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Trend report

Transforming retail interactions

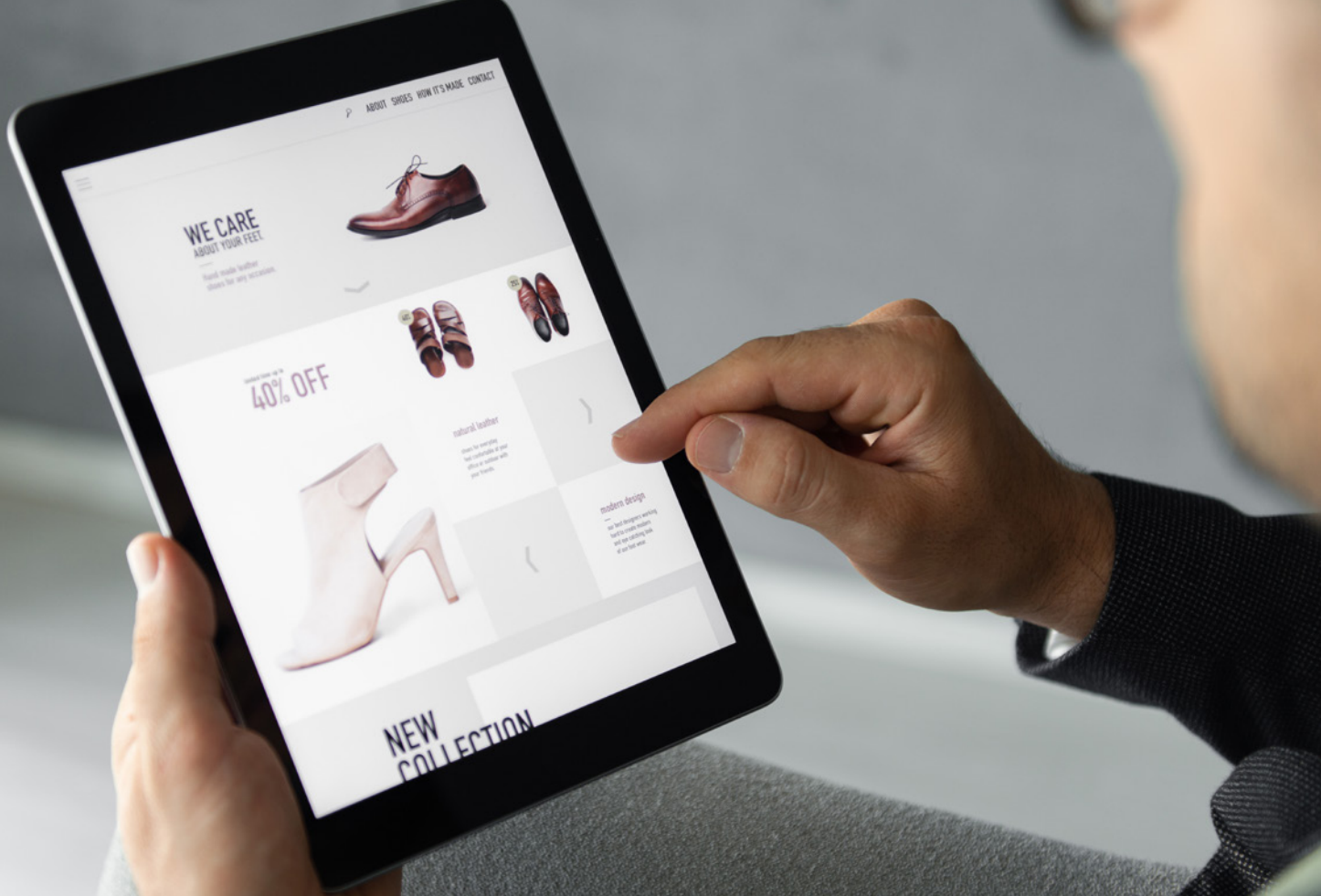
Smart retail - Part 2

Contents

- 04** 1. **Introduction**
- 05** 2. **The faster shopper**
 - 2.1 Contactless payments
 - 2.2 Shopping apps
 - 2.3 The faster shop
- 07** 3. **Tech and the faster associate**
 - 3.1. A better toolkit
 - 3.2 When merchandise is easier to find
- 08** 4. **Informed guidance**
 - 4.1. When interactive is everywhere
 - 4.2 Product information apps
 - 4.3 Location-based informational services
- 11** 5. **From physical to digital**
- 12** 6. **From digital to physical**
 - 6.1. Making pick-up easier
 - 6.2. Last-mile delivery services
- 13** 7. **Real life, only better**
- 15** **References**







01. Introduction

Tech is transforming retail—and transforming the relationships that for generations have defined the shopping experience.

In the past, shoppers typically entered retail environments at an informational disadvantage, and had to rely on a store's personnel to help them overcome it—by offering the shopper information on pricing, selection, and so on. Helping customers overcome that disadvantage was at the core of good customer service. So was making sure that customers could get in and out of a store as quickly and efficiently as possible.

Now technology is revolutionizing how retailers and shoppers negotiate these imperatives. The days when a shopper sidled into a big retail establishment clutching a scrawled shopping list and scanning the premises for an indication of where to go first are vanishing. Now shoppers are finding aid in the form of interactive digital displays, product information apps, and other tools.

If a shopper ends up in a changing room, he or she is more and more likely to deploy augmented reality (AR) tools to make shopping easier. The fitting room might even be a “smart” one, where an interactive screen makes it possible to virtually model items of different sizes or colors.

Tech has also started making shopping faster. “Tap and go” contactless payment technology is cutting precious seconds off the checkout process. New staff task tools are bringing points of sale to in-store shoppers wherever they happen to be, eliminating lines. With “click and collect” services, shoppers can order something online and then show up at the store to take it home whenever works best for them.

Shopping from home, meanwhile, is becoming even easier thanks to tech that makes reordering staple products almost effortless. Tech is also increasingly defying the “last-mile problem” that makes home delivery a challenge.

