

2022 POS & CUSTOMER ENGAGEMENT REPORT



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From the pandemic to a record-setting 2021 and now a 2022 with higher inflation than seen in decades, retail's ups and downs remain somewhat unpredictable. Despite the volatility, retail remains resilient and 2021 and the first half of 2022 did not disappoint, with an amazing rebound and customers returning to stores in record numbers. Proving that the store remains the focal point and preferred shopping channel by customers.

While not as top of mind as it was two years ago, COVID-19 has had a lasting impact on retail. From store layout changes to additional and improved delivery/pickup and self-service options. Many of these changes are welcome enhancements to the store experience and an acceleration of pre-pandemic trends.

The pandemic not only set in motion some quick scrambling by retailers to deliver or improve omni-channel services, such as Buy Online, Pickup At-Curb (BOPAC), but for many it also highlighted the cracks in their technology foundation. Many retailers now realize the criticality of technology with modern architectures that can quickly adapt and integrate to new and legacy solutions. This realization is further driving go-forward technology priorities for many retailers.

Retail has been at the epicenter of continued labor shortages and turnover with no immediate signs of improvement. Retailers continue to look for ways to attract and retain talent, but there is a long road ahead for retail to reset and market retail as a viable, interesting and rewarding career for upcoming generations. In the meantime, with a focus on improving operational efficiencies and the customer experience, retailers are adapting and integrating digital and mobile capabilities within the store, such as mobile self-services and self-checkout.

As 2022 is approaching the 4th quarter and we look ahead to 2023, much remains uncertain, with inflationary and recessionary pressures, continued staffing challenges, and supply chain disruptions. Many retailers remain cautiously optimistic and are looking for that perfect balance between these continuing challenges and their strategic plans for growth and the role of the store in the overall customer experience. One thing is certain based on the results from our 2022 survey, retail as an industry is moving forward, demonstrating its ongoing resiliency to external constraints.

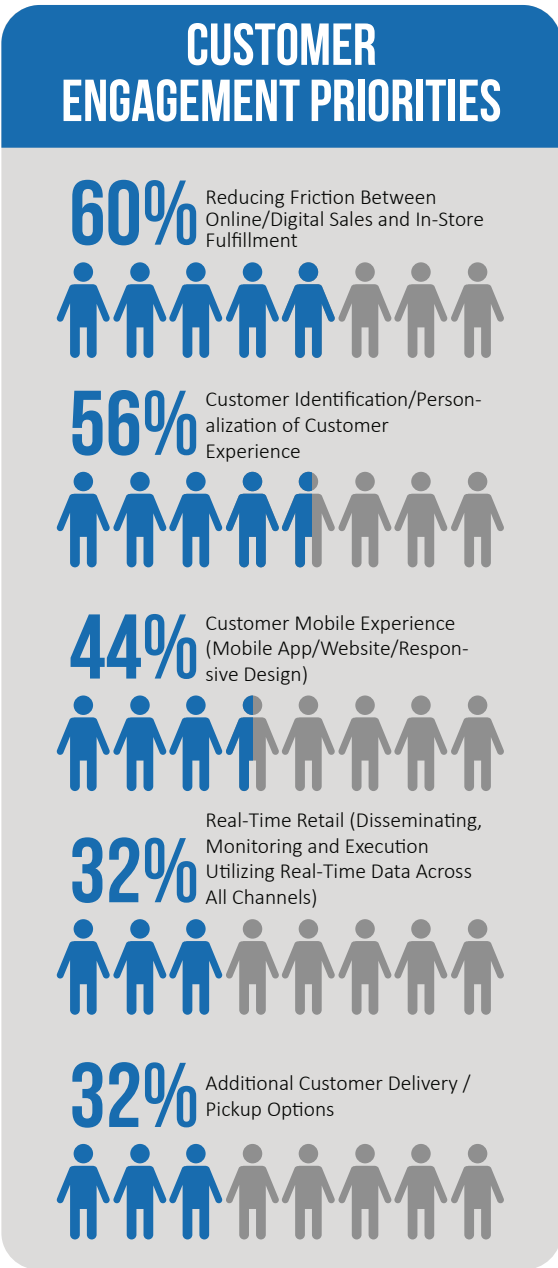
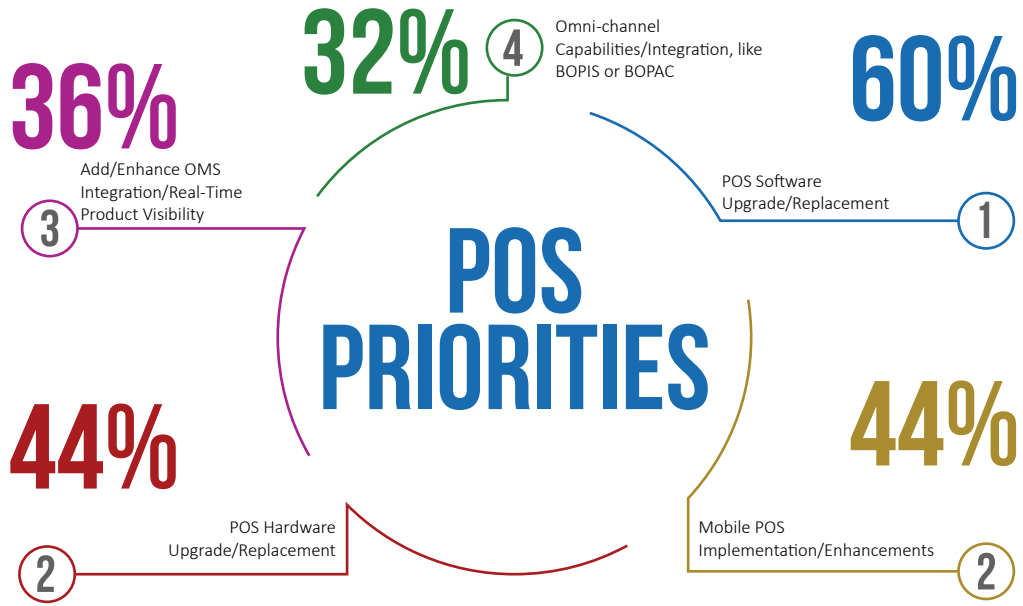
We welcome you to join us as we explore these themes and the leading retail trends for customer engagement, stores and in-store technology.

