The Future of Grocery and CPG

IHL GROUP

HARD DATA, **SMART** DECISIONS

Research Made Available Thanks to Our Sponsor

BlueYonder

The Good News...

It was in the movie "Sound of Music" where there was the hit song about the heroine with the lyrics "How do you solve a problem like Maria?" Ear-worm aside, it seems that tune might describe how the retail world looks at 2020 for the Food, Drug and Mass Merchants market. The year started off solid enough with retail sales up 4.1% for the first 2.5 months and then, well, the equivalent of Christmas every day hit the stores for a 3-4 week peak period. Overall sales were up 80% or more and in some categories over 500%. Runs on toilet paper, disinfecting wipes and frozen pizza, among others, reduced the domestic supply chain stock to zero in less than two weeks. Manufacturing plants supplying these and other items closed down for weeks or months, adding to the issues.

While sales began to slow after the peak, things had radically changed. Where going into the year, consumers were beginning to accept grocery delivery and click and collect at a growing pace, the three months from March-June the market experienced the equivalent of 10 years of organic growth, causing great pain and margin pressure. If not for the massive increase in the in-store business, this change would have buried the average retailer which were losing between 3 and 8 points of margin per order compared to walk-in customers. It doesn't take long to realize when those digital journeys go from 3-4% of revenue to 20% of revenue in a matter of weeks that there were growing pains that will influence the future way these retailers go to market.

That is what this research is about. The pandemic has changed the food and consumer goods retailers and manufacturers permanently. The good news is that the pandemic has accelerated technology investments that were long overdue. The bad news is the peak and surge exposed many issues that were hidden before. And as long as these problems are not fixed, the margin erosion in this new world is akin to continually picking a scab. The wound never heals.

So, retailers are trying to "solve the problem like 2020" and decide what sticks going forward. One thing is clear, despite the growth of the digital journeys, the smart retailers are realizing that the new store is more important than ever to the success of the future.

Stronger and Higher Investment for 2021

Overall, the Food, Drug and Mass Merchant retailers ended 2020 with a **9.4% increase** in sales. Fueling this growth were massive increases in Mobile Commerce **(+17.0%)** and Desktop E-Commerce sales **(+12.8%)**. Changing customer behavior, specifically lower in-store traffic coupled with an increased preference for digital journeys, caused retailers to pivot towards BOPIS, curbside and ship from store. Trips decreased, order size increased, everything changed.

Going forward, retailers are expecting a solid but more modest **5.5% increase** in sales for 2021.

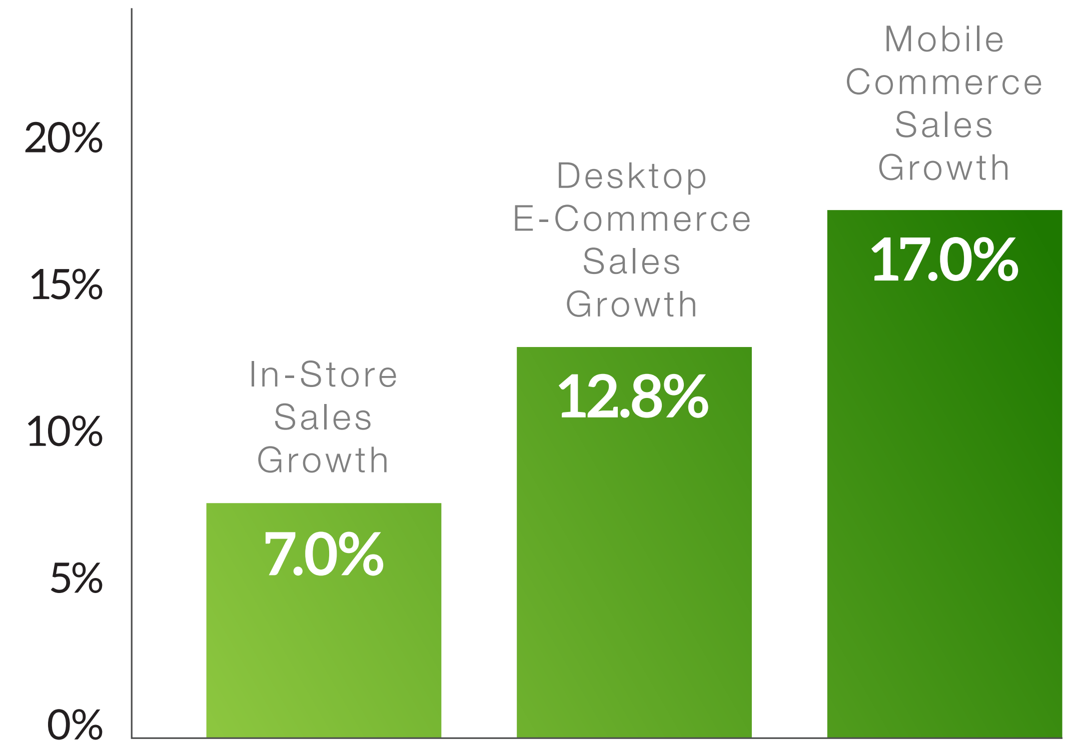
This figure is about 20% higher than the expected growth for 2020 prior to the pandemic and reflects that even as vaccines role out, consumers will still be eating at home at a higher rate for 2021 than they were pre-pandemic. Add to this that Nations Restaurant News estimates that 30% of all restaurants have closed permanently due the pandemic, remaining restaurants simply won't be able to match the demand as people get out of their homes in 2021.

