

2020 POS/Customer Engagement Survey



21st Annual

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KEY FINDINGS

2020 POS/CUSTOMER ENGAGEMENT SURVEY - KEY FINDINGS

POS PRIORITIES

1 59% – Omni-Channel

2 52% – Enhance POS

3 44% – Unified Commerce

4 44% – Mobile POS

5 41% – Upgrade/Replace POS

MOBILE

78% - Unable to ID customer before checkout



63% - Have or plan mobile tools for associates

41% - Have or plan customer scan of products to cart

SELF-SERVICE / KIOSKS

44% - Have or plan self-checkout solution

33% - Have or plan for customer returns kiosks

26% - Have or plan for BOPIS transactions kiosks



CUSTOMER ENGAGEMENT PRIORITIES



56% - Personalization

44% - Associate Mobility

37% - Customer Mobility

Trending Up 

33% - Customer Facing Technology

22% - Customer Self-Service

OMNI-CHANNEL

63% - Have or plan Unified Commerce

28% - Have or plan cloud-based POS



82% - Have or plan omni-tokens

71% - Have or plan Start Anywhere /Finish Anywhere

FORMAT GROWTH PLANS

48% - More stores

44% - Special event hosting

41% - Pop-Up locations

15% - Add Café/Restaurant



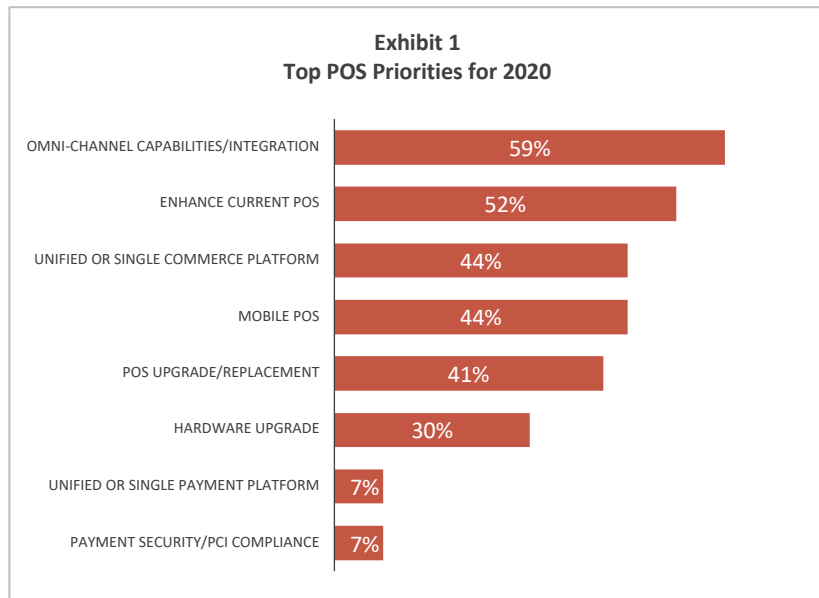
“Today’s customers are driving the retail experience of tomorrow. If retailers don’t stay ahead of the curve and anticipate these needs, they risk being left behind.” - Ryan Grogman, Managing Partner, RCP

THE EVER-EVOLVING STORE

Retail started with simple markets, where people could gather to buy and sell products or services, get something to eat, socialize and potentially be entertained. It was local, the merchant knew his or her customers and it was an essential part of life. Cultural, societal, political and economic forces have constantly acted to redefine retail through time. This constant evolution is nothing new, but the pace of change has exponentially accelerated. Technology advances, from transportation, communications and of course digital technology, is and will continue to be drive this rapid change.

Recently, mobile technology has been the greatest accelerant to retail change and increasing customer expectations. Customers expect and in an increasing number of situations can start to dictate their own personalized experience within retail, including the where and how of retail. Self-service capabilities, including a significantly broadening number of self-checkout technologies and experiences are rising trends empowered by mobile and like technologies.

A strong unified commerce strategy is required by retailers to meet these heightened needs and position themselves for future success. Among retailers surveyed, the top two POS priorities for 2020 are focusing on omni-channel capabilities (59%) and enhancement of their current POS (52%). These initiatives most likely reflect critical shorter-term priorities as we see a number of retailers also considering a unified commerce platform (44%), mobile POS (44%),



and a POS upgrade/replacement (41%) in 2020 as part of longer-term strategies for the store experience (Exhibit 1).

As retailers look ahead, it’s about more than technology or unified commerce as the answers. It starts with the customer and defining a holistic customer experience that is the right fit for each brand. The future also involves varying formats and definitions of retail stores as our ideas of traditional retail morph and in many ways are potentially getting back to their original retail roots. These themes and retailers’ plans are what the 2020 POS/Customer Engagement Survey will analyze.

THE CUSTOMER JOURNEY



As digital interactions continue to drive and define heightened customer expectations, retailers are challenged with finding ways to connect with customers and provide an enhanced and personalized in-store experience

With an ever-increasing number of touchpoints, retailers and consumers can interact 24 hours a day, throughout the entire year. In-store sales continue to drive the majority of revenue for the retail industry, but it is by no means the only way in which purchasing decisions and brand satisfaction are influenced. From social media,

to retailer websites, to mobile apps, shoppers have constant exposure to retail brands and products. The concepts of “online only” or “store only” shopping is quickly becoming obsolete: retail is now the convergence of the digital experience with the physical environment and it requires a new customer engagement model to support it.

Many of today’s successful retailers have begun mapping out these touchpoints and interactions with their customers in order to better learn what capabilities are important to these different personas. Understanding this Customer Journey is critical for ensuring a retailer’s overall customer engagement strategy is aligned with what are key requirements for their shoppers.

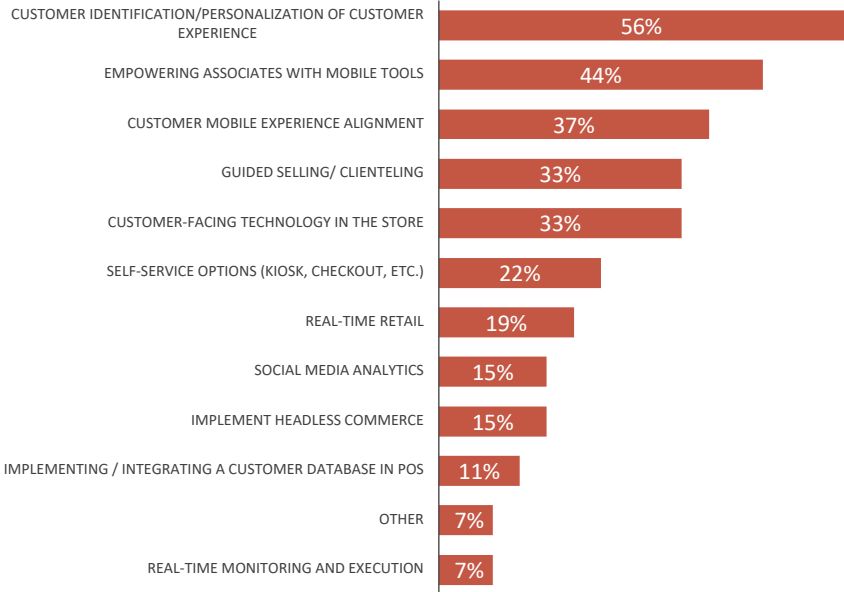
Given what consumers have come to expect from their highly tailored online shopping experiences, it’s not surprising that Personalization once again holds the top spot heading into 2020, with 56% of retailers identifying that as their #1 Customer Engagement priority (Exhibit 2).

Retailers are focused on innovative ways to enhance and personalize the in-store shopping experience, and this year’s survey results show strong increases in leveraging mobile devices and introducing customer-facing technology.

In fact, the top 5 responses to this year’s survey question around Customer Engagement Priorities can be correlated with an end result of curating a more personalized experience for their in-store shoppers. Between enhancing mobile tools for associates (44%) and aligning the overall customer mobile experience (37%), 4 out of 5 retailers have identified mobility to be a top priority for 2020.