This report will delve into the state of the art of these innovations, lending a view of how they're changing the process by which we buy things. It will also discuss what we might expect in the future as the ongoing technological revolution continues to transform retail.

02.

The faster shopper

Contactless payments, shopping apps, and other tech innovations are helping shoppers get into and out of physical stores more quickly. There are advantages for consumers and retailers both.

2.1. Contactless payments

Contactless payments have long been popular in the U.K., Canada, Australia, and other developed countries. They're particularly attractive for low-price transactions of the sort shoppers feel comfortable completing without entering a PIN or providing a signature.

The adoption of contactless payments, which are enabled by near-field communication (NFC) or Bluetooth low energy (BLE) beacons, has by contrast lagged in the United States. But that's changing. Visa, Mastercard, Chase, and CapitalOne are among the issuers now providing contactless cards. More and more merchants are signing on to the technology as well, including Whole Foods, Walgreens, Starbucks, and McDonalds. In addition, the spring of 2019 saw the New York City Transit Authority launch a contactless pilot project on several of its subway lines. That project could do much to habituate a massive audience to the novelty and convenience of contactless cards.

Faster transactions of the sort that contactless cards make possible mean easier transactions. And when transactions are easier, consumers are more inclined to make the small purchases they might have avoided before. A by now well-established MasterCard study indicates that consumers using contactless tech rack up 30 percent more in sales than they do with conventional cards.¹

Whether to use BLE beacons or NFC to enable contactless payment is a judgment call for retailers. Beacons allow shoppers more freedom of movement: any shopper within a beacon's range will be able to pay for merchandise via an app—provided, that is, that his or her phone's Bluetooth functionality is switched on. This potentially eliminates the need for shoppers to stand in line. NFC doesn't necessarily eliminate lines, since shoppers still have to bring their contactless cards or card-linked smartphones into close proximity (no more than four inches) with a reader. On the other hand, given the short distances it involves, NFC is more secure.²

Then there's smart clothing. Jacquard by Google is the Internet giant's entry in the wearable tech sweepstakes.³ Jacquard's trucker jacket, with wearable tech woven into the fabric, points towards a future in which we may well pay for items with just a wave of our sleeve.