While it would be safe to say digital orders are helping drive the growth for 2020, the retailers in our research are increasing their number of stores at a rate 25% higher than in 2020, with a 5.4% increase in store locations vs 4.3%. What they realize is that stores matter. In fact, for 2021 the respondents in our study said that despite the digital journey growth, nearly 92% of all sales will be fulfilled through the local store. But these stores and formats must change for operations to efficiently support both digital orders and walk-in orders in the future. That may include moving ecommerce out of the store or setting up micro fulfillment operations in the same store footprint.

2020 INCREASE BY SALES CHANNEL

Food, Drug, Mass Merchants

Source: 2021 IHL/RIS News Store Matters Study



2021 STORE AND REMODEL GROWTH

Food, Drug, Mass Merchants

+5.4% NEW STORE GROWTH

+2.4% STORE REMODEL GROWTH

Source: 2021 IHL Group Competitive Market Leaders

STORES MATTER

In recent IHL Study, respondents said despite the digital journey growth, nearly **92% of all sales** will be fulfilled through the local store for 2021.

Source: 2021 IHL/RIS News Store Matters Study

But it is not just store growth that is driving investment, retailers are also planning to invest in updated IT to transform for the future. Leaders (those with annual sales that grew over 10% in 2020) are investing in total IT at a rate nearly double Below Average Retailers. Thus, Leaders are not only moving ahead in sales, their growth of IT as a percentage of revenue is nearly 2x that of below average performing retailers. In other words, it is like Usain Bolt racing us in the 100 meters. He is not only ahead at 10 meters, but every step he increases that lead to the point it no longer can be called a race.

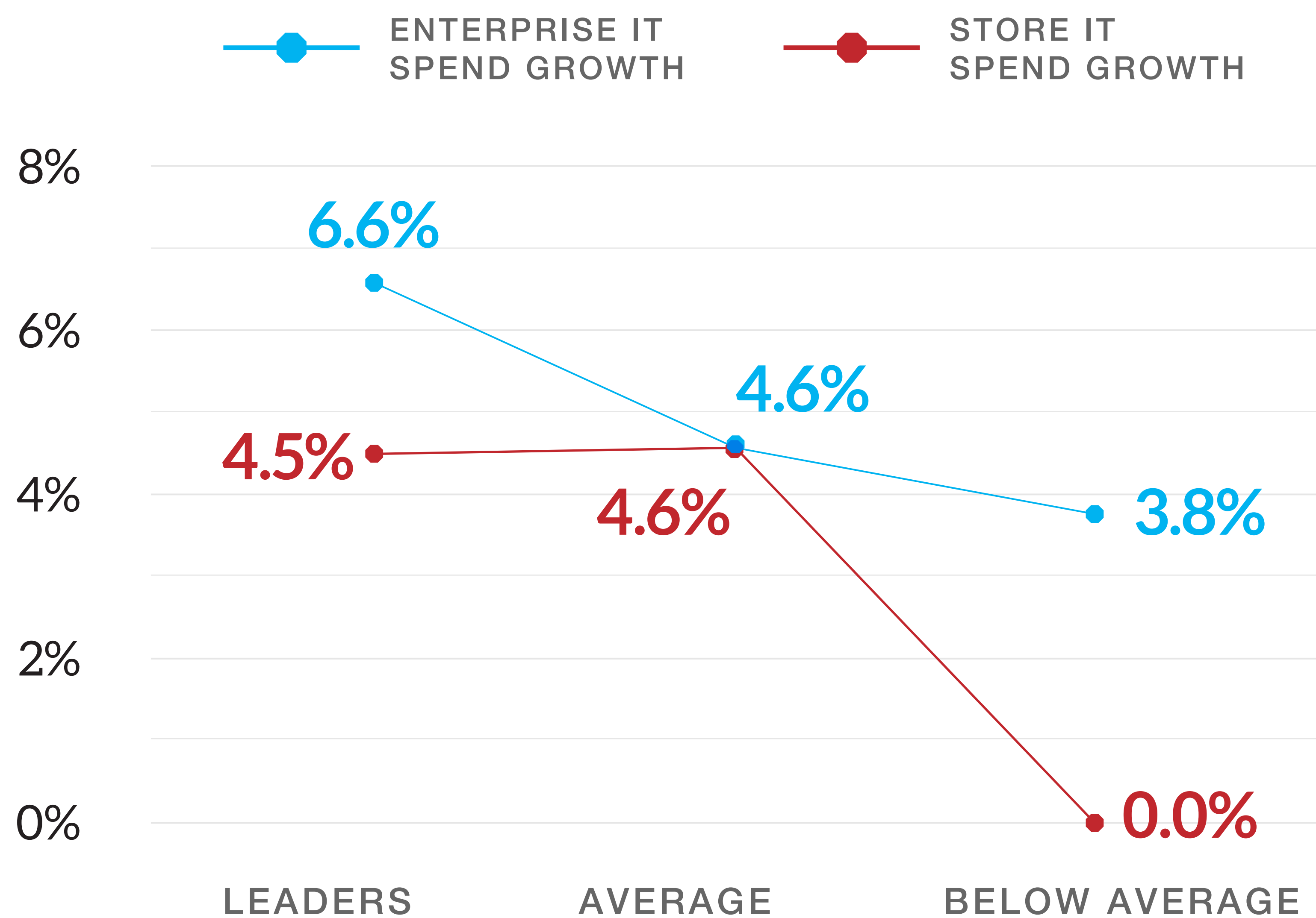
This difference between haves and have nots is even more pronounced when it comes to investing at the store level. Leaders are increasing their store level IT spend at a growth rate of 4.5% as a percentage of revenue while the below average retailer is keeping store spending flat.