Given consumers’ ability to quickly search and compare products, promotions, rewards and prices, all from their handheld device, retailers are increasingly finding it important to ensure that their

**Exhibit 2
Top Customer Engagement Priorities for 2020**



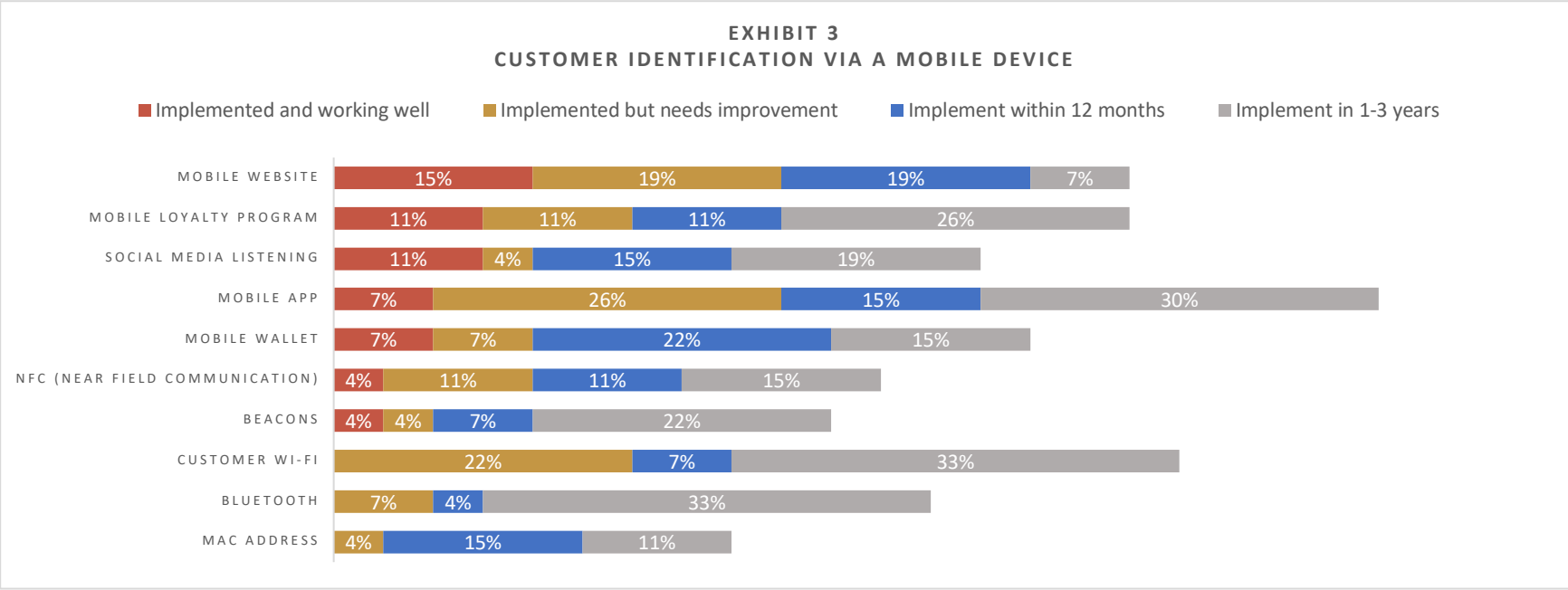
associates have access to the same amount of information in real-time on the sales floor. By providing these associates with the right mobile tools, not only do they become much more knowledgeable, but they can be seen as value-added resources to shoppers by being able to provide access to customer-specific shopping history, tailored recommendations, and personalized offers. One-third of the retailers surveyed indicated that guided selling and clienteling were a critical customer engagement priority for 2020.

Beyond mobile devices, another large theme from this year's survey is the rise in In-Store Customer Facing Technology (33%) and Customer Self-Service Options (22%). Each of these topics saw noted increases from the previous year's survey, which reflects the trend in allowing customers to browse, become educated and purchase products the way they want. Forward-thinking retailers

are increasingly introducing technology solutions in-store that can provide an interactive and engaging experience for their customers.

Other top priorities are focused on implementing real-time retail (19%) along with real-time monitoring and execution (7%). As retailers continue to tighten up their omni-channel integrations and even implement true unified commerce systems, the ability to share common data about products, inventory, pricing and transactions in real-time also becomes an obtainable reality.

Ever-increasing customer expectations, retail transparency and today's anywhere, anytime, anyhow shopping have put the customer experience center stage for most retailers. This retail transparency also makes the retailer's job more difficult as they can no longer differentiate on just product or price, the customer experience itself has become the key differentiator and what is driving customer loyalty in 2020.



PERSONALIZATION



Personalization trends are becoming a major influencer to the customer journey with targeted interaction at the right time and place. The abundance of data and multi-channel customer touchpoints requires savvy retailers to employ different marketing technologies to interact and influence the customer

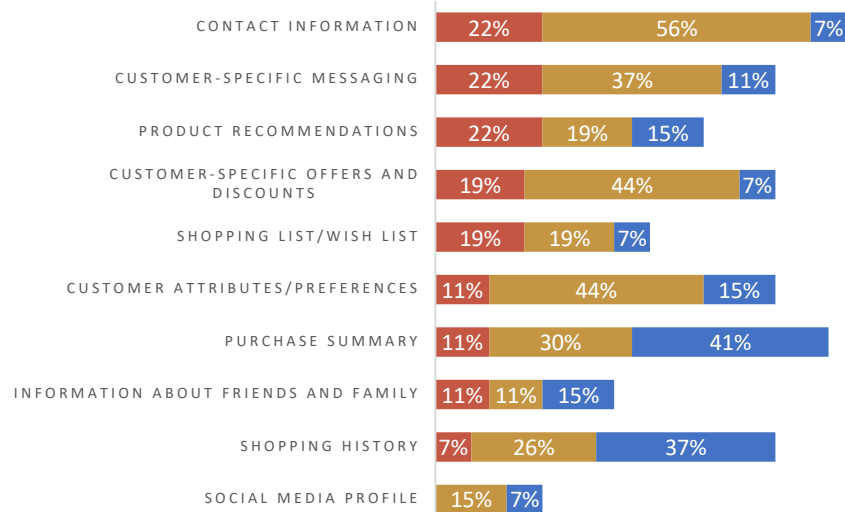
Personalized marketing aims to reach each customer with a customized message for the exact solution for which they are researching or buying. Creating this one-on-one experience to each individual buyer is not only challenging but complex. Whether the interaction occurs in-store while shopping, at checkout, or while interacting with an ecommerce site, the retailer's tools must seamlessly interact.

Mastering personalized messaging without over-communicating or impacting the customer's view of privacy is a retail and marketing art form

Customer identification is critical; however, 78% of retailers are unable to identify their customers prior to checkout (and 22% can't identify them until after checkout or not at all!), which is too late to empower the associate and influence the current purchase decision. Without early identification of the customer, retailers miss critical engagement opportunities to increase sales (Exhibit 4).

EXHIBIT 4
CUSTOMER INFORMATION AVAILABILITY

■ Pre-checkout ■ During checkout ■ After checkout



Retailer capabilities

This year, we see progress and interest in technology methods involving the customer's mobile phone for identification when they enter the store and for some retailers as they approach the store. The most prevalent technologies that retailers are currently using to identify customers are mobile website/apps (both at 34%), followed by mobile loyalty programs and customer Wi-Fi (both at 22%). However, it should be noted that most retailers using these technologies indicate that they need improvement (Exhibit 3).

Retailers continue exploring alternative customer identification tools, such as the combined use of NFC & Beacons (23%) and social media listening (15%).

Proximity marketing involves smart beacon technology to identify customers via their mobile devices and serve up ads based on where they are geographically

Proximity marketing is being deployed in several ways; such as an RFID chip placed on a product or shelf. When near-field communications (NFC) is enabled on the customer's smartphone, the communication with the customer is direct. Retailers are also establishing geofencing to serve up coupons or product information when they enter into a specific zone or area in or near the store. Also, content can be pushed through Bluetooth, Wi-Fi connectivity and mobile browsers.

Personalized and targeted marketing methods allows for a deeper understanding of the buyer's wants, needs and behavior patterns. It is not invasive and enhances the customer's shopping experience by serving them with information about products, reviews, and ratings at exactly the moment they need it, or by serving them coupons for products/services in their immediate reach.

Creating a meaningful experience with your customer is knowing who they are, what they want and when they want it

The big trends in customer identification lies in retailers' future plans. Within three years, 59% of retailers plan to use loyalty programs and 78% plan to use mobile apps to identify customers in their stores. 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 to identify and track as many customers as possible as soon as they enter the store. This ongoing strategy to introduce the right digital

capabilities to a customer's mobile smartphone, as they enter the store, may ultimately be the the final solution to achieving much higher customer identification.

