

# The State of Innovation in Retail 2023

How technology and startups  
are changing the industry



## Welcome to the latest State of Innovation in Retail Report by Cardlink and Foundation.



The past year was defined by “permacrisis”; a continuous state of adversity that’s been defined by geopolitical instability, financial turmoil, and the everpresent consequences of climate change; following on from one of the most severe health crises of our era.

As a pivotal sector of every economy, retail is profoundly affected by global headwinds, as well as the onset of new technologies that are disrupting old paradigms and business models. In this environment, businesses must adapt, evolve, and innovate to keep pace and secure their customers’ trust.

At Cardlink, innovation is part of our DNA. Throughout our 19-year history, we have been supporting businesses by removing day-to-day obstacles and helping them focus on strategy and growth. Empowering retail businesses is a key part of our mission, which is why we are constantly monitoring the retail sector’s evolution and position ourselves at the forefront of its digital transformation. Through constant research, partnerships, investments and dedication to the development of cutting-edge technologies, we create innovative products and services for our customers, faithful to our goal to contribute to their growth and improve their daily lives. Big or small, every idea we manage to turn into something functional, something that will benefit our customers, partners, employees, but also society or the environment, is our contribution to a better and more sustainable payment world, and beyond.

To that end, we have emphasized investment in areas of open innovation through initiatives like the Retail Innovation Hub; a regional platform with the ambition to facilitate the evolution of retail in the digital era. In collaboration with Found.ation, the Retail Innovation Hub aims to be a converging point for retail experts, technology leaders, and communities who want to shape the future of the industry, exchange knowledge and insights, learn how to adjust to the digital transformation landscape, and keep up with the latest developments.

In our efforts, we are proud to be part of the Worldline family, a global leader in digital payments and transactional solutions. Worldline considers innovation one of its core company values, committing €250 million on research & development annually, and consistently exploring new technologies, from cybersecurity to the Metaverse. Worldline shares Cardlink’s dedication at driving value creation through technology-led solutions that benefit businesses and society at large.

As you will see for yourself in the pages that follow, the future of the retail sector holds exciting potential despite, or perhaps because of, current uncertainties. The future holds exciting possibilities, and we stand ready to meet them head-on.

Antigonos Papadopoulos  
CEO Cardlink

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## ▶ Introduction

The retail sector spent the last three years in a kind of existential crisis. The pandemic brought a seismic and unexpected shift to physical retail. Millions of consumers were forced indoors and turned to online shopping, forcing brands, retailers, and suppliers to pivot and adapt rapidly to this online-first environment.

It is true that the trends that the pandemic accelerated had already been prevalent. In many cases, retailers mostly had to implement solutions that were pre-existing or had already been in the pipeline, as e-commerce gained ground in consumer preference. Consumers also proved that, beyond the initial shock, they were quite ready for a world where most, if not all, shopping happens from one's computer or mobile device.

It was enough to make anyone think this would become the new status quo, consigning the future of retail to an online-only, or at least, online-first state.

And then things changed again.

As lockdowns around the world ended and the world stepped back out of the house again, retail found itself reexamining the assumptions of the last two years. Consumers are returning to physical stores, but are now more savvy about their online options. A whole new demographic is entering the market with fresh spending power and very specific ideas of what they want out of their retail experience.

As 64% of global businesses are still recovering from the impact of Covid-19<sup>1</sup>, the transition to a post-pandemic world has brought to light a fresh set of geopolitical and financial challenges, exacerbating disruption rather than easing it. And to drive the point home, the World Trade Organization revised its outlook for trade growth volume in 2022. Early 2022

estimates of a growth rate of 3.4% in 2023 plunged to 1% by the time October 2022 rolled along<sup>2</sup>, citing “strong headwinds”.

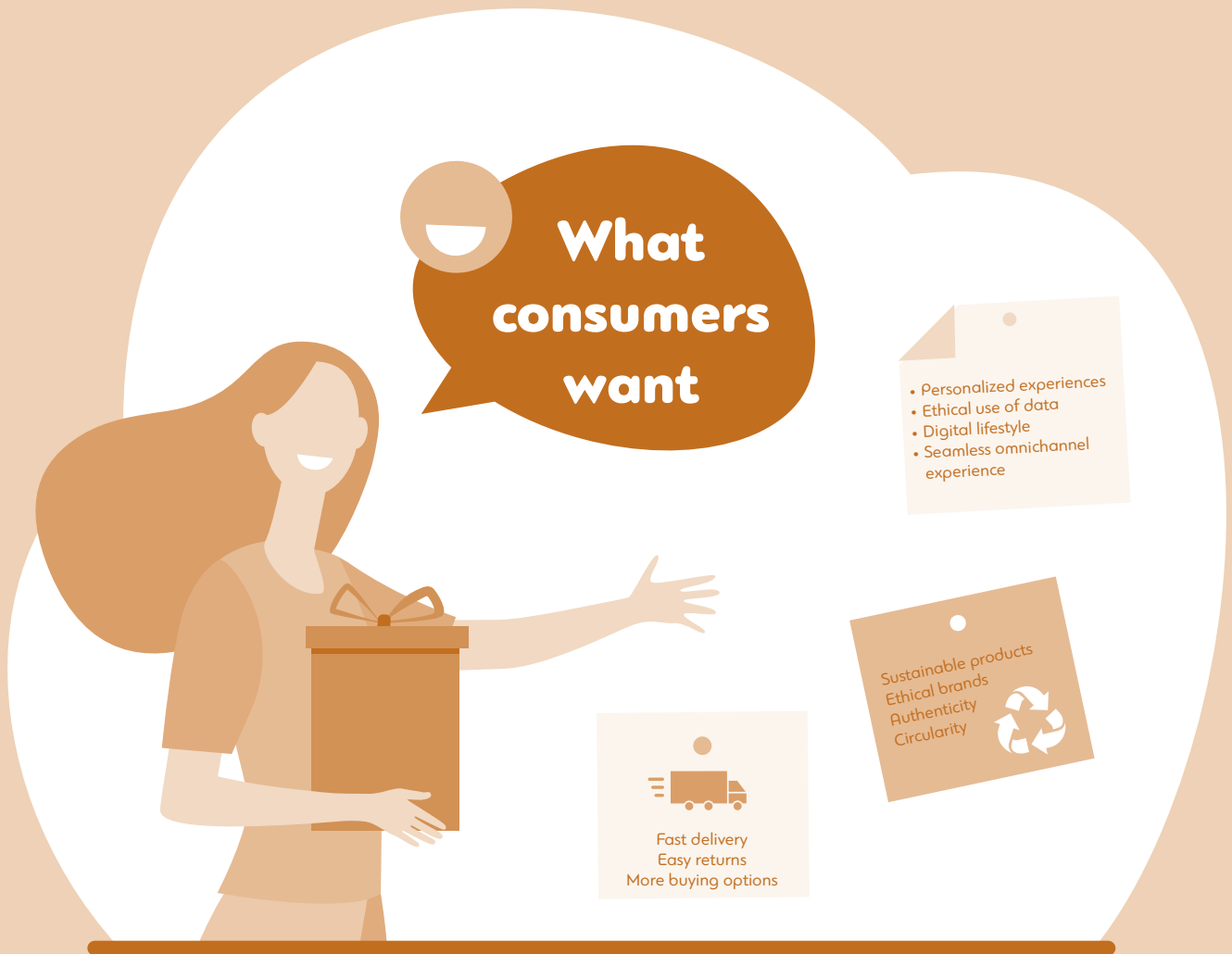
Supply chain problems did not start with the pandemic but they certainly peaked during that time. While several world economies were kickstarted again as restrictions eased, China maintained a “zero-Covid” policy that was only relaxed in late 2022. As a result, vital infrastructure like factories and ports either remained closed or closed down again as local outbreaks appeared in key urban centers like Shenzhen and Shanghai.

In May 2022, 51% of freight forwarders, traders, and shippers said in a survey that they expected a more chaotic peak season compared to 2021, and more than half of those surveyed reported that Covid lockdowns in China had made it harder to ship as much product as planned<sup>3</sup>.

In Greece, soaring inflation, continuing supply chain challenges, and geopolitical and social instability are all taking their toll on a retail landscape that has already been tested to the limit by years of financial crisis on top of the global pandemic. The specter of global recession has never completely gone away, and it seems like it will be with us in 2023 as well.

How are brands and retailers responding to these compounding challenges? Ideally, by leveraging technological innovations that can save costs and improve efficiency, and by understanding what their customers want and meeting those needs proactively and decisively.

In this report, we examine these trends, what they mean for retailers and brands, and how they can be leveraged to navigate the current retail landscape.



# Shifts in consumer behavior

After more than a year since the last real lockdowns ended, the hope was that consumers would be eager to return to stores as well as maintain the online shopping momentum that was kickstarted during the pandemic. 2022 did not turn out exactly like that, however. Mounting headwinds across the world certainly have a part to play in

consumers' increased circumspection about their purchasing behavior. But there are a number of other factors at play which impact how consumers view the market, how they interact with brands, and how they think about retail in relation to other considerations in their lives.



## Consumers get more cost-conscious

Rising energy prices and prices of goods have put pressure on consumers, making the vaunted return to stores more challenging than was hoped for. Unsurprisingly, cost of living and the economy rank highly in Greek consumers' minds. Seventy percent of relevant survey respondents say they spend less money on non-essential goods, and 78% state that price is the key consideration for their purchasing decisions, now and in the next three years. Two-thirds of consumers say they intend to shop primarily during discount periods, with 8/10 of those actively postponing purchases until then. Meanwhile, more than half of consumers surveyed say they have switched to discount brands and private-label goods in 2022 - up from 41% in the prior year<sup>4</sup>.

Tighter economic conditions aren't the only thing shaping consumer expectations around retail, however. Trained by the pandemic as well as competitive practices among the larger e-commerce players before it, customers now demand more convenience and more efficient services at a lower cost - and they have no qualms about switching from their preferred brand or retailer to get them. In 2022, more than 7 out of 10 customers switched brands at least once, with 66% of them saying they did so to find better deals<sup>5</sup>. Other reasons included better customer service, product availability and selection, convenience, and changing expectations.

## Speedy delivery and easy returns

Shipping and delivery are not just a vital link in the commerce value chain, they are also a key consideration when consumers decide whether to buy or not, and where. With e-commerce giants like Amazon making same-day delivery the norm for millions of consumers, and several other brands striving for as fast or cheap (or both) delivery as possible, shoppers' expectations are adjusted accordingly. Delivery speed and cost are foremost in consumers' minds (42%), and they will readily go with the merchant that will give them what they're looking for - the majority of respondents state that they choose the seller who gives them free or the cheapest shipping, even when it takes 5-8 business days, over staying loyal to a brand that offers predictable and reliable shipping<sup>6</sup>.

Convenience and cost are important to consumers when it comes to returns as well. With retailers getting better at offering more options in this regard, including longer time frames (33% of return policies exceed 45 days<sup>7</sup>) and quicker refunds, a sound returns policy should be a given. Interestingly, significant numbers of consumers don't seem to consider free returns essential, with 25% saying they would be happy to pay for returns<sup>8</sup>, and almost half stating they would not change the way they practice returns if they had to pay, suggesting that having the option and the convenience is more important than cost in this case. Half of the respondents have also said they want conveniences such as scheduled home pick-up, the use of a drop-off network, contactless returns, and more.

## A seamless experience across channels

Most importantly, consumers now expect consistency across all possible channels through which they come in contact with the brand, ranking omnichannel experiences as a must-have<sup>9</sup>. Although only a minority of retailers get the balance across different channels right, the importance of doing so is only becoming more pressing. Omnichannel marketing campaigns see higher retention and conversion than single-channel ones<sup>10</sup>, while in 2022 a whopping 80% of consumers stated they had shopped across at least three channels in the preceding six months<sup>11</sup>.