Bottom line, the rich are getting richer and are planning to take even more market share.

GROCERS RACING AHEAD IN IT INVESTMENT

2021 IT Spend Growth As Percentage of Revenue

Source: 2021 IHL/RIS News Store Matters Study



New Customer Journeys Play a Big Part Going Forward

Over the course of the past handful of years there has been no lack of media concerning the status of retail in general, and death of stores in particular. Taken to its extreme, such commentary would lead one to believe that retail was in serious decline, that Amazon was taking over the world, and that almost no stores remain. Needless to say, the reality is very different. Yes, online sales have increased dramatically as a result of COVID (2020's sales here up +23.9% over 2019's), and currently comprise 19.9% of all retail sales (full year 2019 was 15.2%).

In 2020, 24% of FDCM orders came digitally. The largest category beyond the store was traditional ecommerce. About 1/3rd of our sample saw this type of order increase by more than 10% in 2020.

Click and collect saw massive increases with 59% of retailers showing that their orders increased by 10% or more during the year. And local delivery from the store increased 67% from 2019 levels in 2020.

Prior to COVID, FDCM retailers stated that on digital journeys they were losing 3-8 points on these orders compared to when customers come into the store and shop. Further, with the digital orders you also lose the vast majority of impulse buys that happen in the store. Combined, these issues make for an ominous future for the sector if the rise in digital journeys hold and systems and processes are not optimized. Fortunately in 2020 the rise of instore sales have covered these margin losses. This won't be the case in 2021 and beyond.

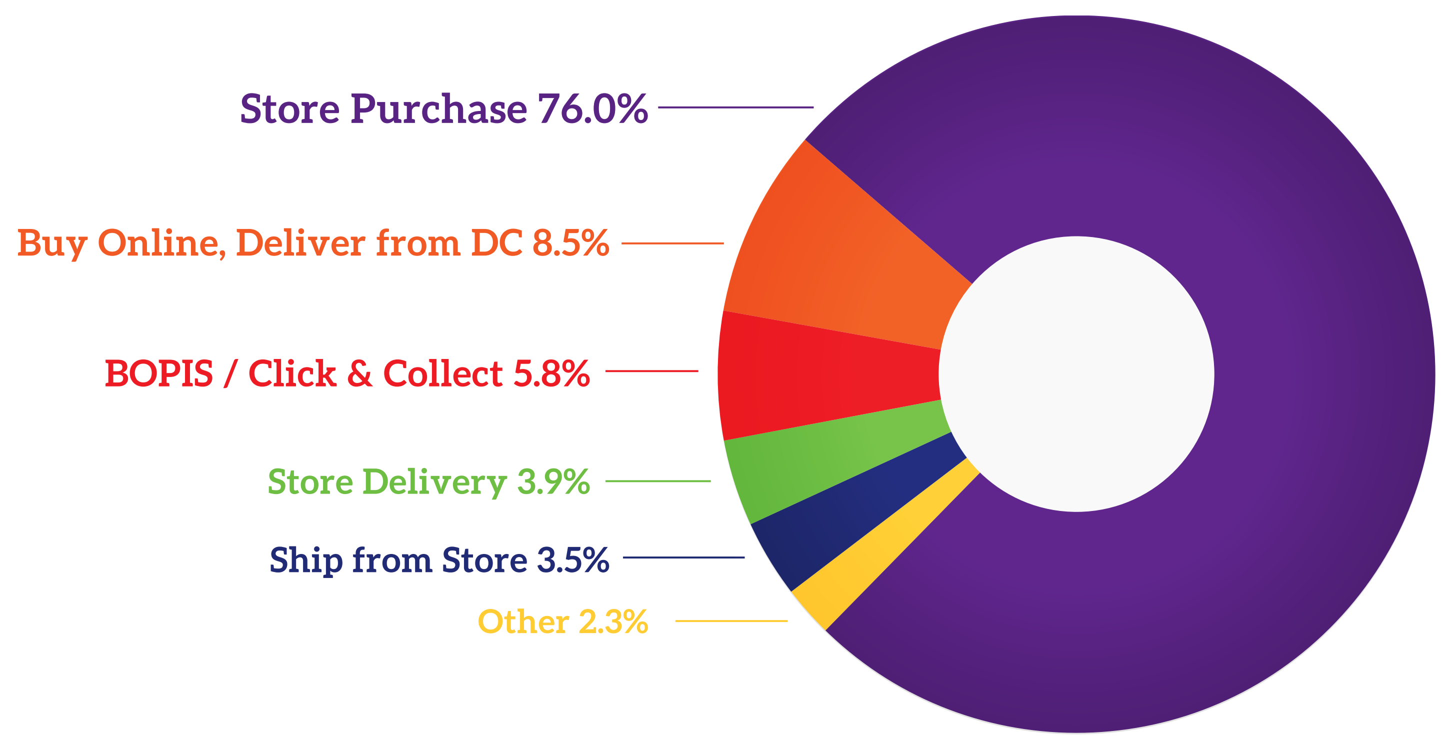
In fact, let's demonstrate this point further. Typically, when sales go up, profits go up higher as fixed costs are more than covered and apply less and less to each additional dollar. However, even the best performing retailers saw their profits only grow at a rate 1/3rd of the level of sales growth in 2020 as each digital order put further drag on the profit margins.