- Key Findings
- Lasting Impact of COVID-19 on Retail
- Business Priorities for 2022
- Customer Engagement Priorities for 2022
- POS Priorities for 2022
- Current State of Store Technology

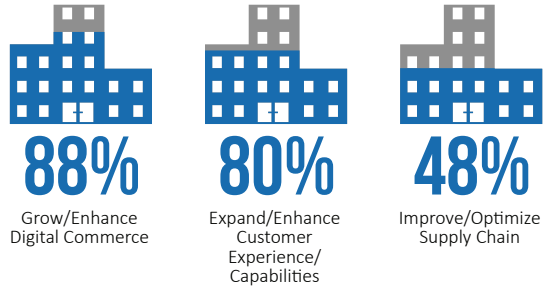
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KEY FINDINGS 2022



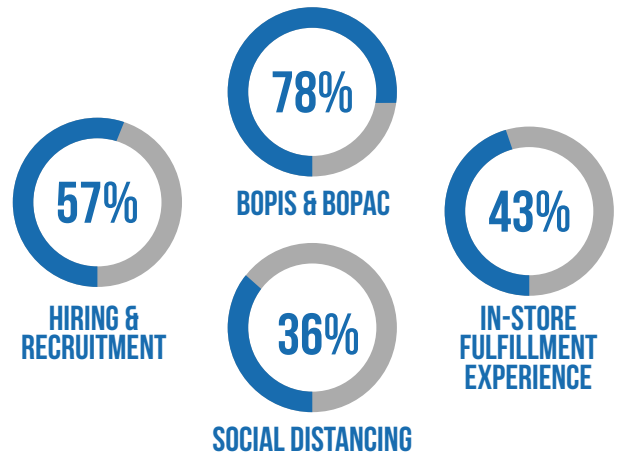
TOP BUSINESS PRIORITIES



LASTING COVID-19 IMPACTS

Most retailers made changes due to COVID-19 and many of those changes are the new "norm".

Percentage of Retailer's COVID-19 changes that are remaining:



LASTING IMPACT OF COVID-19 ON RETAIL

This is the third calendar year which has been impacted in some way by the recent pandemic, and shoppers and brands alike have been forced to adjust to the overall retail landscape. Before we get into the key operational changes noted by retailers in our 2022 survey, it's important to recognize the bigger picture that COVID-19 had, and continues to have in some cases, on retail in general.

The entire global supply chain is still feeling the effects from the pandemic, a full 24 months since cases started spiking and many borders were closed. Access to raw goods, availability of plant workers, shipping delays, and domestic distribution channels have all contributed to wreaking havoc on retail logistics over the past couple of years. Most items are now back on shelves, but the disruptions are still creating longer product availability lead times and higher prices for many goods.

Another trend stemming from the pandemic is the rise in digital commerce and omni-channel transactions. Initial store closures and government orders to restrict non-essential store visits led to unprecedented spikes in the online purchase of goods and services.