Moreover, market surveys have shown that omnichannel retailers have outperformed retailers who only focus on e-commerce or only on brick-and-mortar commerce - retailers in the US showed 61% year-over-year revenue growth versus 47% and 41%, respectively<sup>12</sup>. For omnichannel to truly make a difference in how a retailer or brand engages with its customers, the key consideration isn't just to provide the customer with multiple options to choose from, but also the ability to switch from one to the other seamlessly.



## Sustainability, circularity, and environmental concerns

Consumers across the board are starting to factor sustainability into their purchasing decisions, although it remains to be seen how much of a priority it actually ends up being. Globally<sup>13</sup> and in Greece<sup>14</sup>, more than 1/3 of consumers state they would be willing to pay higher prices for more sustainable or environmentally-friendly products. Two-thirds of consumers believe environmental sustainability is important to them and would consider it one of the top five criteria for their purchase decisions. Younger consumer demographics, primarily Gen Z and Millennials, drive a large part of this trend compared to their older counterparts.

The combination of rising costs and increasing awareness of environmental impact and sustainable practices has created a growing market of second-hand items and sharing economy applications that complement traditional purchase-based consumption. The so-called circular economy flips around the pre-pandemic consumer trends of fast fashion and make-buy-dispose, aiming for more sustainable solutions. It promotes the idea of reusing or repurposing materials, resources, and products, thus reducing waste and introducing a strong sustainability angle.

Recent research points to the “value hill framework” according to which, organizations should emphasize business models that focus on two key pillars:

- Extending the life of a product through offering repair and maintenance options.
- Enabling options after the product has been used, such as recycling and repurposing materials to get maximum value out of it.

The benefits of the circular economy are financial as well as environmental. The European Union’s GDP is estimated to increase by 0.5% by 2030 thanks to new revenue sources and increased profitability, and is expected to create 700,000 jobs in the EU in the same time frame<sup>15</sup>.

### ESG checklist for retailers

Does the company have a sustainability policy/agenda?  
.....

Does it give back to society, support or offer to social/ environmental causes?  
.....

Does it use sustainable sources and ethical procedures?  
.....

Does it meet environmental standards? Does it have a neutral carbon footprint?  
.....

Does it use recyclable packaging?  
.....

Are its products environmentally friendly, recyclable, compostable or reusable?





## How do brands and retailers leverage the circular economy?

### Levi's

#### Levi's: The "Buy Better, Wear Longer" campaign

The well-known jeans maker has used the "Buy Better, Wear Longer" marketing campaign<sup>16</sup> for two consecutive years to highlight the durability and timelessness of its products. The campaign focuses on the quality of materials, which makes Levi's jeans last a long time, and on the idea that jeans are always in style, allowing for the same piece of clothing to be worn across long periods and be resold multiple times. The brand combined the campaign with the launch of a resale platform called SecondHand<sup>17</sup> and collaborated with climate-focused influencers to capture Gen Z audiences.

### IKEA

#### IKEA's first second-hand store

IKEA famously pioneered the flat-pack furniture trend, establishing a kind of "fast fashion" for home furnishings - low-cost items that are easy to produce, with limited durability and high likelihood of getting discarded not long after their first purchase. Addressing this less than sustainable approach, the company introduced its first-ever second-hand store in 2021. Located in Eskilstuna, Sweden, the initiative was presented as a pilot in the company's efforts to become "a fully circular business by 2030". In addition, it introduced "Circular Hubs" in select stores and online, in a bid to encourage customers to "help to reduce waste – good for you, great for the planet!"<sup>18</sup>

### adidas

#### Adidas - endlessly recyclable running shoes

In 2020, Adidas introduced the Ultraboost DNA Loop shoes<sup>19</sup> - a type of trainers that is made from a single material called thermoplastic polyurethane (TPU) and is assembled using heat instead of glue. Past its use, it is meant to be returned to the company where it is destroyed and remade into a new shoe from the same material. Adidas touted the environment-friendly aspect of the product, saying at the time that the biggest impact on its environmental footprint is the materials it uses in their products - and therefore, it needs to ensure that it can reuse these materials for as long as possible.

<sup>16</sup> <https://www.levistrauss.com/2022/09/21/levis-launches-buy-better-wear-longer-2-0>

<sup>17</sup> <https://www.secondhand.levi.com>

<sup>18</sup> <https://www.ikea.com/gb/en/offers/circular-hub-pub2eab7840>. <sup>19</sup> [https://www.adidas.de/en/ultraboost\\_dna\\_loop](https://www.adidas.de/en/ultraboost_dna_loop)

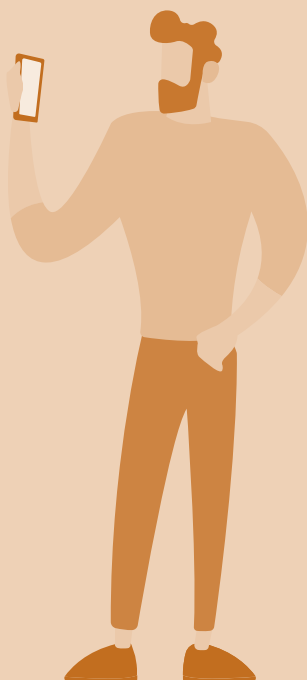
## The next generation

Younger consumer demographics are entering the market with very specific ideas of how, when, and where they want to shop, how they want to interact with brands, and which parts of the consumer experience they value more highly.

As several market studies show, Gen Z consumers (generally comprising those born between 1997 and 2012) are particularly vocal about their shopping preferences aligning with their values.

### ▶ Self-expression and personalization

Gen Z consumers value their personal style and believe it's important to express who they are. This can manifest in the way they dress, the music they listen to, the art they create, and the social media platforms they use. Gen Z is also very open-minded and accepting of others, which allows them to express themselves freely without fear of judgment, leading to a more diverse demographic that requires more granularity from brands who want to approach it.



### ▶ Return to physical spaces

Online might not be the only place to get Gen Z to consume - in fact, Gen Z consumers are reported to show a preference in physical stores rather than online shopping<sup>20</sup> - but it is definitely where brands can reach them with their messaging.



**▶ An always-connected, digital lifestyle**

Gen Z was born in an already connected world. They are “digital natives”; the internet and digital technology have always been part of their lives. As such, they’re not only comfortable using these tools, but said tools form a large part of their identity and the way they present themselves to the world. They spend a significant amount of time online, communicating through social media and messaging apps, streaming content, shopping, or gaming.

This informs their decision-making as well. Gen Z’ers claim to be influenced more by social media and trusted influencers than their Millennial and Gen X counterparts, who place greater weight on online reviews and websites (75% versus 63% and 49% respectively)<sup>21</sup>.

**▶ Brand authenticity and transparency**

Compared to previous generations, Gen Z tends to be highly skeptical of advertising and marketing, and they are quick to spot inauthentic or manipulative content. They value honesty and transparency, and they are more likely to support brands that align with their values and are open and transparent about their practices.



<sup>21</sup> <https://www.mckinsey.com/industries/retail/our-insights/the-young-and-the-restless-generation-z-in-america>



# Impact of new technologies: Happening now

In the face of shifting markets and evolving consumer demographics, brands and retailers have their work cut out for them when it comes to attracting and retaining customers. Technological innovation is a major piece of the puzzle, offering more efficient and cost-effective ways of reaching consumers but also enabling a better and smoother shopping experience for them. Such experiences ensure

that customers continue engaging on multiple levels with a brand or store that satisfies them, and will contribute to the mushrooming of its customer base.

In the next pages we look at some key technological trends that are currently maturing across global markets.

## New technologies in Retail

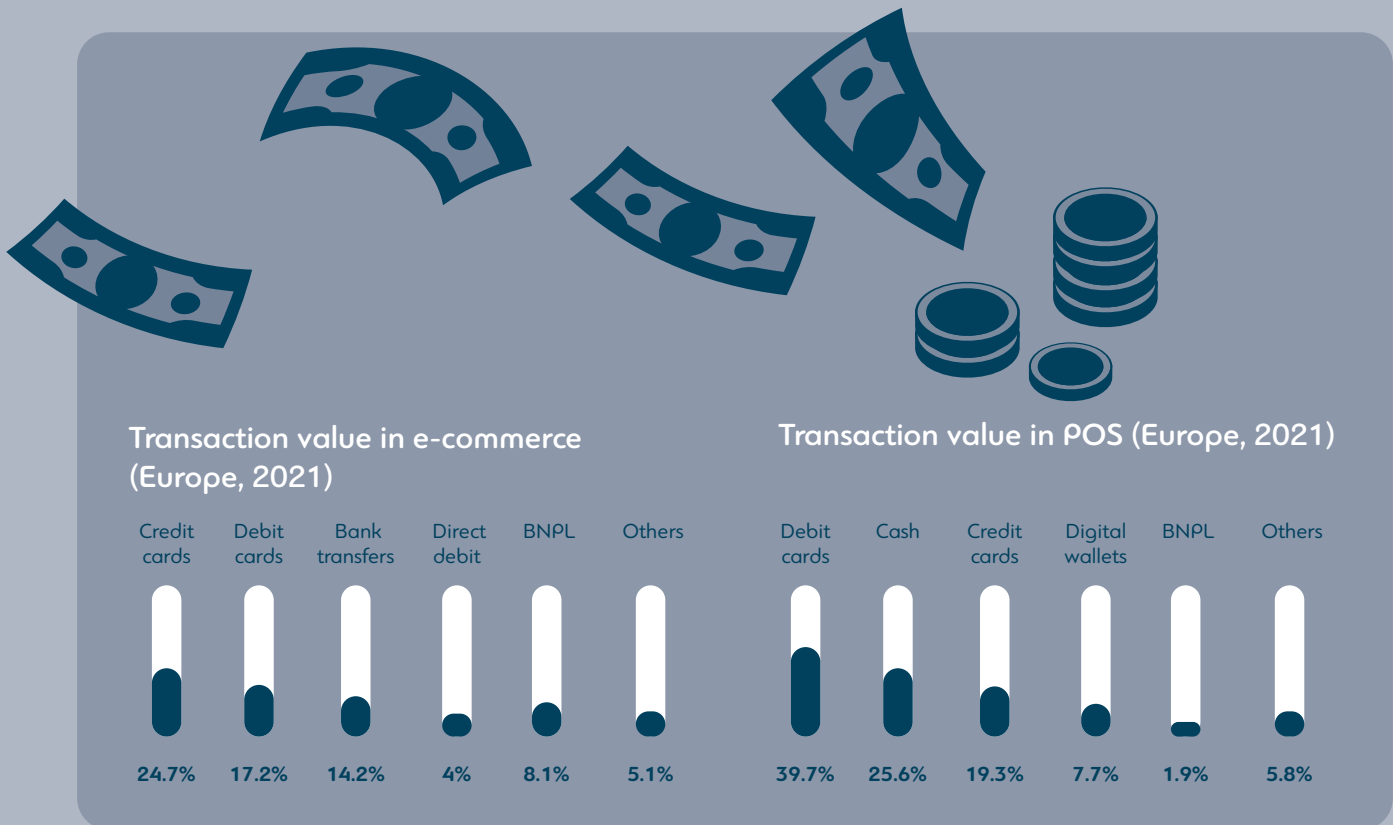
|                            | Happening Now         | Around the corner                                  | In the distant future              |
|----------------------------|-----------------------|--|------------------------------------|
| <b>Payments</b>            | Digital wallets       | Automated payment systems and cashierless stores   | Dynamic pricing                    |
| <b>Customer experience</b> | BOPIS/BORIS           | Virtual commerce / Metaverse                       | Marketing on the go                |
|                            | Customization options | AI-powered recommendations                         | Hyper-personalization              |
|                            | AR apps               | AR/VR fitting rooms                                | Hologram models                    |
| <b>Delivery</b>            | Quick commerce        | Drone delivery                                     | Autonomous delivery vehicles       |
| <b>Supply chain</b>        | Dark stores           | Automated micro-fulfillment centers                | 3D/4D virtual merchandizing        |
| <b>Sustainability</b>      | Responsible packaging | Everything is recycled, everything can be repaired | Sharing economy replaces ownership |

### Retail in 2050:

Consumers will rent everything they need instead of buying it, while physical stores will replace their inventory with virtual merchandizing and order only what is bought. Customers will receive

their orders in less than an hour, whether buying online or offline. Pricing will not be universal, but set according to supply and demand.