Or perhaps the future will see us pay for items with the wave of a hand alone—a hand into which a minute piece of digital hardware has been surgically inserted. That's the vision behind “bio-hacking” startups like the Washington-based Dangerous Things. Whether such “embedded” payment methods gain traction remains to be seen.

2.2. Shopping apps

If NFC and BLE make getting out of a store easier, shopping apps make negotiating it easier, more pleasant, and more financially advantageous for all involved. In effect, they bridge the gap between the digital and physical worlds, giving shoppers the best of both. As Jon Rudoie, former digital and technology director at UK supermarket giant Sainsbury's, put it, shoppers “still want to come into the store—but with limited time, they want to be able to get their shopping done quickly.”⁴ Sainsbury's app is particularly good at helping them do that: it lets in-store shoppers scan and pay for items themselves, using their smartphones.

Not all store apps let shoppers do what Sainsbury's does. But they might let shoppers browse inventory, shop online, access special sales offers and benefits, and keep track of orders they've placed for pickup. Grocery store apps often let users make shopping lists, and can offer recipe suggestions that make use of the items shoppers are buying.

Handy as store apps can be, those associated with broader e-commerce platforms can be more impressive. Amazon's app, with its wide range of products, its discounts for Prime members, and its voice search capabilities, deserves pride of place in any discussion of such amenities. So does Groupon, which bestrides the “digital deals” app space like a colossus.

A wide range of additional apps, from Dosh to Shopbop to Touch of Modern to Newegg, are useful in providing broad access to inventories and deals. The sheer proliferation of such apps indicates how vibrant this market niche has now become.

2.3. The faster shop

The rise of checkout-free stores could represent the biggest change to the nature of brick-and-mortar shopping since the rise of the supermarket.

Amazon is a leader here, establishing checkout-less shopping as a reality when its first Go store opened in Seattle in early 2018. There are 14 Go stores as of this writing, all in the U.S., with three more coming soon.⁵ The Seattle-based tech titan plans to open as many as 3,000 Go branches by 2021, according to a Bloomberg report last year.⁶

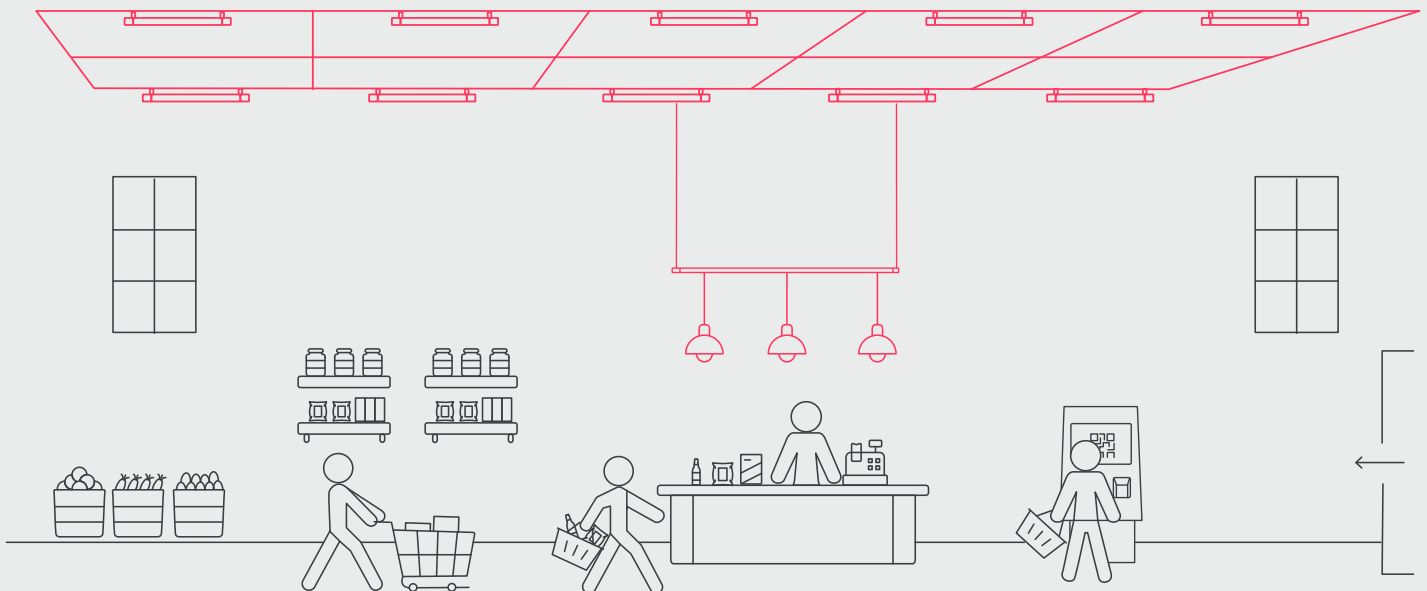
Amazon Go shoppers scan a QR code at a turnstile on the way in. A network of cameras then keeps an eye on them, adding items to their virtual shopping carts as they remove them from the shelves. When shoppers leave the store, the Go system automatically debits their accounts via linked payment cards.