Store Layout Impacts

Social distancing is no longer the priority or mandate it was in the past couple of years, but retailers have indicated that many of the store layout changes they made to accommodate distancing will continue to be a part of their operations moving forward. Over 90% of retailers indicated they made changes to account for social distancing, with 55% saying they were only implemented on a short-term basis and 36% indicating these changes will remain for the long-term. Other store layout impacts include where product gets fulfilled for either ship-from-store transactions or Buy Online, Pickup In-Store / At-Curb transactions. Just over 43% of respondents indicated that changes that were made to accommodate the in-store fulfillment experience will remain as part of their go-forward store designs, while under 30% indicated their changes were temporary.

Store Associate Impacts

Store associates were just as impacted by COVID-19 as their customers, and they have had to deal with all these changes on a first-hand basis. As a result, the supply and demand for retail employees has undergone a significant shift in the past 24 months, with retailers struggling to attract and retain staff to work in their physical locations. With the actual act of interviewing and hiring talent also impacted, it's no surprise that 93% of retailers implemented changes to their overall recruitment process as a result of the pandemic. Online interviews, increased use of digital services to perform skill evaluation or background verification, and the shift to digital for the onboarding process are just some of the examples of changes retailers were pressed into making. A third of retailers (36%) indicated that changes to their recruiting process were just temporary while over a half (57%) stated their recruiting

changes would remain for the long-term.

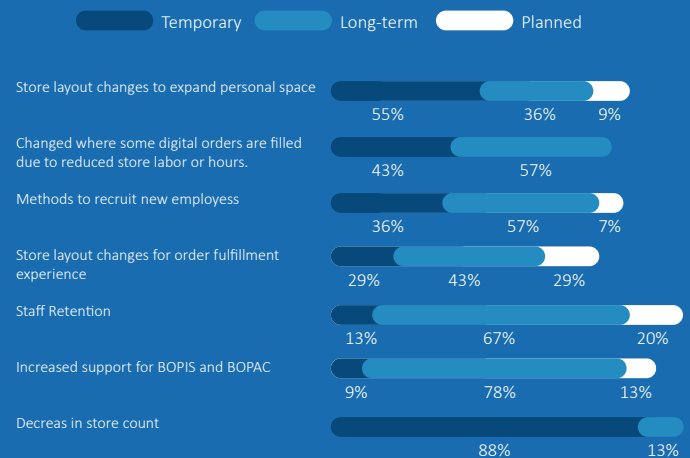
Customer Order Fulfillment Impacts

The rise in digital commerce forced retailers to quickly implement solutions to address product fulfillment, including BOPIS and BOPAC features that previously weren't on their 2020 or 2021 roadmaps. 87% of multi-channel retailers made some changes to assist with leveraging their physical stores in completing digitally created orders. In-store shopping has since returned with a flourish, but customers are now armed with heightened expectations around the blending of the digital and physical shopping experience, and this has led to the permanence of many of the omni-use cases implemented. 78% of retailers who increased their support of BOPIS and BOPAC plan to leverage these changes going forward. This continues to be a large opportunity for retailers with only 12% reporting that they have a smooth process for allowing the modification of a BOPIS or BOPAC order. 37% of retailers indicated this would be an area of focus this year.

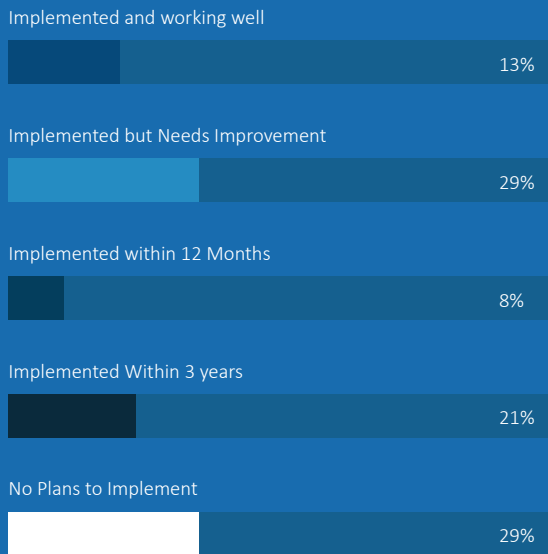
Self-Service Beyond Self-Checkout

Another customer experience impact stemming from both social distancing as well as labor shortages in the marketplace is the rise in overall retail self-service. Many consumers associate self-service with self-checkout, and while self-checkout continues to see heightened interest from retailers beyond the traditional players in both grocery and big-box, there are numerous other ways that retailers have used technology to aid in overall self-service for their customers. These include (1) enhancing their customer-facing mobile solutions (websites and apps) to provide greater product information, inventory availability, shelf location within stores, and in-store basket building for checkout at POS; (2) adding kiosks in stores to assist with price checks, returns, product videos, and access to inventory in other stores and channels; (3) self-service product pickup for online orders via, mobile apps, kiosks for ID verification, smart lockers or designated shelving; (4) Meal and prepared food ordering especially in the convenience and grocery verticals, and (5) Pay/Order at the table in hospitality.