## Payments



source: ECB

Evolution in payment technologies has been ongoing since long before the pandemic, with a range of fintech solutions aimed at both businesses and consumers. The turning point the pandemic brought to the fore was a rapid shift away from cash. Not only were physical stores closed down, making the use of cash much more difficult, but physical banknotes and coins were also pegged as a possible infection transmission medium, making people more reluctant to trade them back and forth. After dropping sharply in use globally in 2020, cash remained the fourth most preferred method of paying at points of sale after digital wallets, credit cards, and debit cards, accounting for 18% of payments internationally. By 2025, it is projected to account for 10% of all payments,

retaining fourth place after the above mentioned methods<sup>22</sup>.

Regardless of the overall global trend, cash in Europe still enjoys high usage, mostly thanks to post-pandemic lift in countries like Spain, Greece, and Germany where cash payments have a share of over 80% of all payments<sup>23</sup>. Still, cash usage is forecast to decline further as shoppers turn to other solutions like mobile wallets and Buy Now, Pay Later (BNPL).

Merchants globally are aware of the trends - 53% of merchants globally said they planned to start implementing digital payments methods in 2022, including digital wallets and QR code payments<sup>24</sup>.

## Digital wallets

Digital and mobile wallets are rapidly becoming the go-to payment solution for consumers across multiple markets. They can store credit and debit cards, loyalty and points cards, and, in more recent examples, national identity cards or vaccination certificates. This makes them more versatile and increases the likelihood of adoption by a broad spectrum of consumers. Most such applications are tied to a user’s mobile phone, which makes them near-ubiquitous across several different markets. Wallets by Apple and Google enjoy wide adoption in multiple markets, making sure that users in both ecosystems have access to at least one form of digital wallet.

At the same time, there are local or regional players in several markets claiming their own share, with digital wallet solutions that are often directly integrated to specific banks, telcos, or domestic payment providers. Unlike solutions like Apple Pay, those providers enjoy advantages such as local knowledge and presence, smoother integration with local regulations and requirements, and brand recognition.

No matter the options, retailers are best-served by making sure they can meet the demands of digital-first consumers. Understanding what solutions customers prefer, accommodating those preferences, and adapting them into a unified business strategy for online as well as physical POS payments will be key - particularly since most market observers agree that these trends seem set to only accelerate in the coming year.

## Digital wallet adoption globally



### E-commerce payments

Consumers expected to shop with a digital wallet by 2023:  
**4.4 billion**

Percentage of e-commerce payments globally:  
**52%**



### POS payments

Consumers expected to shop with a digital wallet by 2023:  
**1.6 billion**

Percentage of POS payments globally:  
**30%**

source: pymnts.com



### A few ways that retailers can respond to the demand:



Use analytics to understand which payment methods customers tend to use



Review the customer journey, ensuring resources such as easy navigation, updated product pages, and checkout processes are in place



Be consistent in the types of payments they accept, so that customers feel safe to use their preferred method of paying



## BNPL: A rocky road ahead

Buy Now, Pay Later (BNPL) has been a growing trend in retail and e-commerce, providing a payment alternative to traditional forms like cards and cash. The concept is based around the not-so-novel idea of installment payments, given a fresh spin by firms like Afterpay and Klarna. It gained popularity in recent years due to the convenience it offers consumers, especially in markets where they may not have access to more conventional payment methods or want to avoid high interest rates and fees on credit cards.

BNPL's rise has been largely enabled by advances in e-commerce and payments technology, becoming available through mobile apps and online platforms. As those are generally favored by younger audiences, BNPL has cemented its place as a disruptive form of payment in younger shopper demographics. It has also benefited retailers, enabling younger consumers to conduct higher-value purchases than they would be capable of otherwise, given their income - or even to go ahead with a purchase more readily, where before they might have hesitated and reconsidered.

The shift to online shopping during the pandemic gave a boost to BNPL, as consumers opted for the flexibility and ease of transaction

the method offers. In Greece, 63% of shoppers would opt for BNPL services versus 22% opting for credit cards<sup>25</sup>. Shoppers claim that BNPL is more consumer-friendly and helps them avoid high credit card fees.

The trend shows no signs of slowing down as far as consumers are concerned. BNPL payments are expected to account for nearly 25% of e-commerce transactions globally in the next four years, up from just 9% in 2021<sup>26</sup>. Not surprisingly, it is younger consumer segments that seem to favor this payment method: in 2022, 44% of Gen Z and 37% of Millennials were forecast to make a BNPL payment, compared to 23% of Gen X and 9.4% of Baby Boomers<sup>27</sup>. As prevalent as BNPL is, however, it has faced headwinds in 2022 that could prove significant down the line. Key concerns revolve around the fact that the practice of BNPL is largely unregulated, with few to no requirements for businesses to perform credit or other affordability checks on their customers. Shoppers, in the meantime, run the risk of racking up large debts without quite realizing the consequences of not paying them.

In the UK in 2021, 1 in 10 consumers said they were referred to debt collectors for



outstanding BNPL-related debts, and BNPL shoppers were charged a total of £39 million (around €45 million) in late fees. Out of the businesses offering shoppers a BNPL payment option, only 11% warned them that they were entering a credit agreement with the business, while the remaining 89% only included this information in small print in their terms and conditions<sup>28</sup>.

As a result, efforts are now underway to investigate and potentially regulate this market across several jurisdictions. In the US, the Consumer Financial Protection Bureau (CFPB) instructed leading BNPL providers such as Affirm, Afterpay, Klarna, Zip, and PayPal, to start providing comprehensive data on transactions, credit checks, and underwriting procedures. The European Parliament recently came to a provisional agreement to amend the Consumer Credit Directive to include payment schemes such as BNPL. The amendment will focus on making sure that consumers are able to make informed choices about taking out credit in this manner, by having easy access to all necessary information about their agreement and being adequately assessed for their creditworthiness, ensuring they can repay any debts incurred<sup>29</sup>.

Increased scrutiny over BNPL and the coming regulation will certainly continue presenting challenges. Retailers will need to carefully evaluate the practice, and weigh the potential risks against the established preference by consumers for this payment method.



## Payments landscape in Greece

Cash payments are still prevalent in Greece, with cash constituting 65% of total transaction volume in the country at the end of 2021<sup>30</sup>. However, alternative forms of payment have seen a steady increase in recent years due to a confluence of social and economic factors.

Between 2015 and 2019, Greece introduced strict capital controls that put a cap on the amount of cash that could be withdrawn every month. As a result, several transactions such as utility payments moved to methods such as bank transfers, especially through e-banking. Also, in order to fight tax evasion and bring transparency in large-volume transactions, Greece mandated that cash could not be used in any purchases above €500 in value. With younger generations entering the market that are also much more comfortable with cards (primarily debit or pre-paid) and electronic forms of payment, and the aforementioned wariness around banknotes and coins during the Covid-19 pandemic, trends show Greek consumers slowly moving away from cash.

In 2021, Greece's cards and payments market size was \$50.1 billion, and is expected to grow at a CAGR of more than 11% between 2021 and 2025<sup>31</sup>. Debit cards take up a large percentage of card-based payments, being widely available and easy to use online as well as at contactless POS systems, and eschewing some of the restrictions and heavy fees of credit cards. Other methods that Greek consumers are turning towards include mobile and digital wallets, as well as pre-paid cards from a variety of providers - which offers an added layer of privacy and security to previously technology-wary consumers.

<sup>28</sup> <https://www.citizensadvice.org.uk/about-us/about-us1/media/press-releases/one-in-10-buy-now-pay-later-shoppers-have-been-chased-by-debt-collectors> <sup>29</sup> <https://www.consilium.europa.eu/en/press/press-releases/2022/12/02/council-and-european-parliament-agree-to-improve-protection-for-consumers-applying-for-credit> <sup>30</sup> <https://www.globaldata.com/store/report/greece-cards-and-payments-market-analysis> <sup>31</sup> <https://www.globaldata.com/store/report/greece-cards-and-payments-market-analysis>

▶ Joint ventures providing alternative payments in Greece ◀



In 2022, French payments provider Worldline acquired 80% of Eurobank's merchant acquiring business to expand its payment services to the more than 120,000 physical and online merchants that Eurobank's business serves in Greece. Worldline seeks to offer more payment offerings in the Greek market, leveraging Eurobank's network in combination with the large acceptance network of Cardlink, which it acquired in 2021, to offer end-to-end payment services.



Italian payments firm Nexi acquired a majority stake in Alpha Bank's merchant business in 2021, and in 2022 pledged a €100 million investment in the Greek digital payments market in the next five years. Under the joint venture, Alpha Bank introduced desktop, portable, and POS solutions for merchants to boost digitization and cashless payments.



Euronet, the NASDAQ-listed electronic payments provider, acquired the merchant acquiring business of Piraeus Bank in 2022, including 205,000 POS terminals at 170,000 merchants throughout Greece, and Piraeus Bank's online merchant acquiring business. Built upon an existing 20-year relationship between the two companies, the deal is meant to boost acquiring capabilities for Piraeus Bank's customers using Euronet's REN payments platform.



NASDAQ-listed payments services provider Evo Payments partnered with the National Bank of Greece (NBG) in 2021 to spin off its merchant acquiring business into a new joint venture. NBG is Greece's biggest bank and largest card issuer, and EVO Payments holds a 51% stake in the joint venture, through which it will provide payments solutions leveraging on accelerating post-pandemic digitization trends.



2022's largest payments-focused deal was JP Morgan acquiring a 48% stake in Greek fintech firm Viva Wallet, which provides digital payments services in 24 European countries. The \$800 million deal reportedly valued Viva Wallet at just over \$2 billion, leading to the potential minting of the first official Greek "unicorn" - that is, a private company worth more than \$1 billion. Viva Wallet provides payment solutions to small and medium-sized businesses, enabling mobile and contactless payments.



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## Omnichannel

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The death of the physical store has been prophesied for as many years as Amazon's market cap has been growing. With e-commerce steadily rising in popularity, more consumer segments gaining access online, and logistics infrastructures evolving to meet rising demand, it would be reasonable to predict that physical retail locations would be reduced to only highly specialized product categories or exist merely as sampling centers for products one would later buy online. Images of enormous shopping complexes sitting empty and abandoned in various countries have become iconic on social media and documentaries about e-commerce.

One would be forgiven for thinking that the onset of the pandemic, which knocked physical retail out of commission for the better part of 2020 and 2021, would be the final death knell of brick-and-mortar stores. However, rumors of physical retail's demise turned out to be greatly exaggerated.

Instead, consumers have adapted to using multiple channels to get the product or service they want. Gen Z shoppers are often described

as an always-online demographic, but as noted elsewhere in this report, they value a physical store experience. Consumers have cited factors like easier returns process, safer payments, and better social interaction as reasons to opt for physical stores, even as they value online shopping due to lower prices, wider product selection, and time saved<sup>32</sup>.

This cements omnichannel retail as the way forward for brands and retailers who want to retain an edge in today's challenging environment. The ability to offer customers a unified experience across all possible touch points might sound intuitive or simple. But it requires businesses to think about how to provide the same, consistent, and efficient customer experience no matter how customers approach them - whether online or offline, whether shopping or merely engaging with the brand, whether they are on a smartphone or stepping foot inside a store.