So digital orders are going to continue to grow, retailers claim that 92% of all retail sales have a store fulfillment component, so stores aren't about to go away anytime soon and they need to optimize these journeys so the margin lost is minimized.

REVENUE SHARE BY CUSTOMER JOURNEY 2020

Food, Drug, Mass Merchants

Source: 2021 IHL/RIS News Store Matters Study



Inventory Issues Revealed by New Customer Journeys

In normal times, grocery retailers have specific inventory challenges. No other segment has as complicated a set of supply chains for fresh items, frozen goods, regulated products, and others. Products can be sourced locally in some cases and through a common supply chain in others. There are also many product categories where the retailer has no control over the inventory as it is managed by the vendors themselves. And then there are product categories that use scan-based trading, which complicates operations as retailers never actually own the inventory except for the moment in which it is scanned and sold. All these unique situations provide challenges in accounting and in maintaining in-stock positions, even in normal times.

Out-of-stocks during the pandemic has been a major issue. In fact, IHL research found that up to 5.9% of same store sales were lost due to out-of-stocks in 2020. But this was not readily admitted before the pandemic. Now most retailers have found religion on the issue as the digital orders and surge inventory issues that in normal times went unnoticed. To illustrate, here is one simple example.

IN-STORE SHOPPER Let's assume you are a shopper in the store looking to buy Chips Ahoy cookies. If the retailer is out-of-stock on that brand, there may be numerous alternate brands. If you choose to buy the Keebler brand, the retailer and both manufacturers won't ever know that Chips Ahoy was your first choice. This out-of-stock was hidden from all but the customer who may be annoyed that their first choice was not available but purchased just the same.

ONLINE SHOPPER Assume instead you place an online order for store pickup for the Chips Ahoy brand. Typically, the retailer will either offer you a choice of alternate products if the item is not available or will make the choice for you. This time the out-of-stock is recorded in real time. But there is the challenge of what to do with the pricing and margin differences. Does the retailer charge the different price, eat the margin, or not fulfill the item and thus possibly push that customer to another retailer? The out-of-stock was discovered here, where it was mostly hidden before. Additional labor may have been involved to find the problem. The end result is retailers quickly discovered they have much bigger inventory accuracy issues than they thought and when there is additional labor in the picking, added costs in every order.

In total, IHL estimates that there were over $505b sales lost due to out-of-stocks in the pandemic and that $75b was newly discovered simply due to the rise of digital orders for store fulfillment that were previously hidden.

-5.9%

SAME STORE SALES LOST DUE TO OUT-OF-STOCKS DURING PANDEMIC

Source: 2021 IHL/RIS News Store Matters Study

Source: IHL Group Disrupted Retail

They Still Embrace Traditional IT...

POS Hardware and Software purchases continue to be a foundational part of IT spend for retailers, as expanded fulfillment capabilities drive system features and functionality. Fully 60% of Mass Merchants / Superstores-Warehouse Clubs expect to make a POS Hardware purchase in 2021, followed by Food/ Grocery at 45%. Food/Grocery takes the lead with POS Software at 30% expecting to make a purchase. One big change we are seeing, however, is a desire for a single POS stack where the application logic can be used in a number of different form factors. Several large retailers are looking towards a mobile-first approach to their POS so that the application is portable from the fixed POS to a mobile device.

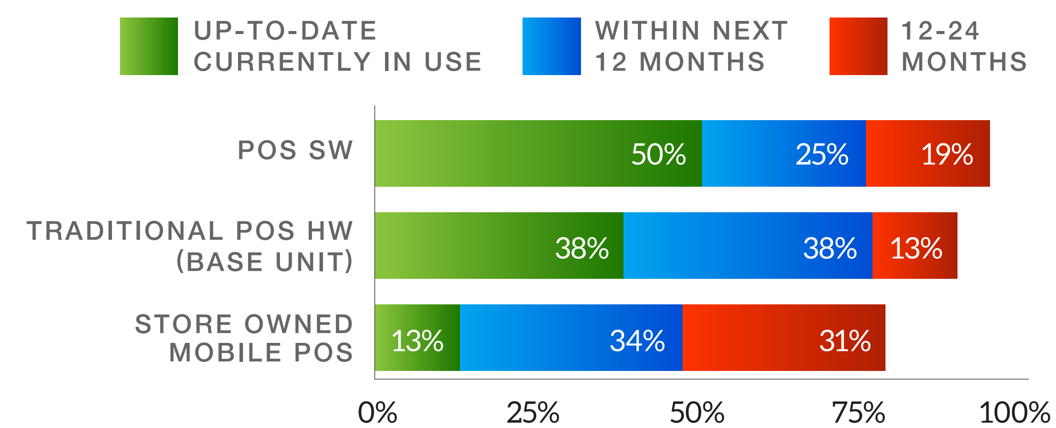
More than one-third of FDCM retailers expect to make a Store-Owned Mobile POS purchase in 2021, and that will bring overall penetration to 47% in 2021. Keep in mind, these devices have a considerably shorter life cycle than traditional POS hardware, so more frequent replacement is expected.

One area that will see incredible growth for the next two years is the removing of the associates face to face transactions in favor of contactless options. Truth be told, many retailers have been wanting to move in this direction, eliminating labor in the checkout process, however, they faced great push-back from unions in doing so. But the pandemic removed some of the roadblocks of moving in that direction in favor of "associate and consumer safety". Self-Checkout is expected to grow 178%, contactless payment +190% and consumer mobile checkout on their own devices +300% in the next two years.