COVID-19 OPERATIONAL CHANGES



ABILITY TO EDIT BOPIS/BOPAC ORDERS AND TENDER AT PICKUP



ingly hard to consistently deliver in-store due to staffing challenges. A lot of retailers' focus is on optimizing fulfillment of digital purchases, which increasingly happens from retail stores. This has led to a lot of renewed attention on tighter, real-time integration between order management systems (OMS) and in-store fulfillment and POS systems. Only 13% of retailers indicate that their OMS to POS integration is working well and 62% indicate they will be improving or implementing POS to OMS integration.

Enhancing the Customer Experience

Overlaying store and digital commerce transactions is the holistic customer brand experience which encompasses a customer's entire journey and not just a point-in-time transaction. 80% of retailers indicated that the customer experience as their 2nd highest business priority. A seamless and pleasantly engaging brand experience across all customer touchpoints remains paramount for leading retailers. Often, the digital capabilities supporting the overall experience are top of the priority list. Customer expectations will do nothing but increase and for many retailers the brand experience, good or bad, is their distinguishing characteristic.

BUSINESS PRIORITIES FOR 2022

2021 saw feverish growth in retail with total retail sales growing a record 14% over 2020. And even though inflationary pricing is skewing 2022 financials, overall shopping traffic continues its rapid ascent from the dark days of 2020. As retail reopened, customers happily returned to pre-pandemic behaviors and shopping in stores. The retail store remains the central customer experience hub, and over 70% of retailers indicate they plan to increase their store count. Most customers are a short distance from their favorite stores and those stores continue to represent the ideal intersection of transaction and fulfillment. Interestingly, the number of retailers who indicated plans for regional fulfillment centers or dark stores decreased, as post-pandemic retailers embrace traditional brick-and-mortar locations as primary fulfillment locations.

Enhancing Digital Commerce

While stores remain the central hub, digital commerce remains strong and trending up, accounting for a little over 19% in 2021 and forecasted to be over 20% in 2022. Digital commerce will continue to grow and could reach 25% or more of total retail sales within a few years. The pandemic accelerated this trend and for many categories of retail purchases, consumers prefer digital convenience and options. For the second year, most retailers (88%) indicated digital commerce as their top business priority. Retailers are focused not only on online capabilities, but a continual focus on the experience that compliments and enhances the in-store brand experience. Digital commerce capabilities are also an opportunity for retailers to deliver additional rich content and services that have become increas-

Optimizing the Supply Chain

Since the start of the pandemic, supply chain disruptions have continued world-wide. Out-of-stocks aren't as prevalent as during the peak of the pandemic, but supply chain delays, cancelations and cost increases remain a top concern for many retailers. Similar to our findings last year, almost half of retailers (48%) surveyed indicated supply chain optimization as a top business priority for 2022. Optimization of the final mile remains an opportunity as well, as local fulfillment and delivery continues to trend up as many consumers continue to enjoy and expect the convenience of rapid at-home delivery.

70% OF RETAILERS SAY THEY PLAN TO INCREASE STORE COUNT.



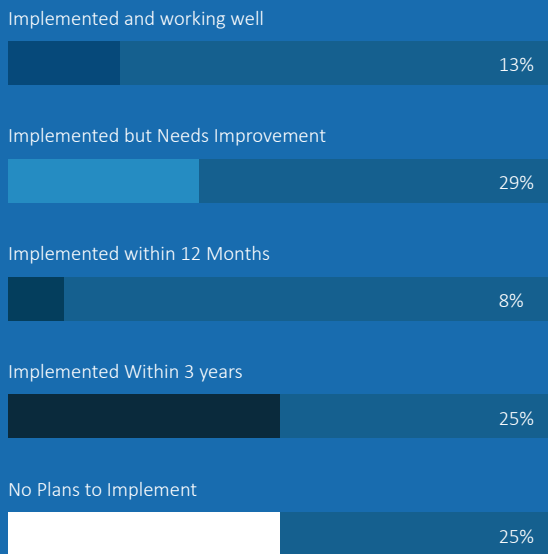
TOP BUSINESS PRIORITIES FOR 2022



FUTURE GROWTH PLANS



OMS INTEGRATED WITH POS



er engagement priorities for 2022 reflect a continuation of many of the key priorities from 2021 along with a sign of engagement maturity as many retailers are now able to build upon the basic building blocks recently put into place.

