one platform from Demandware, retailers are finally able to create unified experiences, a single lens in which to express their brand, engage consumers and drive retail success now and in the future.

For more information, visit http://www.demandware.com, call +1--888--553--9216 or email info@demandware.com

Silver Sponsor – Omnico

omnico

About Omnico

omniStock
This leading edge, omni-channel order management hub delivers click and collect and other unified commerce fulfillment journeys in real time, guaranteeing the customer will have their merchandise when and where they expect it. omniStock is a configurable, rules-based engine which examines all channels of the business to ensure fulfillment routes and service levels are designed to optimize costs while always being able to save the sale and satisfy the consumer. omniStock, a single, accurate and real time view of your business.

omniBasket
This point of sale software is pioneering in its ability to deliver joined up transactions and a consistent, seamless customer journey across multiple touch points including mobile POS, assisted service technology, e-commerce, endless aisle, customer self-scanning and of course, traditional tills. omniBasket provides a revolutionary customer-centric approach to retail as the basket follows the customer whether at home, in-store or on the move.

These core engines support a service orientated architecture (SOA), employing API's that enable the various touch-points (e.g. Clienteling applications) to be presented to the store associates on the device of choice. Using our own highly flexible ETL Tool, integrations are fast and easy.

User interfaces are specifically designed to support precise interactions and workflows, allowing retailers to optimize the experiences they use as they inform and sell to their customers. This includes workflows based various analytical data such as identification of the shopper, customer purchases, affinities, loyalty programs, etc.

omniEngagement
Delivering search based technology to identify shopping behaviors and customer insights, omniEngagement uses that knowledge to create real-time, cross-channel personalization strategies, using micro segmentations for relevant and timely customer communications and promotional offers.

Our future-focused solutions are unrivaled in their ability to transform the customer experience and deliver impressive results for your business. It's selling, Customer centric, and Smarter.

See more at: www.omnicogroup.com/solutions
For more information contact enquiries-uk@omnicogroup.com

Silver Sponsor – UTC Retail

SOFTWARE | HARDWARE | SERVICE

UTC RETAIL

About UTC Retail

UTC RETAIL is a full-service store solutions provider to the specialty retail marketplace. We offer a suite of solutions, which leverage a unique architecture, giving retailers greater flexibility across all channels. Our innovative, full-featured software offerings include:

- **POS-J**

A best-of-breed, 100% browser-based POS solution, POS-J is highly configurable. Its flexible architecture provides scalability, omni-channel integration and the option to deploy the solution in a variety of configurations, including thin, thick or anywhere in between.

- **ReadyStore**

A full-featured mPOS solution, ReadyStore is compatible with iOS, Android and Windows devices. The application requires only a browser on the mobile device for deployment, which minimizes IT support needs and hardware requirements.

- **Gift Card and Loyalty**

As a stand-alone solution with no transaction fees, our Gift Card and Loyalty application has a low total cost of ownership. It also gives retailers greater operational and marketing flexibility, because they own the data and software.

- **WinRetail**

Uniquely designed for mid-size retailers, WinRetail is a scalable best-of-breed, multi-channel retail management solution. It includes comprehensive functionality, along with robust query and reporting tools.

Our offerings also include an assortment of retail-hardened, branded POS hardware, such as all-in-one touch terminals, distributed solutions and integrated platforms. In support of our software and hardware products, we offer a variety of implementation and on-going support services, including:
- Project Management
- Custom Development for Software and Hardware Solutions
- System and Software Integration
- Hardware Staging
- Help Desk and Store Support Services
- Depot Maintenance and Hardware Repair

With 28 years of experience and over 450,000 store-level installations, UTC RETAIL has been recognized as a leader in delivering outstanding service and exceptional value. To date, more than 200 retailers, ranging in size from 10 stores to over 2,000 locations, have chosen UTC RETAIL as their trusted partner. For more information on UTC RETAIL, call us at 1-800-349-0456 or visit us at http://www.utcretail.com.