The following trends in omnichannel have consistently been pointed out by market watchers in 2022, and there's every indication they will continue in 2023.

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<sup>32</sup> <https://insights.klarna.com/shopping-pulse-gr/>



 **BOPIS and BORIS**

They might be unwieldy as acronyms, but they are two of the most indicative applications of a sound omnichannel strategy. Buy Online, Pick-up In Store and Buy Online, Return in Store demonstrate the seamlessness and convenience modern customers expect in their purchases. Buying from a retailer’s online store and picking up the item at a physical location can address issues like lack of availability at a particular physical branch, facilitate access to a wider selection of items, free shoppers from having to shop during conventional business hours, and help them save on delivery fees. Being able to return an online-bought item at a physical location, meanwhile, offers added flexibility to the customer but also presents an opportunity to the retailer: Having the customer already at your location enables you to re-engage them, take real-time feedback, and build a more personalized relationship with them.

 **Online brands to offline locations**

Following the theme of connecting an online store to a physical location, online-first brands now find it useful to set up pop-up stores in selected areas, precisely in order to provide that physical touch point with their brand. Even as younger consumer segments opt for online shopping, a significant number of them value interactions with their favorite brands. For retailers, this can be a valuable investment that boosts their marketing efforts, allows them to acquire customers more easily, and gives them a physical touch point at a fraction of the cost of maintaining a permanent physical location - especially considering currently rising costs of energy and real estate.



### Customer personalization

Online-first brands have been able to leverage customer data to offer more targeted and personalized experiences for years. Globally, a large majority of consumers say they value more tailored services and businesses are getting ready to accommodate them: 75% of consumers say they are more likely to buy from brands offering personalized online experiences while 74% of companies claim to have a website personalization initiative in place<sup>33</sup>. Gen Z shoppers particularly value personalization, with 74% stating they prefer personalized products and services - more than their Millennial, Gen X, and Baby Boomer counterparts. They also overwhelmingly expect consistency and continuity across services and interactions with a business (77%), and state that they have used multiple methods of communication as well as devices to complete a single transaction (77%)<sup>34</sup>.

### Leveraging online and offline data

Personalization and tailoring services to users requires robust data analytics capabilities. E-commerce businesses have access to a wealth of data, from the products a customer tends to search for to when and where they prefer to shop, allowing online stores to tailor their user experience accordingly. This kind of visibility has traditionally not been available to offline retailers, but this is now changing with the emergence of trends like multi-channel attribution and the deployment of data analytics across the entire spectrum of interactions between consumer and business. Through multi-channel attribution, a business can collect data across its different channels and then deploy data analytics to gain a 360-degree view of consumer behavior. This is facilitated by advancements in AI-powered analytics, the deployment of in-store footfall tracking via mobile devices, brand loyalty programs, and more.

<sup>33</sup> [https://f.hubspotusercontent20.net/hubfs/418621/Personalization%20Report%202020/Yieldify%20Research%20Report\\_Personalization%20After%20COVID-19.pdf](https://f.hubspotusercontent20.net/hubfs/418621/Personalization%20Report%202020/Yieldify%20Research%20Report_Personalization%20After%20COVID-19.pdf) <sup>34</sup> [https://www.salesforce.com/content/dam/web/en\\_us/www/documents/research/salesforce-state-of-the-connected-customer-4th-ed.pdf](https://www.salesforce.com/content/dam/web/en_us/www/documents/research/salesforce-state-of-the-connected-customer-4th-ed.pdf)

## Supply chain optimization

In the post-pandemic landscape, the globalized supply chain exposed multiple weaknesses and points of complexity. Retailers end up not having a great deal of visibility into what their inventory levels are like, which can then trickle down to consumers themselves. With supply chains fragmented and siloed between suppliers, logistics providers, and shipping carriers, there are limits to how retailers can address any disruptions and mitigate their impact - which remains a concern: Nearly 7 out of 10 retail executives believe supply chain disruptions negatively impact their growth<sup>35</sup>.

Supply chain collaboration is positioned as a key concern when it comes to an efficient omnichannel strategy, in order to give businesses end-to-end visibility and transparency into supply networks and more efficient processes to ensure minimal disruption. New technologies are particularly valuable in this regard, particularly real-time data sharing, online collaboration platforms, and even blockchain applications that can be used to track products and provide checks and verification from one end to the other.

| Trend                                       | What it offers  | What it requires  |
|---|---|---|
| <b>BOPIS &amp; BORIS</b>                    | Enables retailers to re-engage with customers, gather real-time feedback and build personalized relationships | Solid inventory management systems, effective payment gateways        |
| <b>Online brands to offline locations</b>   | Boosts marketing efforts, enables easier customer acquisition, adds physical touch points                     | Physical space, additional personnel/managers                         |
| <b>Customer personalization</b>             | Responds to customers new expectations, increases loyalty   | Robust CRM systems  |
| <b>Leveraging online &amp; offline data</b> | Offers 360 view of consumer behavior  | Hardware and software infrastructure for data gathering and analytics |
| <b>Supply chain optimization</b>            | End-to-end visibility and transparency into supply networks, cost optimization                                | IoT tracking technologies, data analysis, AI prediction models        |

## Last-mile delivery and rapid order fulfillment

With online shopping showing no signs of slowing down post-pandemic, market players need to establish networks and resources to ensure consistent and coherent delivery, as well as develop or access infrastructure that allows them to fulfill orders quickly and efficiently. Last-mile delivery, the final step in

a product's journey right before it reaches the customer's hands, is becoming an increasingly vital part of the online shopping experience. In fact, rapid innovation has taken place in this sector even before the pandemic made it so vital.



### Optimizing the last-mile

#### Home delivery

For faster order fulfillments, retailers can make use of warehouse robotics, drones and autonomous systems

Consumers get their orders without delays, whether they order online or offline (omnichannel experience)

#### Pick-up points

Hyper-local pickup points and micro-fulfillment centers take advantage of physical spaces and can also act as return points

Consumers pick a location and time that is most convenient to them, and are more eager to buy from a retailer that offers a wide range of buying and returning options

## Drone delivery

Delivering packages via drone has been a particularly headline-grabbing innovation. The benefits of using automated drones to deliver packages are obvious: Drones can deliver items at any time of day, they are not constrained by road traffic, and they can reach areas that are not as well-connected to road infrastructure, among other things. This can significantly cut down on delivery times as well as costs for retailers and customers. Recent research also suggests that using drones for last-mile delivery can be more energy-efficient (and therefore, more environmentally-friendly) than employing delivery trucks and vans<sup>36</sup>.

However, the sector is still in its infancy. More than half a decade since Amazon famously made the first package delivery by drone in Cambridge, UK, the technology is yet to be widely adopted. Regulatory hurdles are a key reason for drone delivery failing to take off, as various jurisdictions have yet to settle on consistent frameworks for autonomous delivery drones, and safety concerns remain. Also, despite delivery drones being able to bypass traditional infrastructure, they still need infrastructure of their own, like points of launching and landing, online connectivity, and secure software. Such infrastructure can come at a significant upfront cost for operators, even ignoring any regulatory difficulties.

Even so, both large players like Amazon, Alphabet, and UPS as well as startups are invested in the sector. In Greece, local retail chain Kotsovolos made headlines in September 2022 for its first delivery by drone, as part of an activation during the annual Rally Acropolis event<sup>37</sup>. And more companies continue working on bringing costs down and optimizing the process, making it a space to watch.

## Micro-fulfillment centers

Several large retailers stocked up during the pandemic to be able to fulfill skyrocketing demand. Following the significant slowdown in early 2022, many of them were left with cavernous warehouses full of unwanted inventory. Amazon famously acquired large amounts of warehouse space only to be forced to sublease that space following the slowdown<sup>38</sup>. Enter micro-fulfillment, where a retailer or a brand uses small-scale, usually automated warehouse facilities that are closer to highly populated urban areas. This helps improve delivery times for consumers and helps the business allocate space more efficiently.

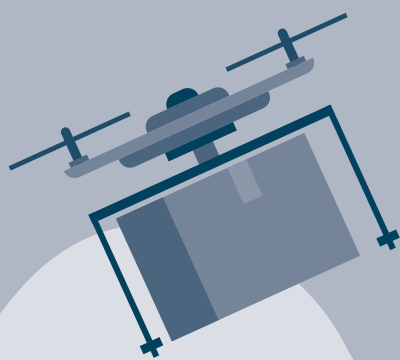
This results in added flexibility for businesses according to their needs. Online-only brands can leverage micro-fulfillment to completely eschew the need for retail locations and save on large warehouse space costs. For retailers, micro-fulfillment centers located within a retail store adds a powerful toolset to their omnichannel strategy. The use of advanced robotics and automation in these facilities allows for faster and more efficient order fulfillment. Automated micro-fulfillment centers are considered one of the fastest-growing segments in modern logistics solutions - 7,300 automated micro-fulfillment centers are expected to be installed worldwide by the end of 2030, up from 86 in 2021<sup>39</sup>.





## ▶ Hyper-local pick-up points and delivery

Improved delivery times and satisfying customer demand are key elements of the strategies and innovations involved in last-mile fulfillment. Hyper-local is perhaps the ultimate expression of this trend, placing everything as physically close to the customer as possible. It relies on a pick-up point or small fulfillment center in the same geographical area as the customer - a specific neighborhood or even a town. It can be owned by a brand or retailer but more often is a local business that enters into a partnership with them. This model tends to be a better fit for online marketplace-style services, allowing them to leverage on local businesses with the type of inventory they need, and routing orders through them. It has proved more effective in rural areas and regions in emerging economies, where it would be either prohibitively expensive to set up fulfillment centers or there is lack of basic infrastructure to allow time and cost-effective logistics. Startups innovating in this space develop software solutions for routing orders from business outlets to customers, inventory management, and data analytics.



## ▶ Warehouse robotics

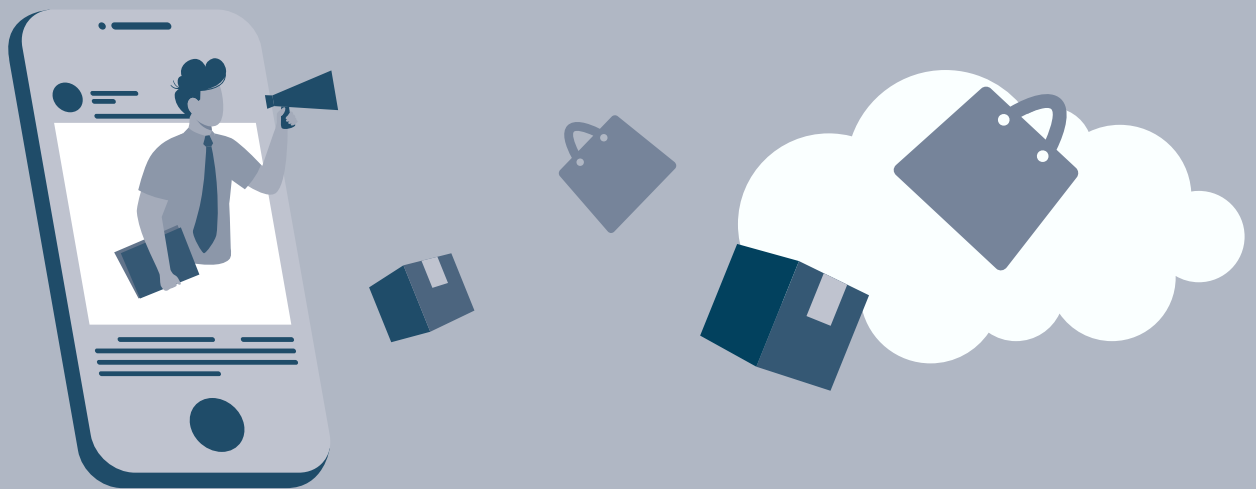
More than other technological trends in logistics and delivery, the use of robotics in supply chain, distribution centers, and warehouse management is the one that seems to have come of age in recent years. Amazon has been at the forefront of this technology, having deployed more than half a million robotics units since it acquired Kiva Systems in 2012. In 2021, the e-commerce giant accounted for 38% of investment in warehouse robotics in the US, while it announced a \$1 billion Industrial Innovation Fund in early 2022 to drive more growth in the sector<sup>40</sup>.