However, while retailers realize the need to arm their associates with the right training and better information, it is still a game of catch-up to the abundance of information and technology that customers possess.

This suggests that retailers are missing opportunities to increase sales because associates can't access customer data until the customer is at the checkout (or in a number of cases, after the customer has checked out), which is too late. With customer data available pre-checkout, associates can influence the transaction with personalized promotions and relevant product suggestions to customers.

**EXHIBIT 5
TAILORING THE SHOPPING EXPERIENCE**



Delving deeper into how associates can tailor the customer’s shopping experience based on available information uncovers capabilities that are limited but increasing (Exhibit 5). This is good news as it represents significant progress and engagement opportunities for retailers to meet customer needs. The most prevalent customer personalization capabilities involve offering personalized rewards based on customer loyalty and suggested selling based on previous purchases. We are now seeing approximately half of retailers offering these capabilities, which is up significantly from last year when 23% of retailers offered both. There are also expansive plans to drive further utilization of customer information to tailor the shopping experience. Within two years, 85% of retailers plan to provide some form of suggested selling based on previous purchases and 81% plan to offer personalized rewards based on customer loyalty.

Opportunities

Each step along the customer journey offers retailers opportunities to engage with the customer and strengthen the personal relationship to drive sales and customer loyalty.

While some retailers are still “blast emailing” and frustrating customers with multiple deals per week or even per day, the retailer that personalizes all aspects of the customer journey with relevant marketing communications will stand above.

Whether the personalization aspect of this approach is loyalty programs, product recommendation engines, gamification, proximity marketing or even behavioral, the ability to offer targeted messaging and unique promotions to each customer based on needs and wants will be a key differentiator in today’s marketplace.

MOBILE

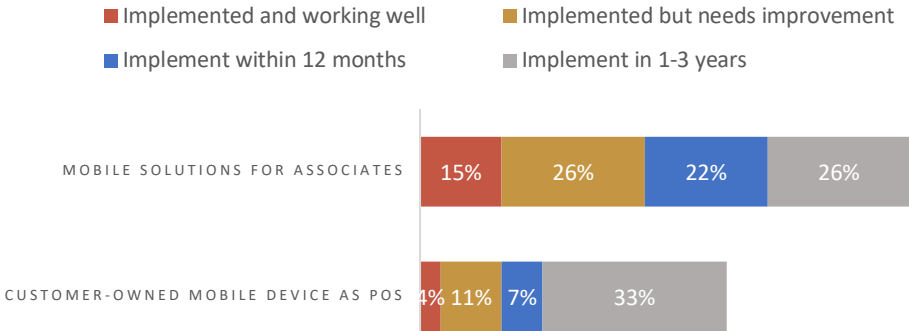


Mobile device applications for associates and customers soar as retailers see tremendous opportunities to take control of key functions typically performed at the front-end or in the Backoffice

Retailer capabilities

Over the next year, the use of mobile devices and tablets – both in the hands of associates and customers – will continue to increase (Exhibit 6). 89% of retailers plan to provide mobile solutions to their associates to enhance customer service within three years. Interestingly, we saw a significant increase in the number of retailers enabling customer-owned devices for POS with 8% offering last year (and all needing improvement), while this year 22% will

EXHIBIT 6
IMPLEMENTATION STATUS



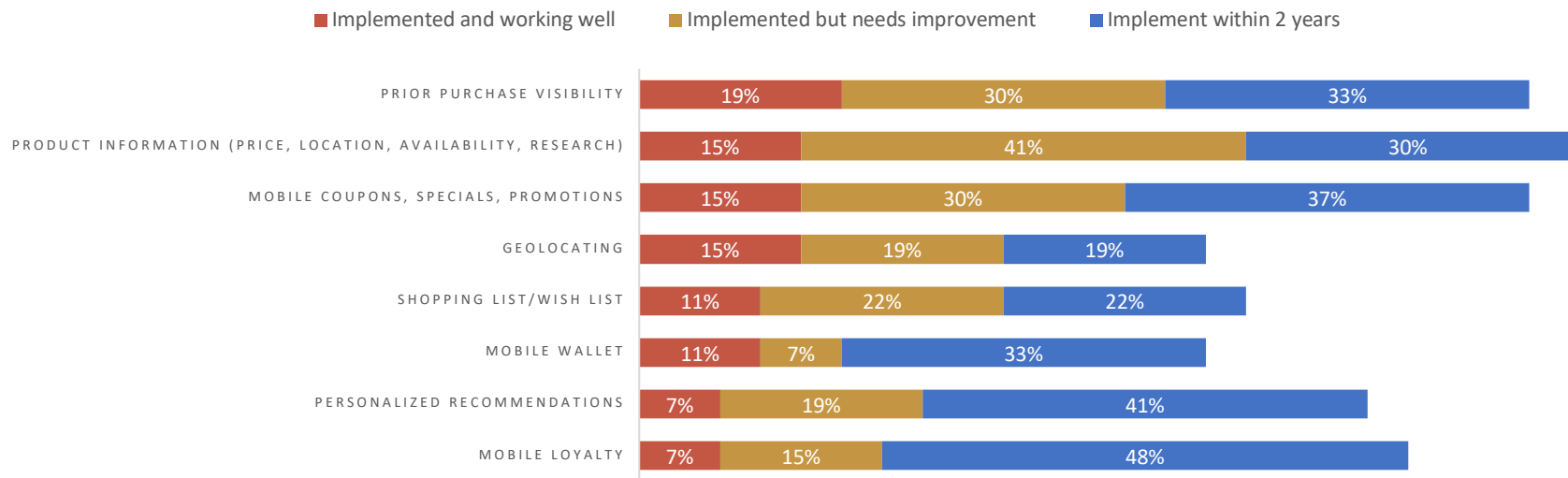
offer it (although half still need improvement). This is consistent with the trends we are seeing in the industry.

Mobile point-of-sale (POS) enables associates to complete a customer's purchase on the sales floor at the moment the buying decision is made. It also frees the associate from the checkout area to allow for more personal interactions on the sales floor, and simplifies the checkout process by eliminating the need to wait in line. This also reduces the probability of a customer changing their mind, as the purchase can be made as soon as the customer makes the decision avoiding a customer reconsidering the purchase.

Putting mobile technology in the hands of customers and retail associates is driving a transformation of the customer engagement model

These same mobile devices are being used for associate facing applications. Retailers are leveraging mobile, so associates can multi-task, provide "on the sales floor" customer service when needed while performing day-day to activities. These tools are being put in place to enable and take advantage of real time inventory and customer data that is available at an increasing number of retailers. These powerful associate applications enable productivity increases through refined processes and key capabilities. Tools are being incorporated into the applications to provide training (short videos, interactive help) and track productivity by monitoring usage. These same tools are providing central views to metrics that providing feedback on completed versus overdue tasks and time to complete versus peer averages and ultimately used to determine the effectiveness of device quantities in the field

EXHIBIT 7
CUSTOMER FACING MOBILE SERVICES



Unfortunately, retailers are playing catch-up as the proliferation of tablets and mobile phones is only at the beginning

The good news for vendors is retailers are invested not only in software but in hardware. Customer and associate facing mobile services such as product information, MPOS and task management are on the rise (Exhibit 7). In the past year, retailers have increased focus and investment in all areas of mobile, however, there are still key challenges retailers need to be mindful of, such as; network demands, hardware life-cycle and lost-stolen devices all of which can be enhanced by implementing new technologies and staff, (or outsource) to support Mobile Device Management (MDM) tools.

Opportunities

We still see issues with how well these new mobile applications and processes are working as the “implemented but needs improvement” category is still large for most mobile services, which likely indicates that the processes currently in place have been rushed to production before they were fully tested and perfected.

While the shift to mobile tools can dramatically enhance the customer’s shopping experience and improve associate productivity, it brings a share of challenges. As with any new technology, these innovative mobile approaches require a fundamental change in processes and corresponding training to educate sales associates on new processes.

The expanded use of mobile devices in stores has resulted in retailers taking a much different approach to budgeting and executing lifecycle management. Devices can have a shorter useful life than the legacy POS they are augmenting; often needing to be upgraded or replaced every 3-4 years. There is also a lost-stolen

aspect, and a higher rate of damage, that is often overlooked as devices are small and portable, so processes and monitoring need to be put in place. Additionally, the need to plan for batteries and docking stations are required to ensure uninterrupted operations.