As in days past, retailers continue to spend significantly on mobile technologies. Mobile Devices for Managers show a current adoption of 31% of retailers, with another 34% expected by year end 2021. Mobile Devices for Associates show up at 25% current adoption, and their adoption by YE 2021 will be a bit more than three-quarters that of the number for managers.

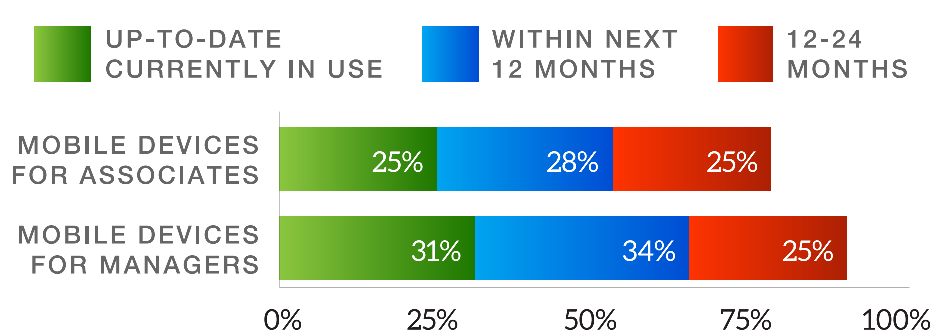
TIMEFRAME FOR NEXT STORE TECHNOLOGY PURCHASE FDCM

Source: 2021 IHL/RIS News Store Matters Study



TIMEFRAME FOR NEXT STORE TECHNOLOGY PURCHASE FDCM

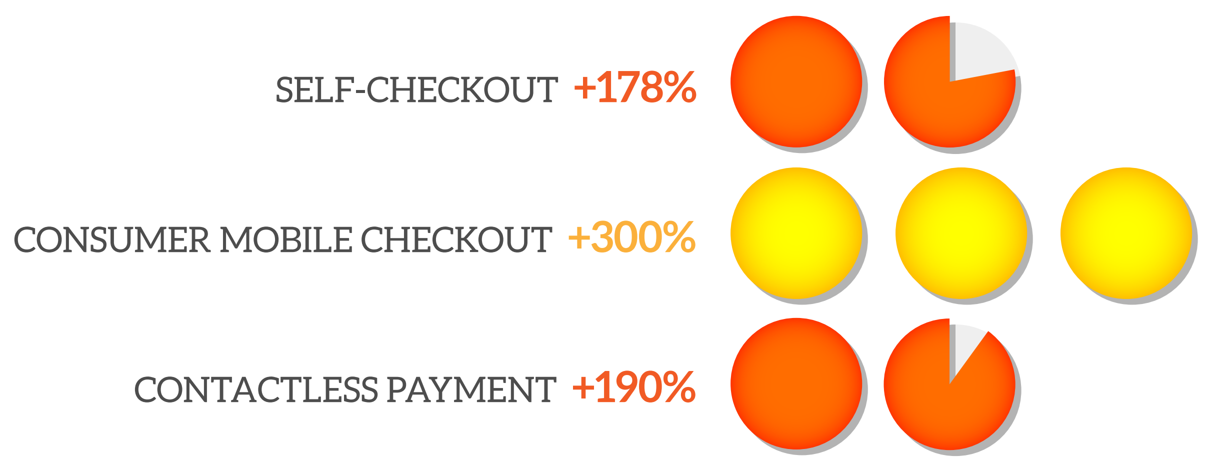
Source: 2021 IHL/RIS News Store Matters Study



GROWTH IN INSTALLS THE NEXT 2 YEARS

Food, Drug, Mass Merchants

Source: 2021 IHL/RIS News Store Matters Study



Emerging Technologies Becoming Mainstream

We have stated many times that the pandemic supercharged trends that were already moving. This is particularly true as it applies to the adoption of emerging technologies. The global pandemic did not just serve as a threat to retailers; it also served as a wake-up call that enabled them to review their infrastructure and operations to consider what upgrades or alterations they might implement going forward. Granted, for many retailers, survival was first and foremost on their minds. But for those that were surviving (and even thriving), it was a great time to prepare for future investment. We specifically want to highlight several of these trends that are literally transforming this sector as we know it.

First, let's review the changing nature of stores and the introduction of dark stores and micro fulfillment centers designed specifically for fulfilling digital orders. When a retailer's digital orders for local fulfillment reach 10% or more of total business it becomes tremendously disruptive to shopping in the store. Retailers in FDCM expect these second locations (dark stores and micro fulfillment centers) to grow nearly 10x in the next two years because that 10% of business was quickly surpassed in 2020.

The primary differences between dark stores and micro fulfillment centers are the level of automation and size of facilities. The dark store is generally a location that is quite similar to a standard store, but is for picking orders for click and collect and delivery. No customers are allowed in the store. Everything is picked by store employees as if they were shoppers and then the order is picked up by the customer or a delivery service.

GROWTH OF NEW LOCATIONS TO FULFILL ONLINE ORDERS OVER NEXT 2 YEARS

Source: 2021 IHL/RIS News Store Matters Study

DARK STORES MICRO FULFILLMENT **+966%**

SECOND LOCATION IN-STORE **+700%**

Micro fulfillment centers tend to be fully automated or almost fully automated locations designed for delivery or pickups. A typical micro fulfillment center can handle the same amount of inventory and handle the same number of orders in the same space as dark store but with 1/4th the floor space due to ability to automate and go vertical.