Warehouse robotics use different kinds of robots for tasks such as packing, sorting items, and transporting supplies. Automated vehicles transport goods or even staff within a warehouse, replacing human-driven forklifts and carts. Robotic arms can sort or retrieve items from shelves and racks, speeding up order fulfillment. And mobile robots can traverse warehouse floors in order to help human workers carry large numbers of items or carry items themselves from one human-managed station to another.

A step further than traditional conveyor belts and articulated arms, these robots utilize advancements in artificial intelligence and processing power to automate more complex tasks than ever before, with some companies believing it's possible to have fully automated warehouses within the next five years. As it is, adoption of robotics in warehouse applications is expected to increase by 50% in the next five years. With companies such as Walmart, FedEx, and Kroger making heavy investments in the sector, as well as several startups providing solutions on smaller scales, the technology is expected to be much more ubiquitous as well as accessible to smaller retailers in that time frame<sup>41</sup>.

<sup>40</sup> <https://www.interactanalysis.com/how-will-amazons-u-turn-in-fulfillment-center-expansion-affect-the-warehouse-automation-market>

<sup>41</sup> <https://www.mhi.org/publications/report>




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## Social commerce

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The always-online lifestyle of Gen Z and the prevalence of mobile platforms coalesce into one of the most fundamental shifts in online shopping observed in recent years. Social commerce is a natural progression from a user encountering a brand or retailer's social media page to the user immediately becoming a customer by being able to buy the product they saw without ever leaving their social media app.

The trend has gotten increasingly popular in the past half decade, generating almost \$1 trillion in sales worldwide. It's not expected to stop either - forecasts suggest social commerce sales could reach \$2.9 trillion by 2026<sup>42</sup>.

For brands, it's a valuable trend that is relatively straightforward to take advantage of. Depending on the social media platform, there is a built-in audience that is highly engaged, and is ready to buy - 9 out of 10 consumers say they buy from brands they follow on social media<sup>43</sup>. A majority of users aged 18-45, meanwhile, says that they find the idea of shopping on social media convenient, they like being able to click on items they see on social media and buy them instantly, and


feel that social platforms should offer more opportunities to do that<sup>44</sup>.


There is a robust digital infrastructure providing easy-to-use tools and a wealth of data analytics on users. And most brands these days will already have some degree of social media presence, allowing them to complement their social media marketing efforts and resources with direct sales. The potential here also underlines the importance of proper targeting and tailoring of the brand's message to the right audiences. Social media offers substantial reach and exposure, which can also backfire if a message is not communicated well or reaches out to the wrong audience. Careful social media management and strategies are therefore vital for any brand who wishes to engage and convert its audience on such a platform. With the right strategy, consumers can get a seamless experience where discovery, consideration, and purchase can happen organically on a single app.





## TikTok's recipe for success

There are several platforms offering e-commerce directly, but TikTok is the poster child for social commerce. The mobile-first short video platform has gained ground on selling through its app by leveraging on a set of unique strengths:

 **High degree of engagement.** Social media algorithms are built to keep users in the app for as long as possible. TikTok's algorithm is famously exceedingly successful at figuring out user preferences and serving relevant content - so much so, in fact, that TikTok seems to outperform all other social media platforms in terms of engagement<sup>45</sup>.

 **Strong visual element.** TikTok specializes in short, high-quality videos in mobile-friendly format. Influencers on the platform often showcase items like clothes, accessories, electronics, and other products, acting as perpetual showrooms even if the content is not advertising-related. Products are presented more organically and more creatively than the average online ad, making them more relatable and desirable.

 **A large and engaged user base.** With around 1.5 billion monthly active users, TikTok offers access to an enormous user base, which is apparently ready to consume. According to a study commissioned by TikTok, over 70% of users have said they were inspired to buy something through TikTok even though they weren't looking to do so, while unplanned and impulse purchases trump planned ones (63%, 23%, and 14% respectively)<sup>46</sup>. It's not an accident that the hashtag #TikTokMadeMeBuyIt trended in 2021<sup>47</sup>.

 **Influencer messaging.** As has been mentioned elsewhere in this report, younger consumer demographics value personal connection and authenticity, and these are factors in their purchasing decisions as well. According to surveys in the last two years, over 60% of users prefer to take the word of an influencer, a friend, or a family member when it comes to product recommendations, with less than 40% trusting a brand on social media<sup>48</sup>.

<sup>45</sup> <https://www.rivaliq.com/blog/tiktok-benchmark-report> <sup>46</sup> [https://www.tiktok.com/business/library/TikTok\\_Publicis\\_WARC\\_WhitePaper.pdf](https://www.tiktok.com/business/library/TikTok_Publicis_WARC_WhitePaper.pdf)

<sup>47</sup> <https://www.tiktok.com/business/en/blog/whats-next-2022-community-commerce> <sup>48</sup> <https://www.businesswire.com/news/home/20200526005058/en/Matter-Survey-Reveals-Consumers-Find-Influencers-More-Helpful-and-Trustworthy-than-Brands-During-the-Pandemic>



**TikTok** casts a particularly large shadow over the social commerce landscape in terms of reputation. Interestingly, however, it is far from the top when it comes to market share. Meta has that honor, with two of its properties dominating shoppers' preferences. Facebook marketplace is the top platform with 51%, while Instagram follows with 16%. TikTok comes in at 9%<sup>49</sup>. It should be mentioned, however, that even though Facebook marketplace is part of the eponymous social media network, it's not social commerce as described in this section - it's a peer-to-peer marketplace more akin to eBay, where brands don't have much of a presence.

**Instagram**, on the other hand, is much closer to TikTok in its approach to social commerce. It relies on a lot of similar strengths to the short video platform (and has, in fact, adopted several of TikTok's features in a bid to remain competitive), particularly the influencer model and strong visual element. For an overwhelming percentage of users (over 80%), Instagram helps in discovering new products and in making purchasing decisions, while 54% of users surveyed said they had made a purchase either the moment they saw a product on Instagram or immediately afterwards<sup>50</sup>.



Other influential social platforms include **Pinterest**, where brands can create entire boards listing their products and relevant information, and messaging apps such as Meta's WhatsApp, which offers online store functionality in select markets like India. In regions like China and Southeast Asia, meanwhile, "super apps" thrive - those are mobile apps that are built with multiple functions in mind, aiming to offer a wide range of services within a single, unified environment.

In China, **WeChat** began as a messaging app but eventually integrated a mobile wallet, online shopping, food delivery, and more. In Southeast Asia, Grab and GoTo started out as ride-hailing services similar to Uber, but grew to incorporate food delivery, ticket booking, financial services, online shopping, and more. Super apps have not caught on in the West in quite the same way, although big tech players are looking for opportunities to be the first ones to do it. Turning Twitter into a super-app-style service was famously one of Elon Musk's ambitions when he took over the micro-blogging platform, although it's still unclear what form this would take.





As such, the importance of social commerce in the retail landscape cannot be understated. As customers continue to congregate on social media platforms, retailers will need to continue to adapt and make use of these platforms to reach their audience and drive sales. Social media in general is having something of a reckoning at the moment, with increased regulatory scrutiny and technological changes

(such as Apple's killing of third-party cookies on its mobile devices) challenging most of the familiar attribution and monetization models of recent years. Still, their influence remains powerful and social platforms haven't stopped being major converging points for the majority of online users. This cannot be ignored as part of any sound digital strategy.

## ▶ The rise of live commerce ◀

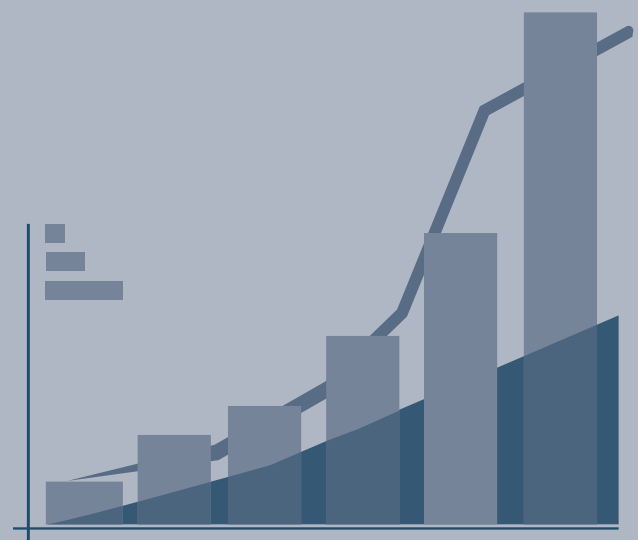
Adjacent to social commerce is the equally recent practice of selling through livestreaming. Platforms like Twitch and YouTube have allowed content creators to reach audiences through live video activities like playing video games or simply talking about a topic. The latest evolution of the relationship between livestreamers and audiences is selling products to them directly through the stream.

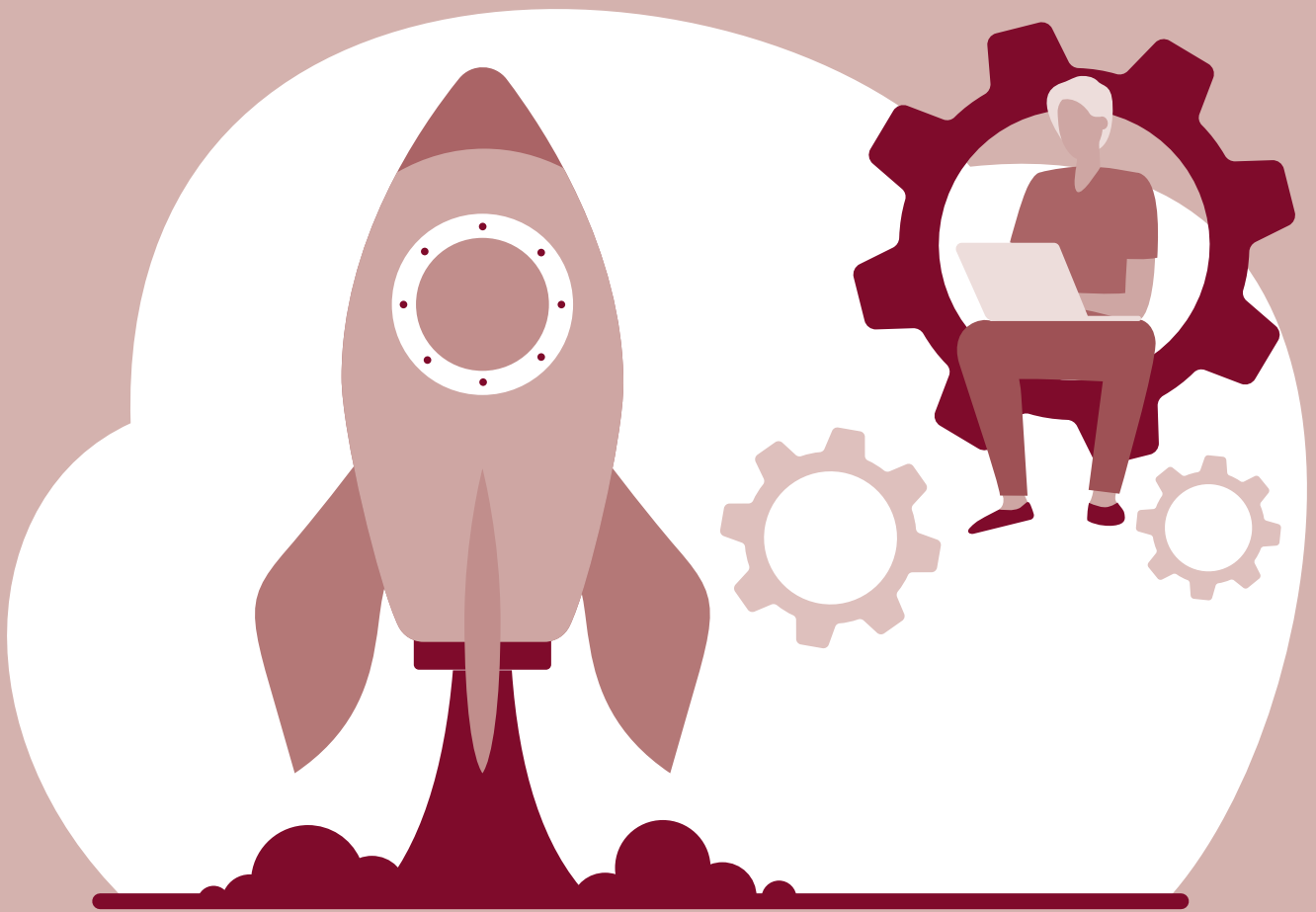
The trend of live commerce began in China, where local e-commerce giant Alibaba launched Taobao Live in 2016 to create a livestreaming event where shoppers could watch and shop at the same time. Since then, live commerce in the country has spread like wildfire, with GMV ballooning from \$3 billion in 2017 to \$171 billion by end of 2020<sup>51</sup>.