Amazon dominates checkout-free shopping in the U.S., but other players have emerged overseas.

The spring of 2019 saw Sainsbury's open the U.K.'s first no-checkout store, in London.⁷ This store does without the camera surveillance, requiring shoppers to scan items with an app as they shop. They then pay with Apple Pay or a similar method when they leave.

Checkout-free stores are leading the way in changing how we shop, but there are other approaches as well: virtual stores, for example. The 22 Homeplus virtual stores that British-based multinational grocery retailer Tesco opened in South Korea stand as a prime example. The stores are located in subway stations, bus stops, and other public places frequented by South Korea's commuters. Using smartphones equipped with Homeplus apps, shoppers can scan QR codes assigned to products displayed on the virtual store's walls. They can then arrange home delivery of the items they purchase, with same-day delivery standard.

Chicago-based Peapod, India's Yehbi.com with 30 stores in Delhi, and Holland's Jumbo are among the other global entrants in the virtual store space.



03.

Tech and the faster associate

Tablets with location-aware applications, mobile payment terminals, and even robots are helping sales associates do their jobs more efficiently—from restocking shelves to assisting customers wherever they happen to be in the store.

3.1. A better toolkit

Technology is changing how salespeople and other in-store personnel do their jobs. Armed with tablets or other devices, retail employees are smoothing the in-store experience for shoppers. A salesperson can now check inventory with a swipe of a screen. That means no more abandoning a customer for a trip to the stockroom.

And using a mobile payment terminal, the salesperson can ring up a customer's purchases anywhere in a store: the point of sale comes to the customer, and not vice versa. For the customer, this represents a pleasant change from how retail has traditionally worked, even if the methodology works better in some retail environments than others. Grocery purchases, for instance, may well necessitate a traditional point of sale counter, to make bagging and packing easier.

Location tech, meanwhile, helps salespeople find shoppers and lets retailers track how shoppers move around a store. On the basis of the resultant data, retailers can create "heat maps" that indicate where shoppers like to congregate, what parts of a store they avoid, where they feel comfortable lingering, and so on. Such information can lead to product placement and store design innovations that translate into sales.

The tablet is perhaps the iconic "mobile toolkit" when it comes to outfitting salespeople. It speeds up checkout and makes product information available to customers. It even drives online sales: a salesperson can place an order for an item that isn't in stock, on the spot. But other portable task tools are having a positive effect on retail interactions, too. One of them is the credit-card scanner. This device may lack the tablet's sleek design-forward style, but it can be effective in getting shoppers paid up and happily out the door.