Improving Upon the Omni-Channel Experience

Impacted by store closures, limited shopper capacity, and the rise in digital commerce, retailers spent a significant portion of the pandemic years accelerating many of their “buy anywhere, fulfill anywhere” objectives. For many retailers, these solutions were quickly implemented to address immediate consumer demand, without the benefit of well thought-out and efficiently architected technology solutions. As a result, it is unsurprising that the top customer engagement priority for 2022 is reducing friction between digital sales and in-store fulfillment, with 60% of retailers indicating this was their top priority. Patchwork implementations and one-off integrations were put into place to ensure BOPIS and BOPAC transactions could be completed, but many of these were over-burdened with excessive associate tasks or a clunky consumer experience. Therefore, retailers are making it a priority in 2022 to ensure that their support for omni-channel use cases are cleaned up to not only satisfy customer expectations, but also to ensure greater efficiency as operating margins are tighter than ever.

CUSTOMER ENGAGEMENT PRIORITIES FOR 2022

On the heels of a disruptive couple of years in the retail industry, the customer experience is still the ultimate determinant of success and failure amongst retailers. There are a variety of factors that help drive customer satisfaction with their shopping experience, and successful retailers are the ones that have been able to create positive engagement despite supply chain issues, price inflation, staffing concerns, and the various issues associated with the blending of the physical and digital commerce channels. Top custom-

Meeting Digital Commerce Expectations in the Physical World

The past few years have shown some of the highest shifts towards digital commerce, and consumers have continued to have their expectations heightened when it comes to the many advantages of online shopping. Some of these include: complete access to past purchases, the ability to receive personalized suggestions, and an awareness by the retailer around the preferences of the shopper for tender, delivery and communication. As consumers have been flooding back into physical locations over the past 8 to 12 months, they are carrying these enhanced expectations with them when

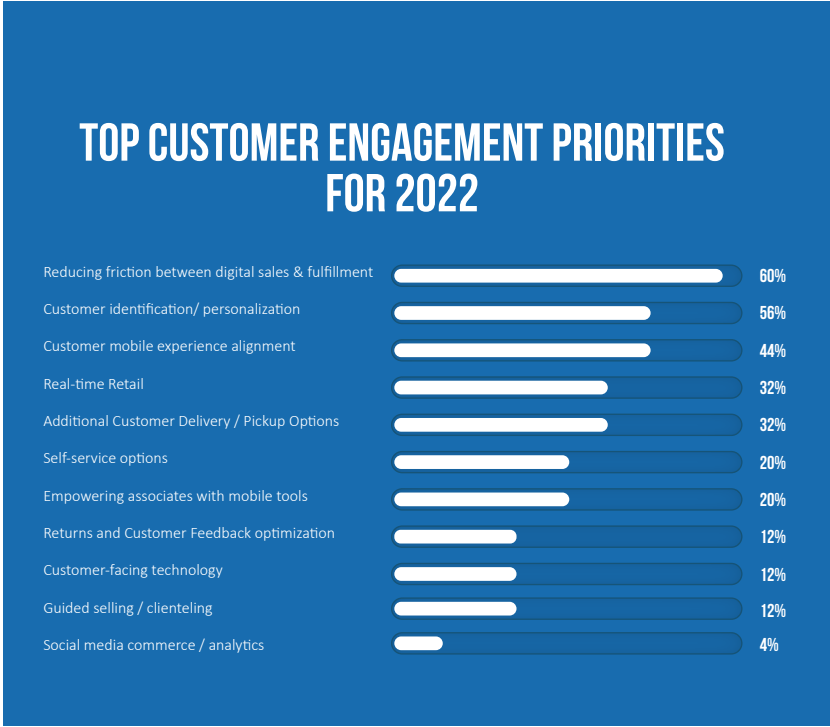
engaging with their preferred retail brands. Successful retailers have been able to build upon the push for personalization and customer identification recognized prior to the pandemic with the increased number of omni-transactions implemented over the past couple of years. Being aware of their customers full shopping history across different stores and channels starts with being able to identify customers in the physical store, and forward-thinking retailers are implementing single view of the customer (SVC) solutions to provide a curated experience in the store similar to the digital experience by tapping into a 360-degree view of the customers' exposure to the brand.

Continued Focus on Mobile Solutions

It's impossible to walk around a retail store in 2022 and not see most customers using their mobile phones while shopping, and 44% of retailers have indicated that enhancing their customer's mobile experience is a top priority towards effective customer engagement. Whether it's creating a more responsive mobile website, engaging customers via their mobile app, or providing advanced "in-store mode" functionality, there are a variety of ways that retailers can ensure their customers are getting the most out of their physical shopping experience while leveraging their mobile devices. After all, consumers are utilizing their devices while shopping, and successful retailers want to be able to control that browsing to ensure their customers have the information they need to have a positive customer experience.