Unlike traditional e-commerce in China, it isn't showing any signs of slowing down either. E-commerce growth in the country is currently stalling amidst a perfect storm of regulatory crackdowns and worsening economic conditions, set to grow a mere 8% in 2023. Social and live commerce growth, on the other hand, remains in the double digits, with livestreaming commerce by retailers expected to grow by 19% and livestreaming commerce by individuals on social platforms by 23% this year<sup>52</sup>.

Live commerce didn't reach Western markets until very recently. Amazon recently relaunched its own live shopping network, Amazon Live<sup>53</sup>. YouTube hosted its own Taobao-like live shopping livestream in November 2022 called "From YouTube to You" - a 10-day series of videos and live streams featuring famous YouTube personalities like MrBeast, Amber Scholl, and iJustine, where users could shop between streaming video content<sup>54</sup>. Other brands like Tommy Hilfiger and Walmart have also tried their own versions of live shopping events.

Gen Z shoppers form a key demographic for live shopping, given their preference in social media and online influencers to inform their decisions, although Millennials and Gen X'ers follow not far behind in terms of online content and social media<sup>55</sup>. As Gen Z'ers increasingly enter adulthood and their spending power increases, those audiences are likely to stick with the channels they are most comfortable with, just like their predecessors.





# Impact of new technologies: Around the corner

Innovation and technological progress stop for no one. Even as a number of tech breakthroughs are already revolutionizing retail across a number of areas, there are developments in the wings that are sure to introduce further disruption. They are expected to affect not only how consumers

access stores and products, but also the relationships between retailers, customers, and workforce. In this section, we will take a look at some technologies that are currently at different stages of development, but hold equally important evolutionary potential.

## Cashierless stores

The first step was to go cashless. And without cash, what's the use of a cashier? That's obviously not the train of thought behind this new technology, but as more and more functions of the retail journey get automated, the traditional checkout in physical stores seems to be next.

Cashierless stores are physical outlets where customers can enter by tapping a payment card or their phone, pick up the items they want, and simply walk back out without stopping at a checkout point. The automated systems monitor which and how many items have been picked up, and charge the customer's payment method accordingly when they have left the store. The technology is based on a network of cameras and sensors placed around the site, with computer vision and AI algorithms making sure the system knows which customer picked up what, and how much to charge them.

Cashierless stores go one step further than stores that offer self-checkout - where the customer is trusted to go up to a checkout point, scan their items themselves, and pay with a cashless method, without the assistance of a human employee. In the cashierless store scenario, the customer simply walks out with their items and the system is trusted to have itemized and charged the bill correctly. It's fitting that the most prevalent example of this

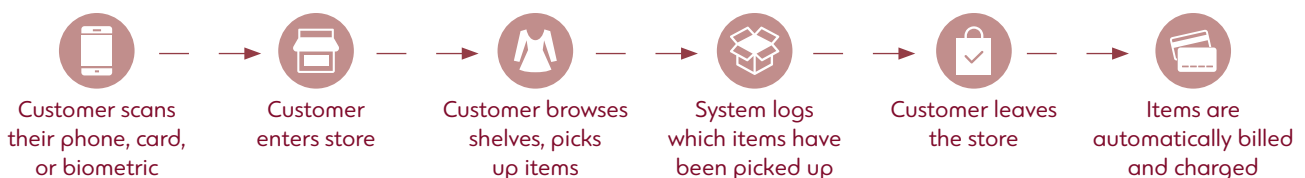
technology, developed by Amazon, is called Just Walk Out<sup>56</sup>.

Amazon first came out with a prototype of a cashierless store concept in 2016, when it introduced Amazon Go at its headquarters in Seattle. The grocery store was initially available exclusively to Amazon employees before opening to the public in 2018 and expanding to a number of cities in the US, also adding a store in London. Amazon has also started selling the technology to third parties, enabling other brands to develop their own cashierless outlets.

Other businesses are piloting their own versions of the technology. Tesco and Aldi tested automated outlets in the UK in 2021, while retail software developer GK opened its own version of a "contactless store" in its headquarters in Germany.

Meanwhile, Greece-based i-mall Micro Market debuted another version of a fully automated store in Athens, employing Cardlink's IM30 POS solution. Relying on specially-made vending machines, the "micro market" concept allows customers to buy their product through a mobile app and pick it up at the store itself, or buy and pay for it through the on-site touchscreens, with no need for cash or a human assistant present<sup>57</sup>.

### The cashierless store journey







▶ Cashierless technology brings a number of **benefits to businesses** ◀



**Lower labor costs**

With many of the functions of a human employee at a checkout point automated, a business doesn't need as many employees in such positions. In the long run, it is estimated that replacing an employee with automation can cost 20% to 30% of an annual salary<sup>58</sup>. There are, of course, concerns about automated systems depriving human employees of their livelihoods, which need to be addressed on a corporate, social, and legislative level.

However, businesses are encouraged to take advantage of such technologies to reskill and redeploy human employees to do more efficient work, while menial tasks can be tackled by automation. The same estimates referenced above show that reskilling an employee can cost around 10% of an annual salary and offers up to 3x higher return of investment in the long term than hiring a new employee with the skills needed.

**Improved customer experience**

Automated checkouts are meant to help speed up a customer's visit to a store and offer them a frictionless experience, as they don't have to fumble for their wallet, wait in long lines, and scan items one by one. This improves customer experience within the store as it leads to more easily manageable customer numbers and prevents overcrowding.

This can also benefit a business's reputation and lead to increased footfall and positive word of mouth. In that same vein, at least during initial implementation, the novelty of a fully automated store can be a powerful differentiator for consumers who are impressed by innovation and new technologies.



### Improved data insights

Tying into the broader omnichannel theme, the technology at work in automated stores offers ample opportunity for data analytics and insights from physical customers, something that a lot of brick-and-mortar stores still struggle with. In cashierless or automated stores, which rely heavily on hardware like cameras and sensors, the business can get insights like how customers move within a store, which product displays attract attention, how long customers spend in front of a shelf, what products they pick up and set down again, which products are the most popular, etc. This can enable more personalized communications towards brick-and-mortar customers as well as improved insights on inventory and stock, enabling better decision-making for the business.

There are still drawbacks and challenges, such as high costs in implementing the technology as well as picking the right provider to work with. Concerns are also being raised about data collection practices in such stores - Amazon notoriously uses large amounts of data to power its commerce machine and its Amazon Go stores are no exception, since customers sign into the store with their Amazon accounts. Finally, there is an ongoing conversation about how such technology will affect human staff and businesses are encouraged to think carefully about striking the right balance in this regard. Issues such as shoplifting and inefficiencies actually complicating the customer journey rather than simplifying it have been observed in some outlets in the US<sup>59</sup>, which underlines the need for careful planning and implementation of such technology to reap its benefits.

<sup>59</sup> <https://alvarezandmarsal-crg.com/wp-content/uploads/2022/08/Just-Walk-Out-Alvarez-and-Marsal-Consumer-Retail-Group.pdf>

## Virtual commerce and the metaverse

Virtual reality (VR) first emerged as a niche technology, promising complete immersion in digital worlds through the use of a specialized headset-visor. It primarily showcased video games and other forms of interactive entertainment but in the years since, the technology and its applications have expanded to include use cases like business and education. The sector received a significant gravity assist from Meta, the

company behind Facebook, when it acquired Oculus, the US startup credited for bringing VR back into the mainstream in recent years with its Rift headset<sup>60</sup>. In fact, Meta chose its new name to reflect its fresh focus into virtual reality in the form of the so-called “metaverse” - an old science fiction term describing a digital space where users can interact, play, shop, and do business together.

### Top activities of VR users



Source: PwC

Whether you choose to call it VR, metaverse, or anything else, this technology represents an increasingly important retail channel. In recent surveys, one-third of respondents said they were using VR technology, and one-third of those have used it to access a retail environment. One-third also responded that they had purchased products after browsing a store in VR. There were even a select few who said they had bought luxury items through VR<sup>61</sup>.

Metaverse enthusiasts seem eager to embrace the potential the technology promises. Out of a group of consumers who have used it, almost half look forward to being able to test

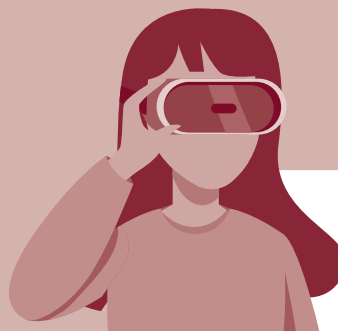
products in a digital environment, from trying out clothes and shoes virtually, all the way to touring a home or property before purchase. A vast majority of metaverse users expect brands to start advertising on the metaverse within the next two years, and retail is one of the industries they expect to interact with the most (58%)<sup>62</sup>.

The current setup for VR is still a little unwieldy for the average consumer: it involves the purchase of costly and bulky equipment, through which users can access any kind of metaverse activity. However, there are applications and variations of the technology that are more readily accessible and can be

<sup>60</sup> <https://about.fb.com/news/2014/03/facebook-to-acquire-oculus>

<sup>61</sup> <https://www.pwc.com/gx/en/consumer-markets/consumers-respond-to-waves-of-disruption/gcis-report-june-2022.pdf>

<sup>62</sup> <https://www.sitecore.com/blog/metaverse/2022-research>



equally valuable to brands and businesses.

For example, many virtual experiences can be accessed through a computer or mobile device screen similar to the way video games are played now, without the need to wear a bulky accessory. In addition, Augmented Reality (AR) experiences require nothing more than a modern smartphone, allowing a consumer to point their device's camera at an empty space and see a digital product, or aim at a particular item in a store and get instant information about it.

Engaging with such technologies would enable retailers to build digital spaces for their customers to access, such as virtual showrooms, 3D recreations of stores where customers can browse as if they were at the actual store, and even completely off-kilter experiences such as gamified environments that tie into their brand.