To make the best use of mobile technologies, retailers need to have highly available and redundant in-store networks as well as a holistic approach to real-time data. Mobile devices put the associate on the sales floor with tools to engage with the customer anywhere and at any time during their shopping journey, so it is imperative to deliver an exceptional experience in line with the brand’s image.

SELF-SERVICE

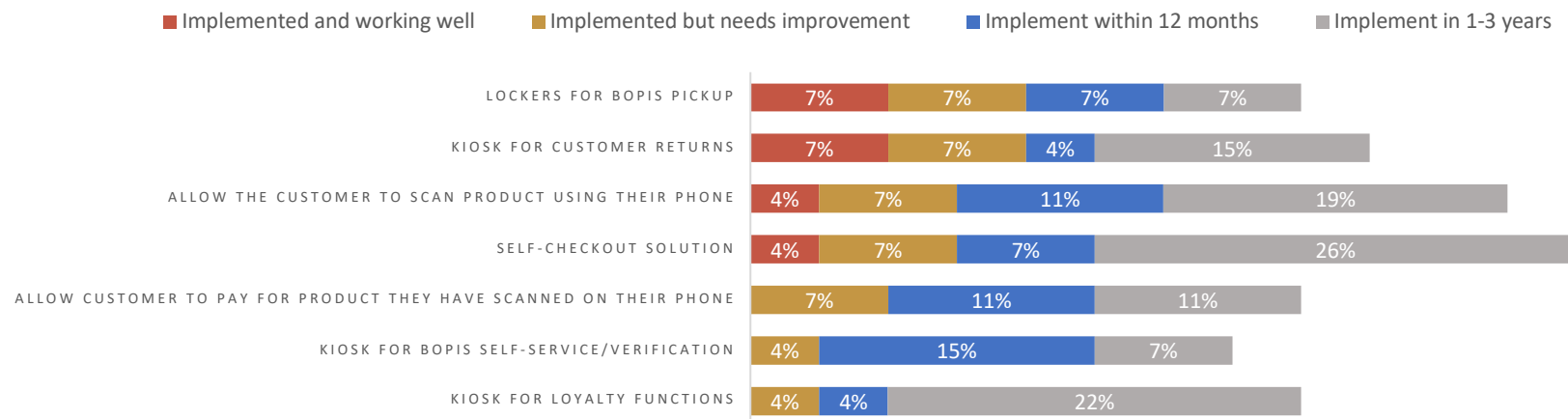


The shift in importance of self-service in retail is a significant opportunity for retailers. When implemented properly, self – service functions are a win for retailers and consumers. The consumer’s demand for improved speed of service and independence in the overall customer journey combined with higher wages and lower margins for retailers have all contributed to the importance of an effective self-service strategy.

Retailer capabilities

As the focus within the store shifts to offering consumers multiple shopping experience alternatives, each based on their needs at the time, self-service has become a key part of that flexibility. Differences in retailers’ self-service approaches are vast; ranging from wait and see, to proof of concepts, to “all in”. Factors driving

EXHIBIT 8 SELF SERVICE OPTIONS



the retailers' commitment to self-service investment include, core customer demographics, IT budgets, store labor models, and POS application maturity.

The proliferation of consumer mobile devices combined with the younger demographics' ubiquitous use of technology offers new opportunities for retailers to enhance their ability to meet or exceed their customer's preferred service experience

Most retailers have spent the last 20 years driving every second possible out of the traditional check-out experience. This remains important because it is a significant component of the total in-store payroll for a retailer. With the significant shift in minimum wage and retailers' challenges hiring talented team members the shift to self-service has allowed many retailers to lower the payroll they spend on the checkout process. Often a labor reduction in the checkout

process is shifted to other points in the customer journey resulting in improved overall customer experience prior to the checkout as well as at the time of checkout.

Enabling self-service has taken on a very broad set of tools and experiences. Recently, we have seen the full experience in experiments like the Amazon Go store, and basic extensions of BOPIS, with the use of in-store lockers. 11% of retailers reported that they were either implementing or piloting allowing customers to scan products with the customers' own phone (Exhibit 8).

A key factor in the retailers' broader use of customer self-service has been the broader use of services-based architecture in POS. This shift in platform has allowed retailers to extend the existing POS, loyalty, and CRM applications to include consumer facing functions in the same application. In the past the significant majority of self-checkout and CRM applications required the retailer to manage two complete sets of code when they were extended to the customer.

Having two complete sets of code and often two completely different sets of hardware was cost prohibitive for all but the largest retailers.

The use of the newer technology has allowed retailers to extend the online experience into the consumers hands while they are in the store with a single code base. The enablement of an omnichannel wish list appears to be some low hanging fruit for retailers as 33% of the survey respondents indicate they have delivered this functionality. However, only 11% say it is working well indicating that a long road of improvement remains ahead of us in the area of a true omni-channel experience.

The significant shift by software providers and retailers to newer architectures and technologies has resulted in a much broader adoption of self-service functions by retailers. Correspondingly, this shift has resulted in a much stronger push by the POS software and hardware vendors to provide a lower cost and much more flexible solutions.

Opportunities

The use of self-service technology will have the single most impactful change in the customer journey, and retailers' budgets over the next five years

Leading retailers have already implemented newer self-checkout and self-service components while the fast followers are now in the process of throwing out their previous self-service ROI models and starting from scratch with new approaches and vendor costs. 33% of retailers expect to have a self-checkout solution in place in the next three years. When this significant number is overlaid with retailers implementing kiosks for loyalty and enhancing the BOPUS

experience we will see over half of the retailers having some type of self-service function in place in the next 3 years.

In many cases the grocery industry is a leader in some of the self-service areas. This is driven by many factors including their high cashier payroll, razor thin margins and customer frequency making it easier to “train” consumers. Additionally, the grocery segment has made a significant investment in self-checkout. In the past grocery industry has used self-checkout hardware and software provided by the major software/hardware vendors. These solutions have extremely high costs that had previously created hard to reach ROI models for most SMB grocery retailers and almost all other retail segments.

Retailers are still figuring this out as the percentage of retailers indicating that their self-service solutions are working well is very small (7% or less in all categories). We see issues with how well these processes are working as the ‘implemented but needs improvement’ category is still large for most self-service technologies, which likely indicates that the processes currently in place have been rushed to production before they were fully tested and perfected.

We saw a lot of hype two years ago when Walmart tried their proof of concept, allowing consumers to scan products using their own Phones. Walmart, learned from this and adapted. We are seeing a similar learn and adapt approach from Amazon with their Amazon Go stores. Neither of these solutions is right for every retailer. However, there are lessons to be learned from these leaders. Our survey showed that 11% of retailers are currently experimenting with allowing customers to scan product on their phone.

It is important to remember that successful technologies and approaches will vary across retailers based on costs, staffing, and customers' expectations. However, this area will continue to gain in

importance across almost all retail segments as consumers as the number of consumers expecting the ability to be able to shop in a “self-service enabled” environment will continue to grow.

For each retailer the starting point may be different. In the last 18 months we have seen retailers like Five Below and Dollar General taking new approaches to self-checkout and have broken the old high cost self-checkout model. Additionally, we have seen Home Depot refresh the look of its self-checkout experience with new technologies that have lower implementation and ongoing operational costs.

Other retailers are focusing on areas such as kiosk with 22% of retailers seeking to improve the BOPIS experience in the next 3 years with Kiosks. An additional 26% of retailers plan to use kiosks for loyalty functions in the next 3 years.

To make the best use of these self-service technologies, most retailers need to reset everything they knew about the 20-year-old self-service technology and its costs models. We are seeing successful retailers working closely with their vendors and internal IT, Marketing, and Sales Operations teams to take advantage of new technologies and changing customer expectations to deliver improved customer experiences, reducing IT costs, and shifting labor away from the traditional checkout. The shifted technology costs are often reinvested in improving the additional functions necessitated to improve the efficiency of cross channel returns, BOPUS and loyalty automation.