Retail In Real-Time

The massive spike in digital and omni-channel transactions over the past 18 to 24 months means that retailers must ensure all their commerce channels have the most up-to-date information when it comes to available-to-sell quantity and inventory availability. Consumers are increasingly browsing products online for pickup or purchase in store, and retailers still relying on delayed batch feeds will end up disappointing customers who are notified product is no longer available for fulfillment. This is evident by retailers once again placing real-time retail, along with offering flexible fulfillment options, as the 4th highest customer engagement priority for 2022. Beyond product availability, real-time retail also helps provide: up-to-date order status information, consistent cross-channel pricing and promotions, as well as ensuring retail associates are also armed with the most recent information about brand offerings and customer transaction history.



TOP POS PRIORITIES FOR 2022

In our 2021 survey, retailers POS priorities were focused around enhancing integration with OMS and adding omni-channel capabilities. These two top priorities were extremely indicative of the general retail environment during the pandemic which saw retailers scrambling to implement omni-channel transactions and tie in their physical stores with their digital commerce offerings. With many retailers having spent energy and resources addressing those areas, we have seen the rise of three new priorities to the top of the list in 2022.

POS Software Upgrades and Replacements

The top POS priority for 2022, with 60% of retailers, is the upgrade and/or replacement of their POS software. There are two main factors driving this priority: (1) the need to quickly add omni-transactions and introduce flexible fulfillment options during the pandemic caused retailers to put a hold on traditional POS upgrades and replacements the past couple of years; and (2) the large cycle of POS selections and implementations from 2010 to 2015 are now reaching the point where retailers are evaluating the opportunity to replace their current platform with a more modern architected POS solution built on microservices with more flexible integration capabilities. The 2nd factor is also supported by the current technology age of POS software, with 56% of our respondents indicating their POS software was greater than 5 years of age.

Retailers are seeing the downside first-hand of not having open and well-architected POS solutions in place as they scrambled to implement omni use cases such as BOPAC during the pandemic, with

60% OF RETAILERS SAY THEIR TOP PRIORITY IS REDUCING FRICTION BETWEEN DIGITAL SALES AND IN-STORE FULFILLMENT.



many opting to introduce stand-alone solutions via new mobile solutions rather than attempt to create new interfaces into and out of their POS platforms. This “work around” has driven up their ownership and support costs, as well as ultimately made it more difficult to react quickly to business needs with a single comprehensive customer experience. As a result, retailers will be placing a high priority on not just features and functionality in their new POS platform, but also extensibility and an integration architecture suited for rapid introduction of new data sources.

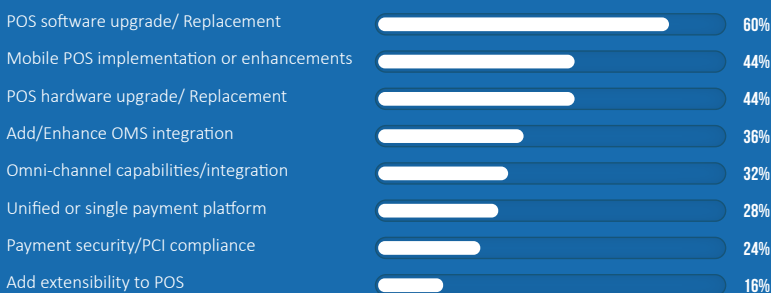
Mobile POS Implementations and Enhancements

Consumers aren’t the only ones who can benefit by using mobile devices when completing their shopping experience, and 44% of retailers have indicated implementing or enhancing mobile POS solutions are a top priority for 2022. The promise of fully mobile POS solutions has been around for at least the last decade, but it has only been in recent years where we are beginning to see the true vision for a mobile POS platform having its benefits fully realized. Mobile POS can mean different things to different retailers, and it’s important that they focus on identifying their unique customer journey to understand how mobile capabilities best support customer engagement. For example, many specialty retailers seek to create a personalized experience for their in-store shoppers (as indicated by the previously noted 2nd customer engagement priority in our survey this year), and this high-touch engagement is most effectively serviced through the use of mobile technology which can be utilized to bring up a comprehensive view of the customer, access a real-time view of inventory anywhere in the enterprise, set up appointments, manage communication preferences, and help identify additional items to expand the customer’s basket. Other retailers are more focused on increasing their speed of service at checkout, and for them, mobile POS solutions can be used in a line-busting capacity or to fully tender sales while on the sales floor without the need to stand in a queue.

60% OF RETAILERS SAY THEIR TOP POS PRIORITY IS UPGRADING/REPLACING THEIR POS SOFTWARE.



TOP POS PRIORITIES FOR 2022



Don’t Forget About the Hardware

For many of the same reasons why POS software reached the top spot on the POS priority list in 2022, upgrading and replacing POS hardware is a critical priority this year, with 44% of retailers indicating its importance. Just over 40% of retailers indicated their POS hardware is over 5 years old, meaning their estimated lifespans are at, or nearing, end of life and end of vendor support. It’s critical to not neglect the importance of evaluating hardware refreshes as part of overall store technology strategies, as outdated hardware can not only increase support tickets, break/fix support costs, and aggravate store associates, but also negatively impact the customer experience. With global supply chain issues still permeating in 2022, many retailers are also accelerating their decisions to order hardware replacements knowing there may be manufacturing and shipping delays in ultimately receiving the new equipment. Of additional concern to retailers is that the COVID-19 driven use of cleaning and sanitizing products on the hardware will continue to result in the earlier breakdown of hardware driving up demand.