Retailers generally move cases and pallet sizes very efficiently, and when it comes to ecommerce, they cut a portion of this inventory and move it to another side of the facility and then try to fulfill orders. It is usually very inefficient.

The use of micro fulfillment centers serve several needs. First, these are smaller and can be targeted to specific populated areas. Second, they are often fully automated and thus eliminate much of the higher labor costs for digital orders for pickup or delivery. As we mentioned earlier, retailers are losing 3-8 points of margin on these digital orders today compared to walk-in customers. It is not uncommon for there to be savings of 30-40% of the cost of fulfillment on a per order basis when these external locations are used (once initial costs are recovered).

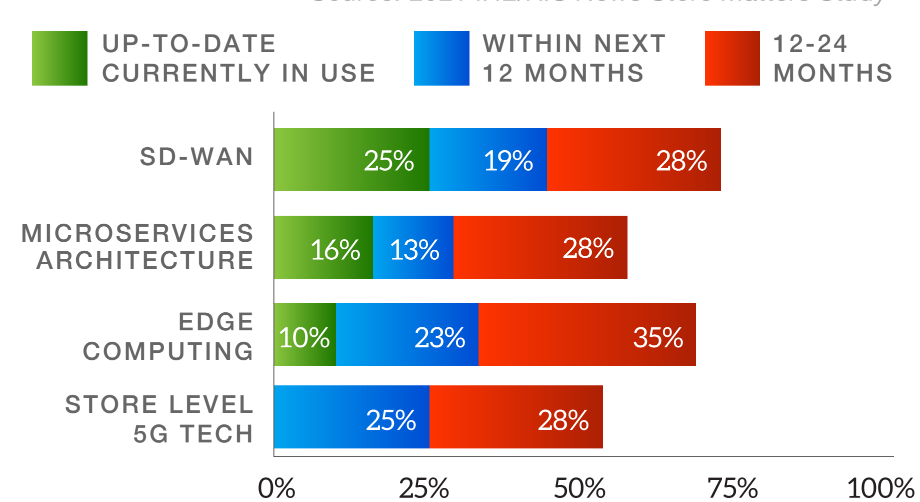
Next, we have the changes in-store. Retailers in our study said they are changing their stores to provide a second "high volume section for digital orders" within the same footprint at a rate of growth of 700% in the next two years. Basically, the top 5,000-10,000 items are located in small store within a store (that might be automated) specifically for the purpose of digital orders, thus eliminating the steps to fulfill orders and removing the bottlenecks within store aisles that we see today with shopping services clogging the space for instore shoppers.

To facilitate all of these changes, retailers are quickly moving to the use of edge architecture in their technology design. Edge provides many cost savings benefits in relation to server consolidation but can also help extend the life of existing hardware devices. Most often we see retailers deploy edge to be able to process and handle all of the IT devices in the store as well as facilitate a simplified code stack for POS and mobile devices being used for all different services. Overall, the study showed a 600% growth in the next two years among FDCM retailers for edge architecture which can reduce operating costs and simplify maintenance. Then related to this change in hardware architecture is the interoperability and data sharing among apps in store with microservices architecture in application design which is growing at a rate of 260% in the next 24 months.

Finally, to handle all that data is the increased LAN and WAN bandwidth options. Software Defined WAN (SD-WAN) is growing at a 188% rate over the next two years and the use of 5G is expected to grow from 0% use in 2020 to 53% of respondents in the next two years.

EMERGING TECH ADOPTION TIMEFRAME FOR FOOD, DRUG, MASS RETAILERS IN NEXT 2 YRS

Source: 2021 IHL/RIS News Store Matters Study



Solving the Inventory Problems

Solving the inventory issues for FDCM retailers is not a single technology solution but requires a coordinated attack across many solutions. Here we address just a few that show great quantifiable benefits.