Other potential applications use digital technologies in physical locations to enhance customer experience. For example, some brands set up large screens on-site that serve as digital "changing rooms" - a combination of cameras, sensors, and AR technology allow a customer to stand in front of a screen and see themselves mirrored in it, with the clothes, accessories, or beauty products they're considering applied automatically on their digital "reflection".

Mobile apps that customers can download to their personal devices can enable similar functionality as well as ubiquity - customers can then be in touch with the brand anywhere they are, without necessarily stepping into a store. The same app could allow the user to seamlessly browse, try out a product, purchase it on the spot, and then receive it at home or pick it up at a store, completing the omnichannel circle.

## Examples of virtual and augmented reality in retail

### **Hugo Boss personalized avatars**

Working with German firm Reactive Reality, Hugo Boss enables customers to create their own "avatars" - digital representations of themselves with their own measurements, so they can try out Hugo Boss clothes virtually. Reactive Reality has also developed a similar solution for online stores powered by e-commerce platform Shopify.

### **IKEA Place**

IKEA uses Apple's ARKit augmented reality technology to allow customers to point their mobile device at any spot in their home and see how the furniture of their choice fits into the space, eliminating the need for traditional measuring and guesswork when buying furniture.

### **Nike Fit**

Nike's AR app allows users to measure their feet automatically by pointing their smartphone camera at them, and then helps them try out different shoe models, designs, and color schemes at their convenience. The company claims to be able to take accurate measurements down to 2mm, and aims to eventually use the tool to allow customers to create their own, completely personalized products.

### **BMW #NextGen**

The famed automaker has deployed a platform featuring both VR and AR apps to create virtual showrooms for its cars, allowing users to examine 3D representations of various models, swap colors, access interactive information, and experience realistic car interiors.

## Artificial Intelligence in retail

One thing every new technology has in common regardless of industry, is that they generate a lot of data. These troves of information can cover everything from top-selling items to customer preferences to consumer demographics.

The opportunity for brands and retailers should be obvious - namely, an unprecedented degree of actionable intelligence - but so is the challenge: How do you organize and analyze this data in order to squeeze insights out of them and make a material impact on your business? Enter artificial intelligence (AI).

As more and more parts of retail get digitized, AI solutions have been gaining ground across different applications. The market size for AI in retail globally was valued at \$4.8 billion in 2021 and is estimated to surpass \$30 billion by 2028, growing at a CAGR of 30.5% during this period<sup>63</sup>. This gives rise both to opportunities for businesses to optimize their processes and for companies developing AI products who gain access to a whole new client base of retail and commerce businesses.

### Top use cases of AI in retail according to industry leaders

| Technology                             | % of respondents |
|--|------------------|
| Customer care                          | 48%              |
| Quality control                        | 47%              |
| Inventory management                   | 47%              |
| Personalization of products & services | 36%              |
| Pricing                                | 29%              |
| Fraud detection                        | 24%              |

Source: Statista

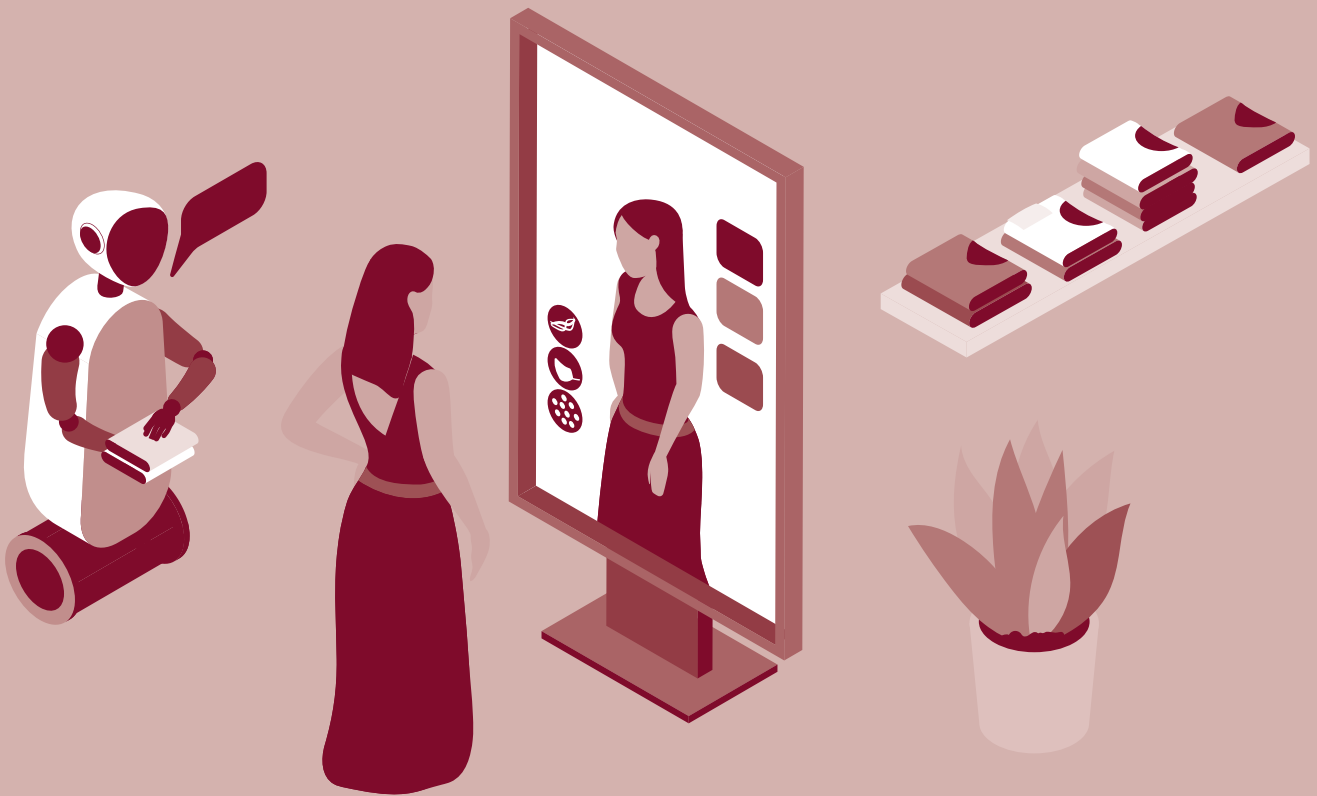
### ► Key retail areas impacted by AI

#### Customer service and personalization

Through AI-powered analytics, businesses can extract valuable insights about their customers, from demographics to user preferences. This way, they can engage them more effectively by serving them more relevant products, using the right messaging depending on factors like age bracket, location, and even time of day or week, or approaching them with the right kinds of offers. Businesses can also deploy automated assistants or chatbots that provide additional and personalized support to customers in an efficient and scalable way. Other solutions can automatically identify relevant products in videos or other media and serve users more relevant recommendations when they decide to buy something.

#### Supply chain and inventory optimization

AI solutions can help automate certain repetitive and time-consuming tasks and streamline processes, and supply chain is a prime field for that. Elsewhere in this report, we examined the use of robotics in warehouses, helping organize stock more efficiently and fulfill orders more quickly. AI algorithms also power logistics operations, plotting out more efficient delivery routes for drivers. And by using predictive analytics, businesses can monitor which products move faster than others and when, so they can make sure they keep the right products in stock.



### In-store planning and configuration

The deployment of IoT (internet of things)-powered cameras and sensors in brick-and-mortar stores allow businesses greater visibility into customer behavior. A retailer could analyze this data to, for example, determine what are the busiest and most quiet times at the store to plan appropriate staffing, figure out their planogram by virtue of which displays or shelves tend to attract more customers, understand how customers tend to move within the store in order to place items and displays more effectively, and so on. Computer vision-powered systems can also monitor store shelves to immediately notify staff when certain products are running out - and in a fully automated store, robots could replenish those products without human intervention. Using such insights, a physical store could be as optimized and continuously evolving as an online one.

### Cost reduction and resource allocation

By streamlining their operations through AI solutions, businesses can make data-driven decisions in order to eliminate inefficiencies that rack up higher costs. Saving on floor and warehouse space, moving more popular products versus fewer unpopular ones, reaching customers more effectively with targeted messaging, and optimizing staffing can all contribute to lower costs and increased efficiency.





# How startups drive innovation for retailers and brands

As is usually the case with technological disruption, much of the momentum in retail innovation through tech comes from startups. The agile small or medium-sized businesses in

the retail tech space are innovating across the full spectrum of areas we have touched upon in this report. From mobile payments to AR/VR applications, most such solutions tend to come



into being as a result of startup breakthroughs being embraced by larger, established players.

The pandemic is largely credited for a boost in the adoption of new technologies in retail - after all, technology was all we had for quite some time during the lockdowns. However, a lot of this innovation has been happening for years, and many of the startups we will explore in this section were already scoring hits with clients and partners before the world had ever heard of the word "Covid".

Investor interest in the sector more than doubled from 2020 to 2021, the year most countries started dispensing with the more strict pandemic restrictions. Investment into retail tech worldwide hit \$109 billion in 2021, up from \$47 billion in the year before<sup>64</sup>. While 2022 saw a subsequent drop in funding to pre-pandemic levels<sup>65</sup>, it has to be noted that this is a broader trend in venture funding, which saw considerable slowdown along with other sectors of the global economy<sup>66</sup>.

As with all sectors, the growth of retail tech and e-commerce startups hasn't gone unnoticed by the larger players. The past five years have seen prominent deals in the space that have provided fruitful exits for founders and investors, and have allowed larger firms entry to innovative business models and technology.

In 2016, Unilever made headlines when it acquired Dollar Shave Club, a startup that pioneered a D2C subscription model for men's razors. The \$1 billion deal was notable both for its size and also because it was the first time that a big-name consumer brand showed an interest in the direct-to-consumer model. While the acquisition didn't turn out exactly as Unilever had hoped<sup>67</sup>, it helped legitimize the concept and opened up the way for further deals of this type, such as the acquisition of

D2C clothing startup Bonobos by Walmart for \$300 million a year later.

The latest example of such a deal, Victoria's Secret acquisition of D2C lingerie firm Adore Me for \$400 million in late 2022, also served as a way for the legacy brand to appeal to a whole new demographic and regain some consumer good will following a period of declining reputation<sup>68</sup>.