CURRENT STATE OF STORE TECHNOLOGY

Retailers understand that current technology in the store is foundational to providing a happy customer experience for a fast and easy checkout, whether traditional or self-checkout. Starting during the pandemic, most retailers tried to minimize store technology costs and extend the life of their existing in-store hardware and software. 2021 saw some retailers start their replacement cycle of in-store hardware, especially POS hardware, but 2022 is the year that retailers started investing again in in-store software and hardware in a meaningful way.

In 2022, we see that 56% of retailers have POS software that is over 5 years old, up a little from last year as POS software upgrades and replacements have been delayed. However, some retailers did start POS software replacements last year, as we see the percentage of retailers with new POS software climbed from 19% to 28%.

Mobile Devices

According to this year’s survey, the number of respondents with mobile POS and customer engagement devices has increased from 48% to 60%. With many retailers realizing the versatility, multi-purpose capabilities and lower costs of a mobile device, these retail mobility trends are expected to continue throughout 2022 and into 2023. All respondents indicate that their mobile devices are less than 5 years old, which is consistent with prior surveys. The short battery life, the retirement of some mobile operating systems and the high impact nature of mobile device environments significantly contribute to the short life span of mobile POS devices.

During the pandemic, retailers curtailed a lot of their technology investments, including mobile, but with re-opening and people once again becoming comfortable engaging with each other in closer spaces, mobile has again taken off and become a favored investment for in-store hardware. Naturally, as mobile POS devices utilization has increased, the number of retailers investing in mobile payments terminals, has increased from 30% to 48%. As we forecasted in our 2021 survey report, this past year saw a significant increase, from 63% to 78%, in retailers leveraging mobile devices for store management and inventory functions as well. A lot of this increased investment is to meet the needs of additional order processing out of stores for fulfillment services such as BOPIS and BOPAC. Not surprisingly, most of the devices utilized for store management functions (52%) are less than 2 years old.

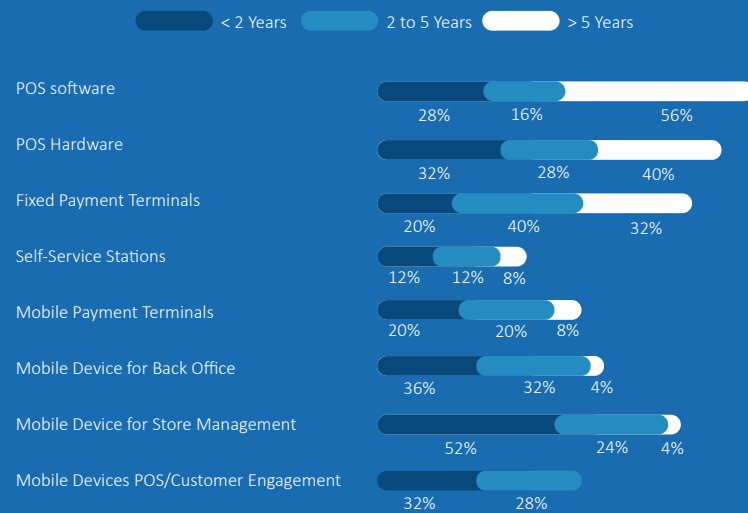
POS Hardware

2021 saw some increased spend on POS hardware, as it appears that a little more than 20% of retailers replaced their POS hardware. However, many retailers (40%) still have POS hardware that is over 5 years old. As we stated, we expect that many retailers have or are considering the replacement of their POS hardware this year or in 2023. Some of this will be in conjunction with new POS software implementations which are similarly on the rise. The number of fixed payment terminals that are over 5 years old has decreased somewhat from last year to 32% and some of this was probably part of the refresh cycle that happened in 2021.

Self-Service Stations

Almost a third of retailers in our survey, now indicate that they have self-service stations. Only 8% of these are over 5 years old, so of retailers with self-checkout, many have newly implemented or refreshed their self-service hardware in the last few years. As noted earlier, self-service, whether self-checkout or other capabilities, is on the rise and the technology options are much more varied and versatile than traditional self-service stations of the past. As the usability of these self-service stations has increased, fueled in no small part by the pandemic, the customer adoption and use of self-service for checkout has also increased in parallel.