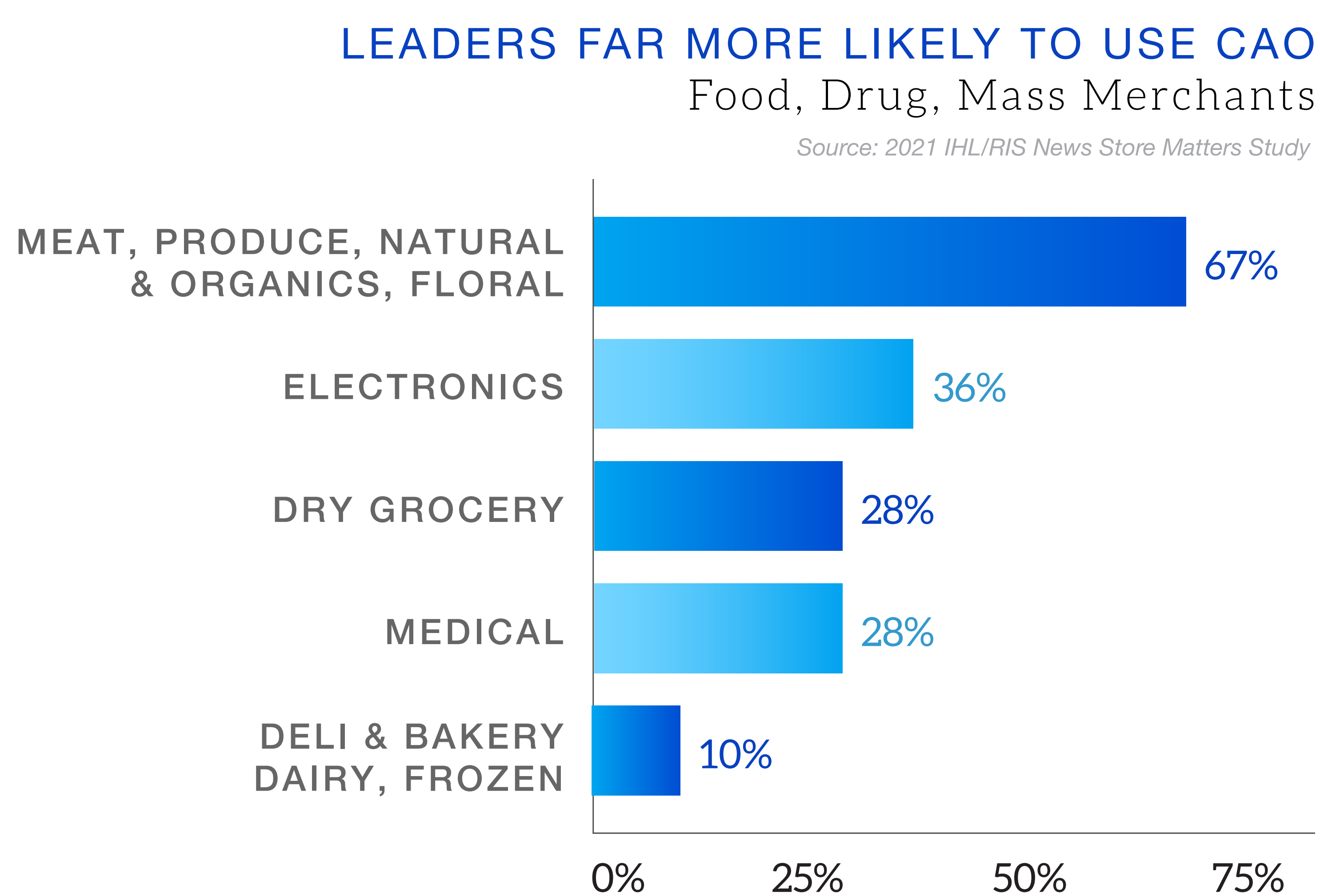
The first solution we would highlight is computer-aided-ordering (CAO). Without question, systems can recognize trends in data and demand much faster than humans can. This was critical during the pandemic's initial stages. Those retailers who were able to quickly adjust their orders up or down based on demand signals capitalized the most. This was especially true when demand indications were showing the need for exponential increases over standard level orders. Those retailers who were using CAO capitalized on more of the sales than their competitors, getting much more of the supply for surge categories.

In the dry grocery and deli areas, those using CAO saw over 9% higher sales in 2020. For beverages, 7.2% higher sales and 18% higher ecommerce sales when CAO was used. And then in the meat/produce areas, users of CAO saw 18.4% higher sales overall and over 80% higher ecommerce sales (124% higher click and collect revenues) compared to peers that did not.

Next are cloud-based forecasting, category management and merchandising applications that support a single version of the truth in data regardless of where the order comes from and the location of the inventory. These components are essential and must support the ability for order fulfillment from store, dark store, fulfillment center or warehouse. These systems also need to support the added record data from RFID and computervision and thus data flexibility is the key.

Excluding the 4-week surge, grocery consumers reported experiencing an out-of-stock on **1 in 4.2** items they were looking for in grocery & mass merchants in 2020.

Source: IHL Group



RFID and Computer Vision are both seeing dramatic increases in the next two years with RFID installs to increase 200% and computer vision 400% in the next two years. These technologies are not complete solutions for the FDCM environment, but they can go a long way for improving counts at the store levels so that the systems say what the customer actually experiences.

The race to accurate inventory will determine who prospers and who does not in the next decade because it is retailers who have accurate data that will be in position to best take advantage of artificial intelligence and machine learning technologies. These technologies are only as good as the data they are working with, so whoever has the best data wins.

It has never been more important for retailers to have in-stock what the consumer wants when they want to buy it. If stores don't have it, Amazon, Walmart, Target, Kroger, Auchan, Tesco, Fabric and others can deliver it in less than a day. CAO, in concert with inventory accuracy inducing technologies, can help retailers fix their Inventory Distortion issues and subsequently race ahead of all other retailers that have not made the investments.