UNIFIED COMMERCE



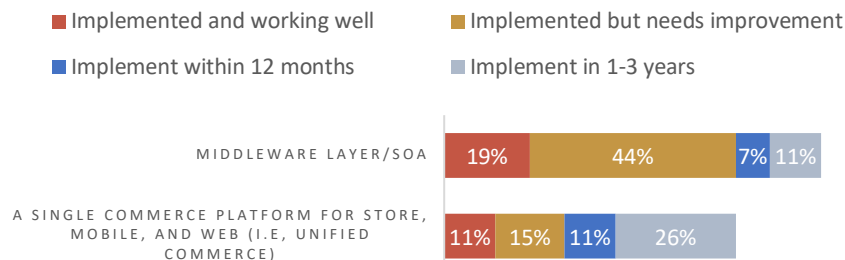
A seamless and personalized holistic brand experience is the goal, but how retailers get there is still quite complicated

Retailer capabilities

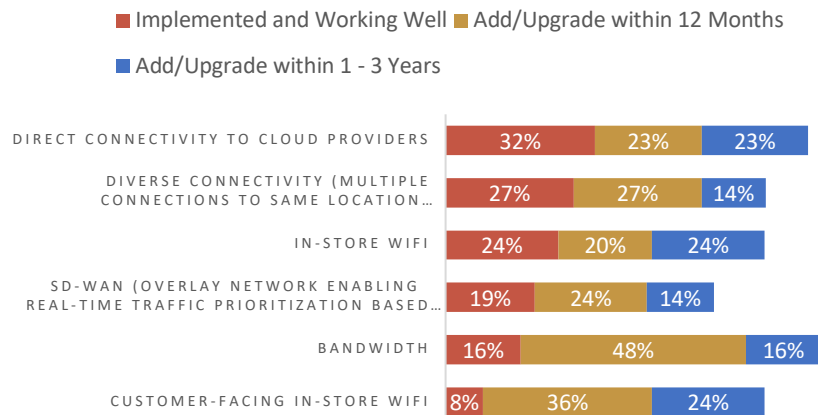
Retailers still struggle to add and integrate cross-channel capabilities while unified commerce solutions and approaches are maturing

It seems intuitive that the best answer to a seamless experience across all customer touchpoints is single commerce platform, that centralizes real-time data and unifies processes and capabilities. The reality is that for many retailers this remains an almost unattainable nirvana. Commerce applications, like POS and ecommerce platforms have evolved separately and for most retailers it remains an on-going integration challenge to integrate disparate point solutions with inventory, customer and order information across all channels. To further the integration challenge, only 19% of retailers indicate

EXHIBIT 9
COMMERCE SOLUTION IMPLEMENTATION STATUS



**EXHIBIT 10
PLANNED NETWORK CHANGES**



they have implemented a middleware layer and it is working well, another 44% indicate that their middleware solution needs improvement.

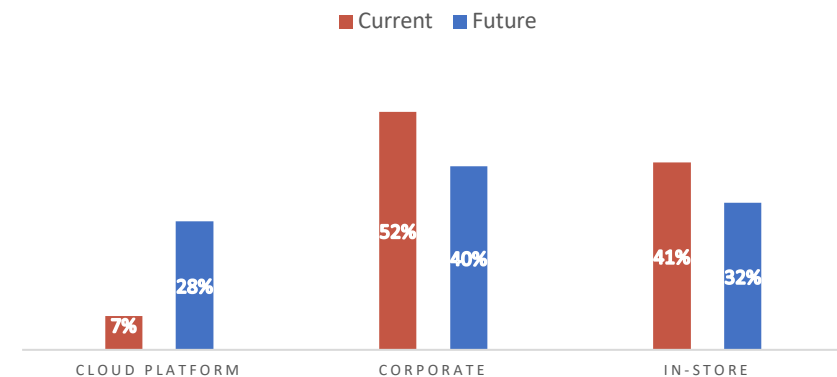
Many solution providers are evolving their applications to provide a modern micro-services architecture in the cloud, which is a large leap from decentralized point solutions of the past. The trend though is still separate platforms underneath the in-store versus online or mobile experience. As the solution marketplace continues to mature, it comes as no surprise that retailers' implementations or plans to implement unified commerce still remain in the early adoption phase. Only 11% of retailers indicate that they have implemented unified commerce and that it is working well. Future plans for unified commerce remain high, with over half of retailers indicating their solution needs improvement or plans still to implement within the next 3 years (Exhibit 9).

Clearly more and more solutions and capabilities are being delivered via the cloud. This is bolstered by the availability of much

more sophisticated network technology, such as SD-WAN and 5G. With today's network technology, retailers can truly achieve 100% uptime – removing the last perceived hurdle in moving towards cloud-based commerce solutions and moving away from the decentralized store environment that has been the foundation of the traditional retail model for decades. SD-WAN remains a great opportunity for many retailers as only 19% indicate they have currently implemented and only another 38% currently have plans to implement (Figure 10).

Many more retailers are planning for cloud-based POS in the future, up to 28% this year, but many are still hesitant to move POS to the cloud. As unified commerce solutions, including OMS, POS and Real time inventory functions, mature and more retailers adopt better network technology we expect this number will climb significantly over the next few years (Exhibit 11).

**EXHIBIT 11
FUTURE POS PLANS**



Opportunities

Retailers continue to make progress in their journey towards Unified Commerce with 82% of them indicating that they have implemented some type of real-time inventory visibility. However, a significant opportunity remains as half of those same retailers indicated that their solution needed improvement. Some progress is also being made with enterprise order management, with 56% of retailers indicating they have implemented enterprise order management and an additional 11% of retailers plan to implement an order management system this year.

Unified Commerce solutions and retailer adoption currently remains limited, but the future is coming into better focus

Unified commerce has continued to be a challenge for many and the solution marketplace remains fragmented with different approaches. Now, is the time for retailers to map out clear goals for the desired customer journey and select partners and solutions as part of a multi-phase strategy to reach the end goal. Customer expectations and competitiveness in the marketplace will continue to increase, and agility to act and respond is critical to future success.

IN-STORE PAYMENTS & SECURITY



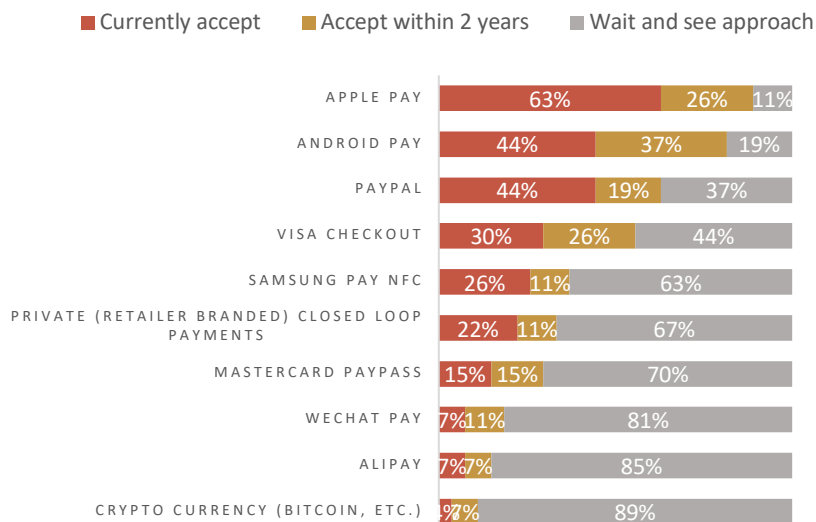
Personalizing the customer experience means that today's retailers must also think about information security beyond the recent focus on payments

Retailer capabilities

Retailers are addressing key payment security threats while positioning themselves for new defenses moving forward

Moving into 2020, retailers are focusing their in-store security efforts in two critical areas: in-store payments and customer data. With news of retail breaches continuing to make headlines, it is imperative that retailers have a strong information security team and policies in place to address these separate, but related topics. The good news is that the continued migration of store applications and data to the cloud makes security easier, with the associated customer data residing in a centralized location with robust security tools. And the increased use of encryption and tokenization means

EXHIBIT 12
ALTERNATIVE PAYMENT TYPES



many retailers have taken all sensitive data out of their physical store environment.

For the past several years, RCP has espoused the importance of a multi-tiered approach towards payment security. Specifically, the three most critical steps towards secure payment processing include: enabling support for EMV, end-to-end encryption (E2EE) and the use of tokenization in lieu of any store card data. Each of these showed continued increases in this year's survey as the majority of retailers have now implemented these components.

With these now in place, retailers are turning their attention to other aspects of payment security. One of these security enhancements is the use of a common token solution across the enterprise ("omni-token"), with 44% of retailers now having implemented across their sales channels (Exhibit 13).

Another area which continues to see growth across the retail industry is the acceptance of mobile payments, which enable the

ability for customers to make purchases with their smartphone while also providing an additional level of security that isn't available with physical credit cards, even EMV-enabled cards.