If the mobile credit card terminal is less appealingly sophisticated than the tablet, robot store assistants are more so. Shoppers at Bay Area Lowe's stores in 2016 met the LoweBot, an "autonomous retail

service robot" that helped patrons find items.⁸ The robot even answered rudimentary questions in a range of languages. The thinking behind this robotics pilot program was that the machine would free human staffers from run of the mill tasks so that they could devote themselves more thoroughly to customer needs, using those powers of empathy and imagination that so far remain the exclusive property of human beings. It seems a sure thing that similar but better robots will play roles in the retail ecosystem in the years to come.

In certain retail scenarios, it's not the employee who possesses the tool that makes the retail interaction quicker and more comfortable—it's the customer. Take Princess Cruises' OceanMedallion, a wearable digital pendant the size of a quarter.⁹ Cruisers can use it to order and pay for on-board meals and entertainment. Onsite readers scan the bracelet and the transaction is complete.

3.2. When merchandise is easier to find

Retail customers may give it little thought, but logistics is a transformational discipline in our economy today, one in which tech like the Internet of Things (IoT) and artificial intelligence are driving impressive breakthroughs. These breakthroughs are making life easier for retail employees down the supply chain and for the customers they serve.

Take radio frequency identification (RFID) technology, which makes it possible to digitally mark, and thus to track, every piece of merchandise that passes through a logistics facility. The consequences of this ability are significant. On the warehouse end, time once lost to tracking down merchandise is now saved. On the store level, salespeople gain visibility into what's on their racks, on their shelves, and in their storerooms.



04. Informed guidance

Guidance for researching, comparing, locating, and purchasing items is now being embedded in apps and informational displays on smartphones, billboards, and metro station kiosks. Shoppers like the convenience, and retailers like to know that they're doing everything they can to close a sale.

4.1. When interactive is everywhere

Another high-potential element in retail is out of home (OOH) digital display. Interactive screens that educate shoppers about products or that function as shopping interfaces tend to cluster in urban environments where the density of passersby makes them effective.

Toronto was an early mover in this space. In 2015 Astral Out-of-Home, a division of Bell Media, furnished 10 bus shelters in the Canadian city with interactive screens that passersby could use to explore information about products and access local film and concert listings. The interactive component even featured a mortgage calculator.¹⁰

Bus and metro stations and other public transportation facilities are natural places for this technology, attracting people eager to make use of what might otherwise be “dead time,” as we’ve seen in the case of Tesco’s initiatives in South Korea. But the façades of actual stores are natural places for these technologies, too.

A shoppable or interactive storefront can draw shoppers over the store’s threshold. But even if it doesn’t, it can boost shopper engagement with the brand and possibly set the stage for an online sale.

Among other groundbreaking early examples of OOH tech have been an interactive storefront that TBWA/Helsinki created for Adidas’ NEO label in Nürnberg, Germany.¹¹ The execution allowed shoppers to virtually model items of clothing on a mannequin and then use their smartphones to buy them. Nike’s interactive window displays at Selfridge’s in London offered passersby a number of experiences: one component of the installation ordered them to jump, then measured how high they managed to do so.¹² Benetton has also made clever use of interactive windows.¹³

A more recent such execution is the one that Swedish retailer Clas Ohlson unveiled in 2018. An interactive screen erected in the shop’s display window has allowed pedestrians to browse inventory, check out deals, and even shop via a phone.¹⁴

4.2. Product information apps

In a world saturated with information, it should be no surprise that consumers would demand comprehensive information about the products they buy, or that they would want it immediately. The ROBO phenomenon—“research online, buy offline”—is a real one.¹⁵ According to 2018 research, more than nine out of ten shoppers use their phones to research merchandise before making a purchase in a brick and mortar store.¹⁶

A range of apps are helping them do that research. Especially in the food space, where people particularly concern themselves with the details of what they're buying, apps are using big data to provide users with easy access to nutritional and other food-related information.¹⁷

Fooducate is one long-running app that, in addition to offering a food diary and a calorie counter, includes a scanner with which a user can scan universal product codes, surfacing nutritional information. ShopWell is another such well-established app. And Nutrition Facts offers just that: nutrition info for thousands of food items.