CURRENT TECHNOLOGY AGE



CONCLUSION

To say the last couple of years in retail has been turbulent is probably an understatement. However, despite all of the pressures that external forces, economic pressures, and heightened customer expectations has brought, retail has remained resilient, and retailers are moving forward to the future with renewed confidence as we put the pandemic behind us. Although the story hasn't been completely written, we've maybe already seen the worst of inflation. The economy over the next 12 to 18 months remains somewhat uncertain, but retailers are forging ahead with big plans for stores, focused on the customer experience and carefully considering the technology decisions to enable and support that experience.

We predict the next couple of years will see significant investment in store technology as retailers are adapting to a new future that requires enhanced digital and physical experience integration and underlying technology architectures that are inherently more flexible to grow in response with ever-changing requirements and evolving consumer expectations.

Thank you for reading and, as always, we welcome your feedback from our 23rd Annual POS & Customer Engagement Survey.

SURVEY METHODOLOGY

Through an online survey system, RCP conducted the 23rd Annual POS & Customer Engagement Survey. The goal was to gain understanding of retailers' planned initiatives, priorities, and future trends by contacting the top 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 customers' experience.

The primary retail segments of the survey respondents were from specialty soft goods with 36% and specialty hard goods with 20% of respondents. The remainder fell into various other categories such as general merchandise and grocery, food and beverage. The focus on the specialty retail segment remains consistent with 56% of the overall retailer responses.

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% of the retailers having more than \$1B in sales.

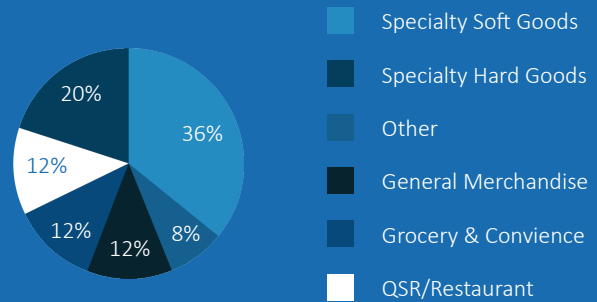
This year's survey also recognizes the challenges that retailers continue to face as they shift from a single channel environment to a unified commerce environment. A small subset of respondents of the total respondents indicated they have a true unified commerce environment. This was a notable change from prior surveys where no retailers had identified themselves as having a unified commerce platform.

The largest shift from last year's survey was a 10% decrease in retailers who had a single channel platform to below 10%. This is the 3rd consecutive year this response has dropped leading to the conclusion that the number of retail models that may never move from a single channel selling experience continues to shrink.

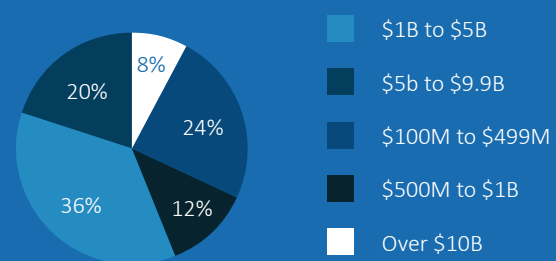
Movement from multi-channel to omni-channel continues with 54% of the retailers indicating that they have achieved an omni channel environment.

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

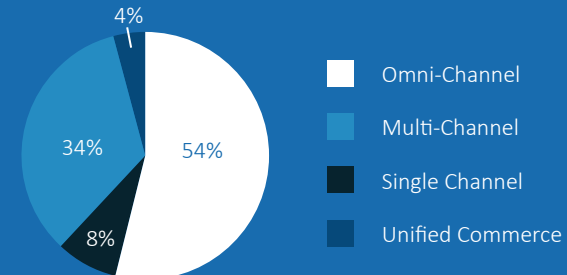
COMPANY TYPE



ANNUAL REVENUE



CURRENT CHANNEL INTEGRATION



ABOUT RETAIL CONSULTING PARTNERS

Retail Consulting Partners (RCP) is a comprehensive retail management consulting firm dedicated to providing superior service and enduring value to our clients. RCP combines our consultants' deep retail business knowledge and cross-functional capabilities to deliver superior design and implementation of strategy, technology, and process solutions. Our firm's unique combination of industry focus, knowledge-based approach, and rapid, end-to-end solution deployment helps clients to achieve their business potential by leveraging our proven methodologies. RCP'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	Networks	Private Equity

For more information or assistance on the topics covered in this white paper or any other of our services, please contact: info@retailconsultingpartners.com.

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About Aptos

In an era of virtually limitless choice, sustained competitive advantage only comes to retailers who truly understand their customers, what they want and why they buy. We are committed to a deep understanding of each of our clients and to fulfilling their needs with the retail industry's most comprehensive omnichannel solutions. More than 1,000 retail brands rely on our solutions to deliver every shopper a personalized, empowered and seamless experience — no matter when, where or how they shop. Learn more: www.aptos.com.