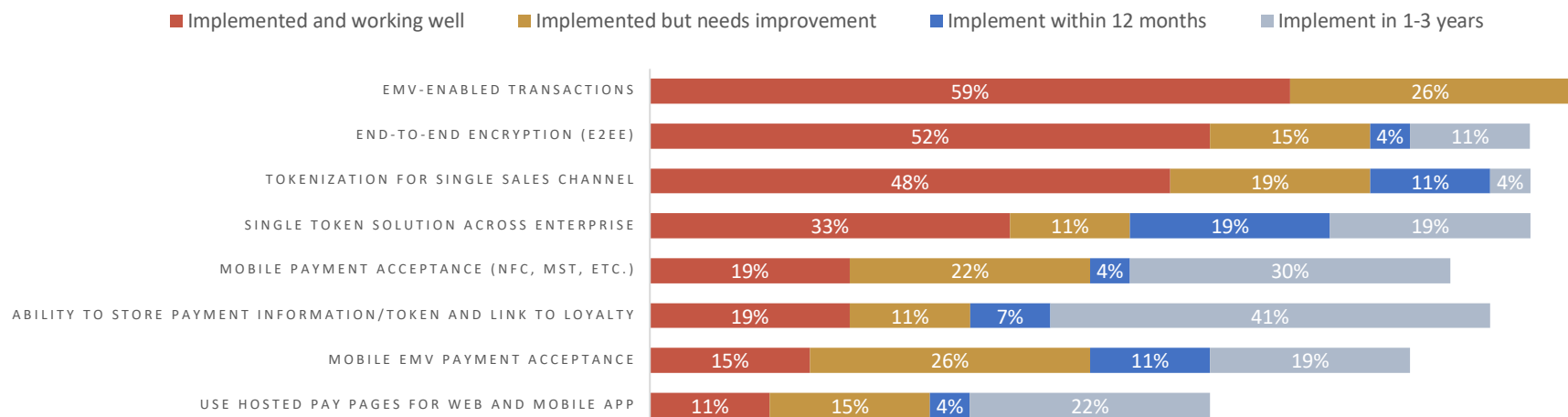
Apple Pay, Android Pay and PayPal continue to be the most widely alternative accepted alternative payment types in this survey (Exhibit 12). The growing support from the payment software ecosystem for these alternative payment types is helping to drive retailer adoption and consumer behavior.

Opportunities

Retailers need to ensure they maintain the trust of their customers as they continue to grow and utilize the amount of information collected

As retailers continue to place personalization as a key customer engagement priority, they must also address the responsibilities

EXHIBIT 13
PAYMENT SECURITY TECHNOLOGY PLANS



they bear in collecting and harvesting the requisite customer data required to provide that tailored experience. Consumers continue to want a custom experience built upon information representing their transactional history and noted preferences, but they also trust that retailers won't put their personal information at risk.

While more information offers a more customized experience, it also provides a greater opportunity for data theft and fraud. Retailers need to establish security policies that ensure the data privacy of their customers' information.

Retailer capabilities

The technology necessary to provide a fast and easy sales transaction is critical to keeping customers happy by providing an efficient platform that can be rapidly adaptive to changing consumer demands

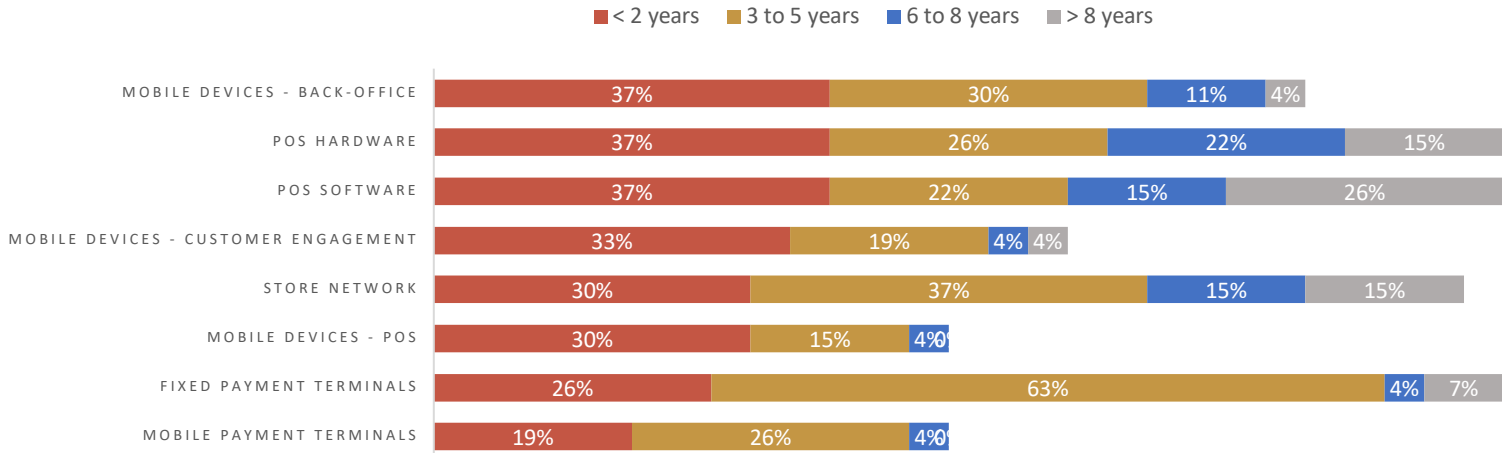
Retailers are looking to refresh their hardware with the latest offerings to take advantage of versatility and usability for multiple functions. Over the past two years, many retailers have upgraded or added mobile devices and half the mobile POS devices are less than six years old (Exhibit 14). This is a trend we expect to see to continue. We were expecting to see a larger spike in replacements this year in the area of mobile devices driven by the Microsoft CE operating systems reaching End-of-Life. Seeing only a moderate increase in replacements leads us to believe that many retailers

CURRENT STATE OF TECHNOLOGY



Most retailers are in some state of Technology Transformation

EXHIBIT 14
CURRENT TECHNOLOGY AGE



have continue to operate many of their mobile devices with the unsupported OS.

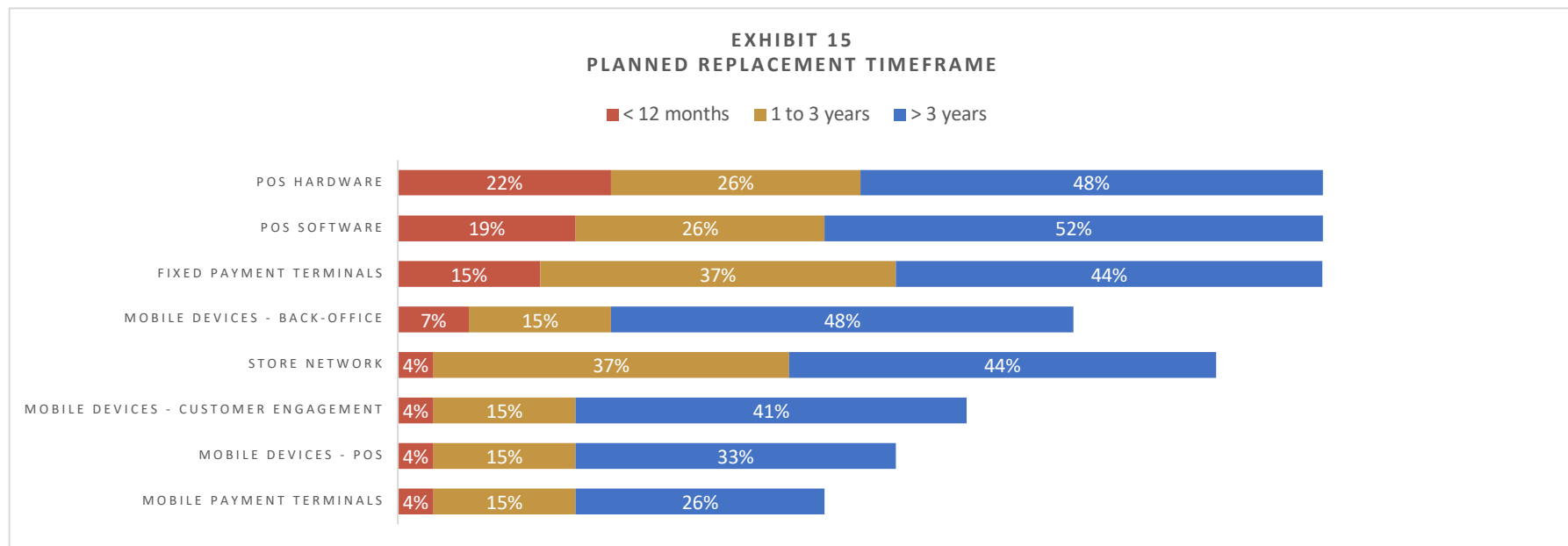
A remarkable 37% of retailers are running traditional fixed POS hardware that has been in operation for 6 years or longer. In significant contrast a very small, (4%) of retailers have mobile POS hardware that is greater than 5 years old. This is very consistent with our findings that mobile POS devices break much more frequently and have shorter battery life's and, in many cases, do not have the versatility to adapt to a multi-function platform for servicing consumers.