RAPIDLY DEPLOYING TECHNOLOGIES TO IMPROVE INVENTORY ACCURACY IN NEXT TWO YEARS

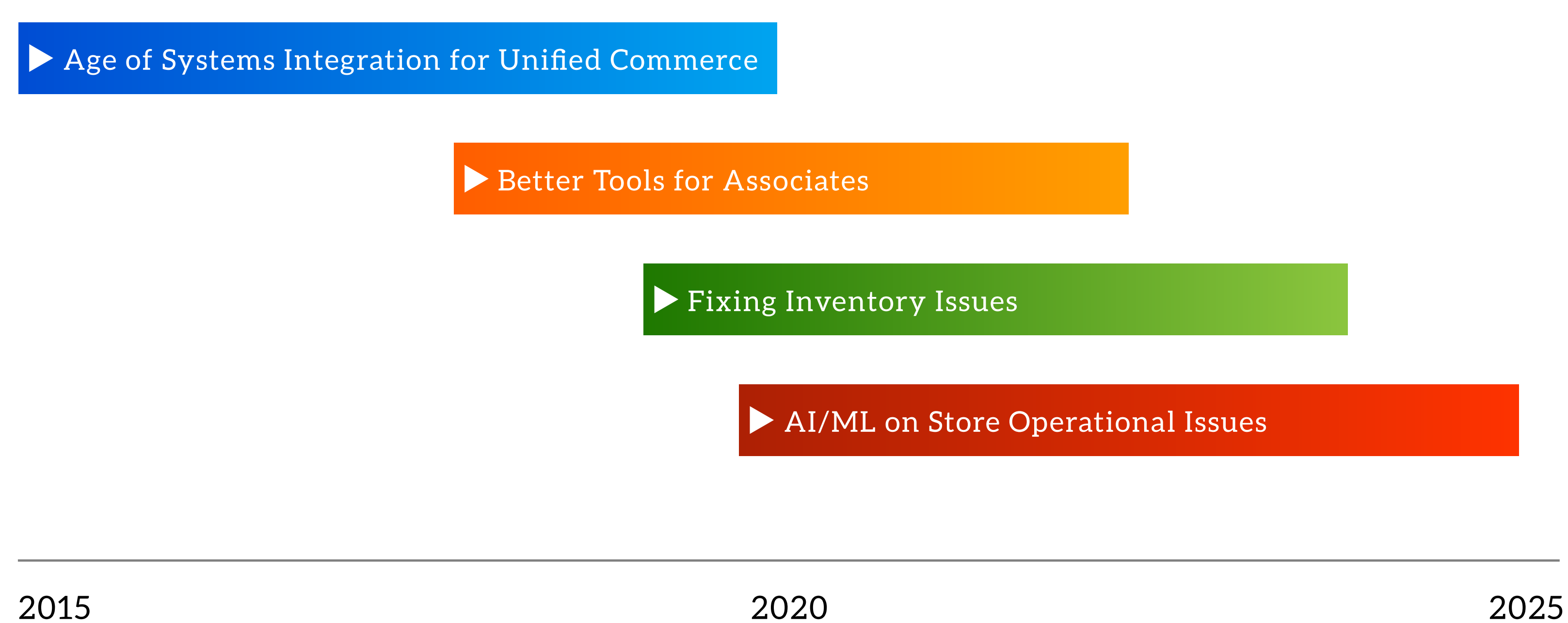
Source: 2021 IHL/RIS News Store Matters Study

RFID +200%

COMPUTERVISION +400%

THE NEXT BATTLEGROUND IN RETAIL

Source: IHL Group



What Does the Future Hold?

The COVID pandemic has caused foundational changes in consumer behavior, which in turn have caused foundational changes in how retailers relate to consumers. Trends already moving in one direction saw 3-10 years' worth of changes in less than one year. This caused both massive stress and opportunity for Food, Drug, and Mass Merchants. And will cause even more pain as more shoppers come back to stores. What do we see going forward? Well, for the foreseeable future, we believe successful retailers will be doing some (or all) of the following.

IN-STORE SHOPPING We expect that masks, shopping cart wipe-downs, plexiglass shields and directional aisle signage will all continue to be a part of in-store shopping for at least the next year. We expect that it will be some time before open buffet-style ready-to-eat foods and services like deli or bakery samples will come back. As mentioned earlier, stores are being remodeled so that the online order fulfillment is mostly separated from the inside shopping. This is going to reduce the sales square footage and stores will remove standard POS lanes in favor of more self-checkout and the ability for consumers to use their own devices to check out. There is a race to get this done because every day more and more shoppers are coming back to the stores and are competing with personal shoppers in the aisle.

ONLINE SHOPPING After the growth spike in e-commerce that occurred at the outset of the pandemic, we expect online growth to stabilize. Consumers have become accustomed to shopping for grocery and personal items in this manner, and the new fulfillment methods have given them much desired flexibility. IHL will be researching this specific area for stickiness post pandemic, but it is our hypothesis that only about 30-40% of the online customers we saw in 2020 will continue with the services at the same level by 2022. We believe this for two reasons: 1) The experience wasn't great for many shoppers as they struggled to find delivery/pickup slots and were faced with many out-of-stocks, and 2) retailers who had offered these services for free will need to begin charging for click and collect and delivery to make up for margin loss and this will push away a portion of customers.

FULFILLMENT We expect the new customer journeys (BOPIS, Click & Collect, Delivery, Ship from Store, etc.) to stay in place, however, the way in which those orders are fulfilled will be dependent on the retailer. Some will go for micro fulfillment locations and others dark stores, while still others will have separate areas in the store for online orders that they may automate like a micro fulfillment location due to efficiency within an existing space. The same retailer might choose a combination of all three types. What is clear, managing fulfillment closest to the customer is a trend with staying power as that location is a clear advantage when competing with Amazon.

SUPPLY CHAIN CHANGES The huge surge that occurred (and the resulting empty shelves) will cause some retailers to rethink their supply chain strategy and incorporate alternate sources for core products going forward. While the last 25 years has been about limiting suppliers for best pricing, we expect the lesson coming forward is no single point of failure when it comes to key items that would be necessary should another crisis like the pandemic occur. We expect retailers to over-correct in this area for awhile, finding a mid-ground that allows a balance between flexibility of sourcing and profitability.

BOTTOM LINE The business coming into 2020 has been completely changed going forward. Those retailers with the foresight to invest in structure, processes and technologies to transform to the new reality will be the big winners of the next decade.