Other apps aggregate information about food allergies. Food Intolerances, which rates more than 900 foods for their allergenic status, is one of them. Gluten-Free Marketplace offers nutritional information relevant to those who must avoid that allergenic protein. TellSpec delivers information about nutrition, calories, allergens, and more to the user's smartphone screen.

The list could go on. Just as in the case of shopping apps, the number of players in the space is an indication of its vitality.

4.3. Location-based informational services

According to TimeTrade, 90 percent of shoppers who can't get the help they need to find an item leave the store without buying anything.¹⁸ The lesson? Retailers are wise to embrace location technology, which can lead shoppers directly to what they're looking for, and thus play a direct role in boosting revenue.

Outdoor location tech, for its part, can pinpoint where an online shopper is located, then flash onto the shopper's screen a notice announcing the presence of a brick-and-mortar store nearby. The point is that the shopper can go see, and sample, the product in question, which in the case of an item of clothing might make the difference in driving a sale.

Then there are location-based ads, promotions, and coupons. These let retailers target shoppers with precision, to the benefit of both parties. A shopper who happens to be standing in front of a soap display will receive a digital coupon for that soap. The retailer for its part gets an effective way to access precisely those customers who are in a perfect position to help eliminate an overstock, and fast.

90%

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TimeTrade





05. From physical to digital

What if consumers didn't have to make regular runs to the supermarket? How much would they gain in terms of time and peace of mind?

A future in which connected technology in the guise of the Internet of Things relieves them of such errands is taking shape. In an era in which machines "talk to each other," and the "automated home" matures from a speculative dream to a reality, we could indeed see wonders. Imagine, for instance, "smart" faucets that trigger water filter deliveries through Amazon when they detect that the filters they're equipped with need replacing.

If a kitchen with such capabilities has yet to materialize, a number of IoT-enabled smart home platforms have already hit the market, with various degrees of sticking power.

Amazon Dash, a consumer goods ordering service that the retailer introduced in 2014 and phased out in 2019, involved a number of tools designed to make household provisioning easier. A Dash Button was a branded button you could affix to an in-home appliance. For example, you could place a button bearing the logo of a laundry detergent on the console of your washing machine. When you noticed you were running low on detergent, you could press the button to trigger a detergent order. The Amazon Dash Wand was a device you could speak into trigger an order. Alternatively, you could use it to scan a barcode.

The Dash service met its end when it became unnecessary. These days, Amazon lets a shopper order items simply by speaking to Alexa.

If they failed to take the market by storm, devices like these at least pointed toward a smart-home future that now seems likely to sneak up on us incrementally, rather than as a single revolutionary leap forward. But today's smart refrigerators, particularly Samsung's Family Hub model, hint at interesting future possibilities, too. The Family Hub is outfitted with a screen on which you can look up recipes or send messages. An interior camera lets you see what's inside via your phone. It offers other technological novelties as well. But a refrigerator that will order milk for you on its own remains a promise unfulfilled.



What if consumers didn't have to make regular runs to the supermarket? How much would they gain in terms of time and peace of mind?

06.

From digital to physical

Unless a customer is purchasing a digital product, at some point the customer journey becomes physical. This is the famous “last mile,” where physical merchandise must be physically delivered to a real-world location. Click-and-collect services are helping today. Will drones and driverless vehicles soon play a role as well?