An astonishing 59% of the retailers are using POS software that is less than 6 years old. This continues to be a significant shift for retailers who used to pick a software and run it for well over 8 years. This appears to be driven in many cases to take advantage of new technology platforms offering extensibility of the applications for omni-channel functions, service-based architecture, and lower

cost of ownership. In the past POS replacements where often driven by the need to extend core POS functions such as pricing or loyalty. These functions now appear to be table stakes while interoperability and extensibility appear to be driving much of the recent change.

According to this year's survey, 48% of retailers are planning to keep their current fixed POS devices in use for an additional three or more years. Only 33% of tthe same group expects to keep their mobile POS terminals greater than three years (Exhibit 15).

A remarkable 30% of retailers have replaced or upgraded their store network in the last two years and an additional 37% are planning on replacing their store network in the next three years. This is being driven by the shifting landscape of retailers with increased central components, hosted service, mobile in-store applications, and the need to support a significant number of mobile devices in the stores.



Opportunities

Multifunction mobile devices will continue to make inroads in the store environment. However, traditional POS terminals and self-checkout stations will continue to evolve and to exist

For most retailers the budget shift to replace mobile devices every 3-4 years is pushing them to make the mobile devices multifunction for efficiencies and resulting mobile POS augmenting rather than substituting for a traditional fixed POS station. The majority of retailers continue to use traditional POS stations as their basic POS, adding mobile options and additional PCs or tablets as supplements. The transition from fixed station POS to a hybrid environment and more mobile solutions is underway but it is a slow process. With the continued use of customer self-scanning and self-checkouts as pay

stations the number of POS devices will slowly continue to decline in most retail environments.

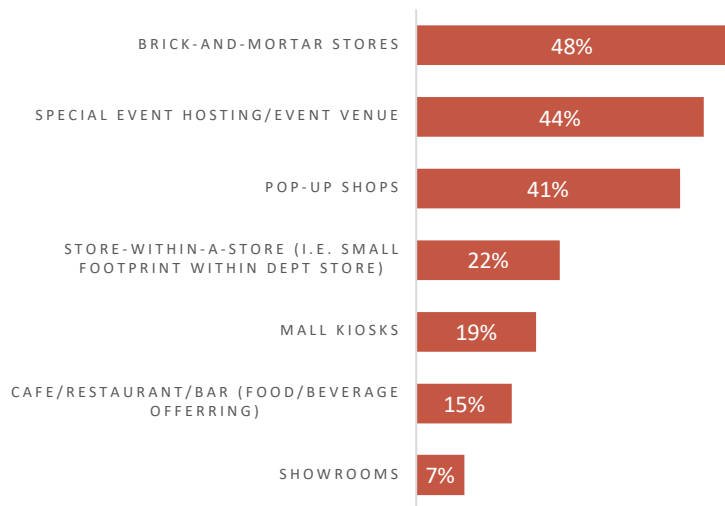
Additionally, the shift in POS software to a more services-based approach will allow POS software to operate on older (slower) hardware for a longer period of time. This is often resulting in the operating system or the need to integrate to newer peripherals driving the need to upgrade instead of what used to be memory and processor speed issues most often driving upgrades.

FUTURE STORE



Stores remain the focal point of retail but physical retail continues to evolve and redefine the where, when and how of retail experiences

EXHIBIT 16
FUTURE GROWTH PLANS



Retailer capabilities

Retailers continue to implement different retail formats and revenue streams and have large plans for new services and technology

There has never been a one sizes fits all approach to retail and that could never be truer than now. Whether the format of the store or the services offered, the answer is going to vary based on the type of retailer and brand positioning. Discount retailers aren't going to offer nearly as many omni-channel services as other segments and for some brands an add-on like a café makes sense where it wouldn't at all for another. Retail is part of the overall social experience for consumers and the lines are blurring between

traditional shopping, dining and entertainment venues. Retailers are moving into other venues and in some cases dining and entertainment are moving into traditional retail spaces. We expect we will continue to see more of this trend as social and other macro forces continue to redefine retail.

Some retailers plan to grow traditional locations (48%), some are consolidating locations, and some plan to grow through other formats like pop-ups (41%) or store within a store concepts (22%) (Exhibit 16). We're not surprised to see pop-ups trending up as many retailers are looking for more cost-effective ways to add seasonal locations or try out different geographies without the commitment of a permanent location. Plus, the growth of dedicated pop-up experience venues with shopping, dining and entertainment has grown tremendously, especially during the holidays. Retailers are also seeking additional ways to create revenue and enhance their brand experience with special event hosting (44%) and cafés or restaurants (15%).

As retailers consider new capabilities within the store, we continue to see a lot of prioritization of virtual inventory, with 41% indicating they have implemented and another 18% planning to implement in the next three years (Exhibit 17). Of the 41% that have implemented, 26% indicate that their current implementation needs improvement. We suspect a lot of this could be due again to integration challenges between various systems as retailers have not yet realized unified commerce.

Personalization remains an important theme for new capabilities, as 82% of retailers have implemented or plan to offer electronic receipts with personalized suggestions and 59% of retailers have implemented or plan to implement personalized real-time contextual promotions within the next three years. Consumers continue to drive personalization expectations and those expectations derive from across all their social experiences. Retailers understand and are responding but the limitation of current systems and the real-time integration required still present challenges.

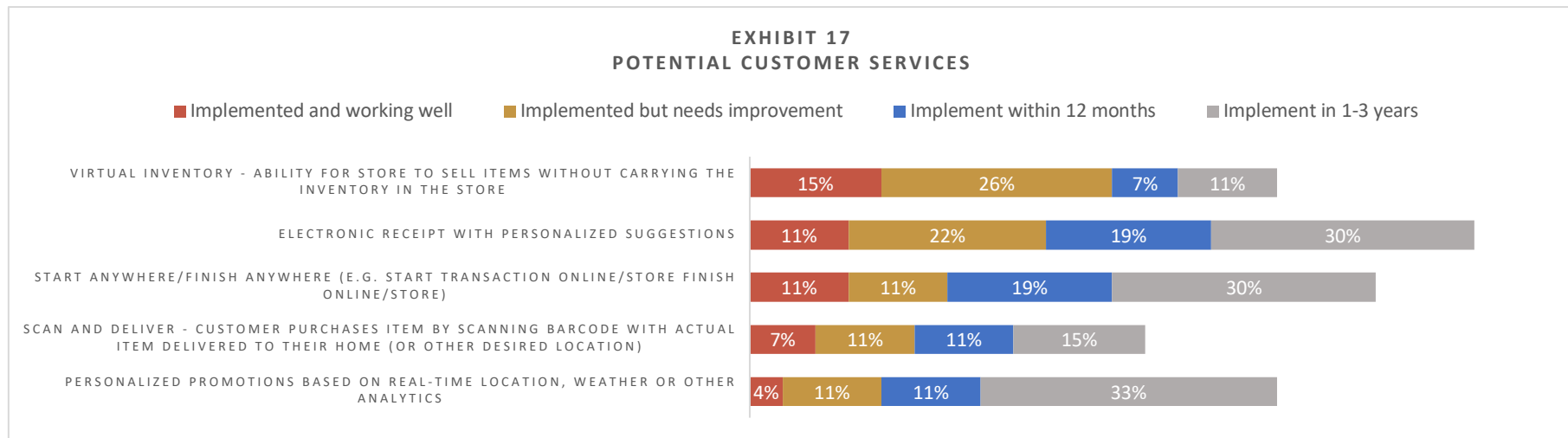
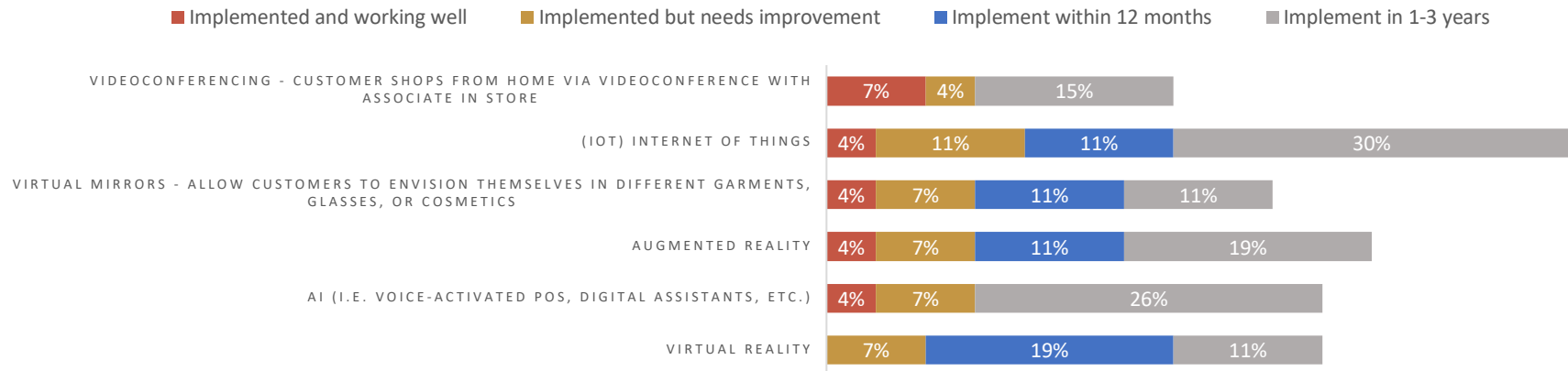