6.1. Making pick-up easier

The online shopping revolution has transformed retail in radical ways, but it hasn't been perfect. Among other significant challenges, there remains the issue of undelivered packages. A 2017 report found that more than 30 percent of respondents had had a package stolen.¹⁹

Pick-up and click-and-collect services represent a way to get around this imperfection in the online economy. Such services give a shopper the option of picking up an online purchase in a brick-and-mortar location or in a “third place,” such as a bank of secure lockers located on the street. Some of these pick-up locations even facilitate drive-through access. Because it's a low-tech solution, store pick-up and click-and-collect might not have the elegance of certain other online-economy innovations. But they are effective in addressing the inefficiencies inherent in doorstep delivery, not to mention cutting the costs associated with repeated attempts at delivery.

Click-and-collect set-ups can differ from each other significantly. There are mammoth operations, like the Walmart Grocery Pick-Up locations across the United States. After placing orders online, Walmart customers drive to the facility, where Walmart attendants bring the merchandise out to their cars. Shoppers have over 10,000 items to choose from, from food (including perishable food) to a full range of CPG items. The service is free.

Then there are parcel collection services for people who aren't home to receive e-commerce orders during the day. The British service Duddle offers more than 500 pick-up/drop-off points around the country, the majority in public transport locations. The beacon-enabled system that Australian retail chain Woolworth's deploys to facilitate click and collect is admirably simple.²⁰ A beacon picks up the presence of an approaching click-and-collect shopper and notifies staffers to start packing up his or her order. The store's app keeps the customer apprised of the order's status.

In its most simple form, click and collect is simply a matter of picking up at a brick-and-mortar store the item that you ordered through a website. By now numerous chains, from Bed Bath & Beyond to the Gap to Old Navy to Crate & Barrel offer click and collect services.

6.2. Last-mile delivery services

How to quickly, efficiently, and cost-effectively move merchandise that last bit of distance to a customer's residence, when economies of scale no longer apply? In the e-commerce age, the so-called last-mile problem is more relevant than ever.

Mindful of consumer expectations, retailers are exerting themselves to make themselves the leaders in doorstep delivery.

Amazon offers same-day delivery on a million items available on its platform, with “same day” defined as arriving by 9 p.m. (and the next day if you order it after noon).²¹ That the service is for now restricted to a number of major metro areas is an indication of how troublesome overcoming the last mile can be: even the reigning ecommerce leader is so far wary of extending this service to relatively underpopulated rural areas, with the logistical challenges they pose.

Amazon is currently working on rolling out Prime Air, a service that promises drone delivery of packages weighing less than five pounds in under thirty minutes. A spring 2019 announcement indicated that the service, which regulatory issues have delayed, would launch in “the coming months.”²² Uber, too, is currently working on drone delivery. So is Google, with its Project Wing.

When these initiatives do launch, they could have a significant effect on the way in which consumers experience retail, given the sheer numbers involved. According to Amazon's research, 75 to 90 percent of the things that consumers buy weigh under five pounds.²³ That means there could be no lack of package-weighted drones buzzing through our collective airspace soon.

Elsewhere in this space, Domino's pizza announced in June 2019 that it's collaborating with self-driving delivery start-up Nuro to introduce driverless pizza delivery in Houston in the near future.²⁴



07. Real life, only better

There exist a number of useful augmented reality (AR) apps in retail, particularly in the home furnishings, home design, apparel, and jewelry areas—in areas, in other words, where it can be imperative for a consumer to model a “look.” Some of the biggest names in these verticals deploy AR to make things easier on shoppers.²⁵ The range extends from IKEA, whose app helps shoppers figure out whether a piece of furniture will fit in their living spaces; to Sephora, whose app lets users model makeup on selfies that they upload to their smartphones; to Home Depot, whose app helps people visualize potential paint schemes in their homes; to Lacoste, whose app lets shoppers “try on” shoes.

Touted as a soon-to-be ubiquitous technology several years ago, augmented reality hasn’t quite lived up to those high expectations. But it’s still in its early innings. As the technology behind it develops in tandem with the creativity with which retailers deploy it, mobile AR could come into its own as a phenomenon that changes retail interactions as we’ve known them.

75% to 90%

of the things that consumers buy weigh under five pounds.

Amazon



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