EXHIBIT 18 DISRUPTIVE TECHNOLOGIES



Another capability that will further drive the need for unified commerce solutions is a Start Anywhere/Finish Anywhere transaction capability across channels. 71% of retailers have or plan to implement this capability within the next three years. Retailers will need a strong central hub for transactions and orders to meet this need to track and access an order across all channels.

Disruptive technologies such as artificial intelligence (AI), virtual and augmented reality and the Internet of Things (IoT), are still in the experimental phase but offer further possibilities for the reshaping of experiences within the store.

IoT continues to be the disruptive technology that is of most interest to retailers, with 56% of retailers planning to have this capability within three years (Exhibit 18). IoT along with technologies like AI, augmented reality (AR) and virtual reality (VR) present opportunities to transform the store experience, especially as social experiences continue to blend. While not an immediate transformation, retailers are experimenting and thinking about the foundational elements necessary to support future innovative experiences. Additionally, IoT has an opportunity to tremendously

improve store efficiencies over the next 5 years as the expansion of digitized and connected functions and components in a store expand.

Opportunities

Retail will always evolve, it's just picking up the pace

No one knows all the coming changes in retail, and we're still amidst a major transformation, but the future of the store is coming into clearer focus.

While unified commerce remains an important opportunity for many retailers, we have to move past some of the hype and noise in the market around how and what it means and that there is no right answer for everyone. The most important element should always be considering the customer experience and journey that is right for each brand. Retailers cannot afford to sit on the sideline and wait and see. However, they cannot afford to try every new technology at once. They must carefully develop their customer journey vision and then select the right technology and partners to fulfill that vision comes through trial and adaptation.

SURVEY METHODOLOGY

Through an online survey system, RCP conducted the 21st Annual POS/Customer Engagement Survey in November and December of 2019. The goal was to gain an understanding of retailers’ planned initiatives, priorities and future trends by contacting leading North American retailers.

This report summarizes the results and key findings of the survey, offers insights 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 evaluate their customer-facing operations and technology and enhance their roadmaps for improving their customers’ experience.

The primary retail segments of the survey respondents were from general merchandise (28%) and specialty hard goods (25%). The remainder fell into other categories such as specialty – soft goods, grocery, and food and beverage. The focus on the specialty retail segment remains consistent with 46% of the overall retailer responses. (Exhibit 21)

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 64% having more than \$1B in sales (Exhibit 22).

This year’s survey also recognized the challenges retailers continue to face as they shift from a single channel environment to a unified commerce environment. While none of the respondents indicate a true unified commerce environment, there is definitely movement from multi-channel to omni-channel to unified commerce with 50% of the retailers indicating they have achieved an omni-channel environment - up from 28% last year. The majority of this shift occurred from multi-channel to omni-channel. Single-channel was 21% in last year’s survey and reduced down to 18% this year. This is an indicator that some retail models that may never move beyond a single channel selling experience (Exhibit 23).

The specific respondents for each company were primarily vice presidents and directors of store systems or IT, and C-level executives.

Exhibit 21
Company Category

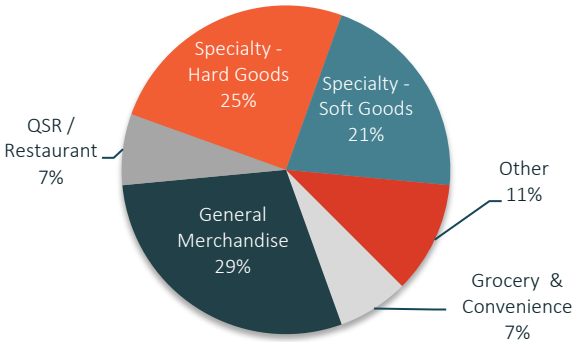


Exhibit 22
Annual Revenue

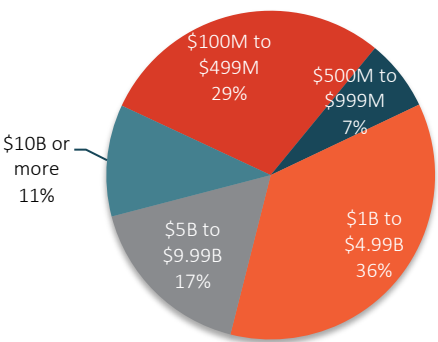
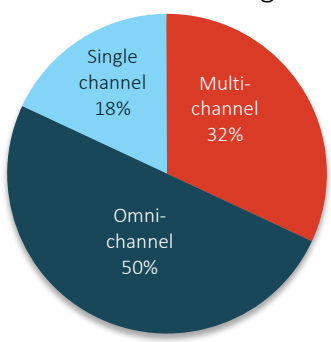


Exhibit 23
Current Channel Integration



ABOUT RCP

RCP is an innovative retail management consulting firm dedicated to providing superior service and enduring value to our clients. RCP 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.

RCP's consulting services include:

Strategy
Point of Sale (POS)
CRM
Order Management
Supply Chain

Business Intelligence
Mobile POS
Unified Commerce
E-Commerce
Networks

Business Process Optimization
Payment Security
Customer Experience & Engagement
Merchandise Management
Private Equity

For more information or assistance on any of the topics covered in this white paper, please contact us at info@retailconsultingpartners.com

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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 1,000 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.

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RedIron is a retail systems integrator specializing in vendor agnostic retail platform integration, platform functionality extension and POS System migration for mid and top tier retailers. Through our integration framework and deep understanding of retail, we improve the user experience by interfacing all major point of sale solutions to dozens of 3rd party systems which enables added functionality within a retailers existing Point of Sale infrastructure, integration to any disparate systems and migration from one POS system to another.

RedIron has proven itself through over 1100 customer facing projects with the integration connectivity, project tested services, tools and methodologies and the implementation expertise to enable retailers to deliver better more impactful technology driven customer experiences leading to improved customer retention and loyalty.

For more information or assistance, please contact: Christine Cole at 978-807-5190 or christine.cole@redirontech.com

Visit us at www.redirontech.com

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Veras Retail builds innovative omnichannel solutions to connect with consumers at every point of decision. It starts at the store, providing fixed and mobile point-of-sale, retail CRM, omnichannel inventory, mobile selling tools, and seamless cross-channel execution. Headquartered in Phoenix, Ariz., Veras is focused on using technology to rapidly implement new solutions to foster positive, meaningful, and profitable omnichannel interactions between retailers and consumers. Veras powers more than 160,000 lanes in over 50 retailers around the world. Top clients include Office Depot, Kirkland's, Floor & Decor, DKNY, Best & Less, and MEC.

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