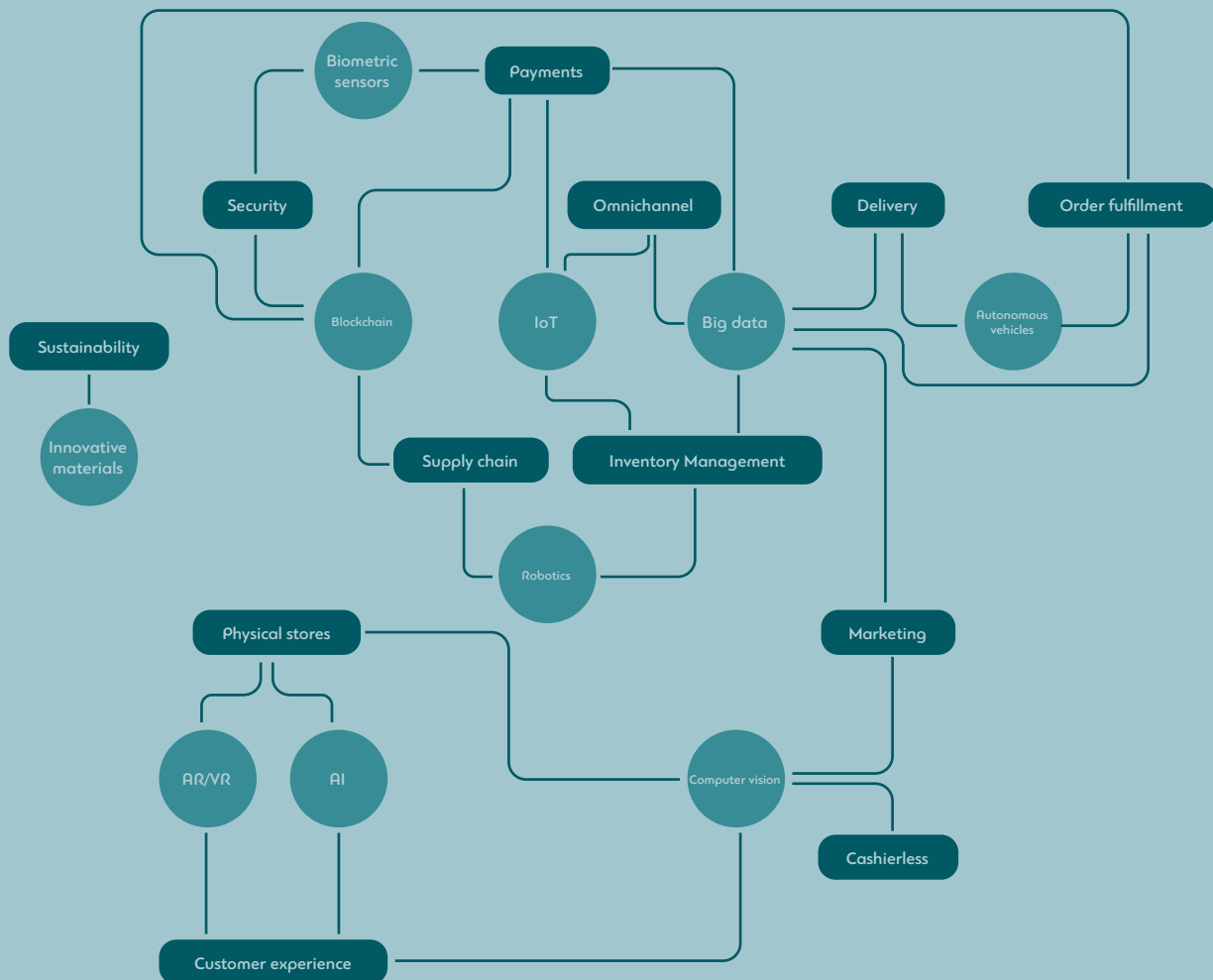
Similar to venture funding, global M&A activity cooled down in 2022 following a rather robust 2021, with deal volume dropping by 12% due to factors like ballooning inflation, geopolitical uncertainty, supply chain disruptions, and other headwinds. However, market watchers are optimistic that the current challenges are an opportunity for dealmakers to refine and adapt their M&A strategy in order to continue unlocking value for their investments.



<sup>64</sup> <https://www.statista.com/statistics/1094146/global-retail-technology-financing-trends-q3-2022> <sup>65</sup> <https://www.cbinsights.com/research/report/retail-tech-trends-q3-2022> <sup>66</sup> <https://www.cbinsights.com/research/report/venture-trends-q3-2022> <sup>67</sup> <https://www.businessinsider.com/why-dollar-shave-club-didnt-work-out-for-unilever-2022-2> <sup>68</sup> <https://www.voguebusiness.com/companies/victorias-secret-will-acquire-adore-me-for-dollar400-million-to-fuel-comeback>

## Key sectors for innovation in retail tech

In this report, we have gone through a number of technological innovations that are having a direct impact on online and offline retail. In this section, we will explore examples of young and established startup ventures that are active in these sectors and have either already made their mark as innovators and disruptors or are making the first promising steps in their respective areas. These startups are setting the stage for the next evolution of retail and, what's more exciting, the convergence of online and offline into a true omnichannel experience<sup>69</sup>.





## Smart or Cashierless Stores

As we saw previously, autonomous stores are an evolving trend that is set to mature further in the coming years as the technology powering them becomes more ubiquitous. From checkout-free solutions to footfall analytics, these startups are transforming how brick-and-mortar stores function and provide value for both retailers and consumers.

### ▶ iRetailCheck (Belgium)

iRetailCheck specializes in loss prevention solutions. It implements AI-powered, real-time video analytics for stores that monitor for, as the company puts it, “forgotten” items that might pass through the checkout point. The unregistered removal of items by mistake or through intent is one of the key challenges facing self-checkout and automated stores. The startup claims that 1 in 3 customers don’t scan all their purchases at self-checkout points, and even in stores with staffed checkouts, 70% of cashiers don’t check shopping carts or baskets for leftover items.

**Founder(s):** Tom Symons

**Stage:** Seed

**Total funding to date:** \$850,000

### ▶ Stockwell (USA)

Stockwell’s solution is a twist on the vending machine: The company’s eponymous product resembles a smart store shelf equipped with computer vision to track which products are picked up. It allows for cashless payments and provides data analytics on which products sell more to allow for more efficient restocking and smarter product assortment.

**Founder(s):** Ashwath Rajan, Paul McDonald

**Stage:** Series B

**Total funding to date:** \$10 million

### ▶ Bespot (Greece)

Athens-based Bespot offers location tracking and analytics services for the retail and hospitality industry. It uses IoT technology to generate insights like how consumers move within a given space, whether they are new or returning customers,

and what kind of products or store configurations drive traffic. Additionally, the platform enables personalized experiences like loyalty offers and targeted marketing campaigns.

**Founder(s):** Leon Gavalas

**Stage:** Seed

**Total funding to date:** \$1.2 million

### ▶ Ariadne Maps (Greece, Germany)

Ariadne Maps is another startup that specializes in customer analytics based on location tracking. Its AI-powered solutions are applied in stores and shopping centers as well as larger spaces like airports. They can provide insights on people’s movement patterns, help customers navigate through a space, and create location-based events like promotional notifications. The company claims 95% accuracy in its location tracking but stresses its solutions respect people’s privacy and are GDPR-compliant.

**Founder(s):** Georgios Pipelidis, Nikos Tsiमितros

**Stage:** Seed

**Total funding to date:** \$2.2 million

### ▶ Trax (Israel, Singapore)

Trax uses computer vision technology and AI to power a robust data analytics platform for physical stores in the FMCG sector. Through its technology, the company claims to give brick-and-mortar stores SKU-level visibility that helps them create the ideal planogram for their space. This allows physical retailers to plan better retail strategies, collaborate more efficiently with their suppliers, and streamline their customers’ experience.

**Founder(s):** Dror Feldheim, Joel Bar-El

**Stage:** N/A

**Total funding to date:** \$1 billion



## Online-to-Offline Retail

With e-commerce and physical stores converging, and omnichannel becoming an imperative for businesses rather than an option, online-only or online-first brands are looking to provide physical experiences for their customers. These startups help power such experiences, allowing e-commerce players a foothold in the brick-and-mortar space.

### ▶ Brik + Klik (USA)

New York-headquartered Brik + Klik creates retail spaces for online brands, helping them connect with their customers and gain new ones through physical locations. The startup claims to provide everything from staffing to in-store tech to marketing and omnichannel fulfillment. So far, it has created curated pop-up-style storefronts for wellness, F&B, and lifestyle brands.

**Founder(s):** Eric Hirani, Hemant Chavan

**Stage:** Crowdfunding

**Total funding to date:** \$225,000

### ▶ Showfields (USA)

Showfields is also based in New York and has created five physical locations across the US - in essence, modern department stores that are host to e-commerce brands as well as events spaces. Besides having a hand in designing a brand's presence in its locations, Showfields also provides a data analytics platform and marketing services.

**Founder(s):** Amir Zwickel, Katie Hunt, Tal Zvi Nathanel

**Stage:** Seed

**Total funding to date:** \$11.3 million

### ▶ Love, Bonito (Singapore)

Love, Bonito started out as a fashion blog in Singapore in 2005, before evolving into a D2C brand that differentiated itself by catering to Asian women. As the company grew, it expanded its online presence offline, opening pop-up stores in its native market and expanding its physical locations from there to four more markets in Southeast Asia, including Malaysia and Hong Kong.

**Founder(s):** Rachel Lim, Viola Tan

**Stage:** Series C

**Total funding to date:** \$80 million



## Circularity

Tackling themes of sustainability, waste reduction, and ethical consumption, the following startups are bringing to the table solutions from two different perspectives: on the one hand, building platforms that empower businesses to adopt their own circularity practices, and on the other, creating business models that can be a blueprint for other retailers to follow.

### ▶ Lizee (France)

Paris-based Lizee provides “re-commerce” technology solutions, as the company puts it. It creates and manages plug-and-play software that enables e-commerce brands to launch rental or resale services. Besides providing the software tools enabling circular commerce, the team also says it handles logistics, payments, quality control, and refurbishing on behalf of their clients.

**Founder(s):** Anna Balez, Tanguy Frécon, Timothée Emery

**Stage:** Seed

**Total funding to date:** \$2.6 million

### ▶ Manymoos (USA)

Manymoos styles itself as “America’s first circular retailer”. The startup creates its own line of clothing, sells or rents its products, and sets no limit for returns. Clothes that are returned are repaired and made available again or broken down to materials and reused for new items. This creates a virtuous circle of sustainable production and consumption, whether customers opt for new or used items. The company has both an online store and physical locations in the US.

**Founder(s):** Carolyn Butler, Meris Butler, Richard Amsinger

**Stage:** Seed

**Total funding to date:** \$5 million

### ▶ Pandas (Greece)

Pandas tackles the problem of smartphone waste - as the company says, 1 billion smartphones go out of use every year as users upgrade to newer models. Whether thrown away or kept in a drawer, those old devices turn into e-waste. Pandas aims to counter that by streamlining the trade-in process so that old phones can be disposed of properly. Through a combination of software and hardware, it claims to be able to get a phone checked and graded for trade-in in just three minutes, and awards the user with a voucher they can use to purchase a new phone from a partner seller. In 2022, Pandas partnered with Xiaomi and Samsung to handle official trade-ins for selected phones by those OEMs.

**Founder(s):** Alex Vratskides, Fanis Koutouvelis

**Stage:** Pre-seed

**Total funding to date:** \$2.1 million



## Live Commerce - Video Selling

Perhaps one of the most unusual trends in e-commerce and retail, selling through video and livestreaming platforms has been rising in Asia for a while, but the pandemic helped boost the trend in Western markets as well. Startups are entering this space with different approaches, each one creating experiences that are reminiscent of late-night shopping TV channels of yesteryear for a modern, mobile-first, internet-savvy audience.

### ▶ TalkShopLive (USA)

A “live social-shopping network”, Los Angeles-based TalkShopLive combines social networking with e-commerce, allowing buyers to follow and interact with sellers, who engage with their audience through livestreaming. The company is notable for having attracted celebrities like Oprah Winfrey and Jennifer Lopez, and recently set up a deal with Walmart to power the retailer’s own video selling efforts.

**Founder(s):** Bryan Moore, Tina Moore

**Stage:** Seed

**Total funding to date:** \$11 million

### ▶ Popshop Live (USA)

Out of the online platforms it could be compared to, Popshop Live most closely resembles today’s social networks like TikTok. It is a mobile-first platform where sellers create their channel and stream directly to users, focusing on younger demographics and items like collectibles, toys, and memorabilia.

**Founder(s):** Danielle Li

**Stage:** Series A

**Total funding to date:** \$23 million

### ▶ Verishop (USA)

At first glance, Verishop looks just like any other online fashion store, with categories for different types of clothes and accessories. However, a “Livestreams” tab at the left of its top navigation bar takes the user to a dedicated area where they can browse live video with streamers showcasing items available in the store. Verishop claims to feature over 4,000 independent brands.

**Founder(s):** Cate Khan, Imran Khan

**Stage:** Series B

**Total funding to date:** \$70 million

### ▶ ValueLenz (Greece)

ValueLenz brings a different twist to video selling. The Thessaloniki-based startup develops a white-label platform enabling businesses to assist customers through video calls, where store staff can showcase products to the customer and help them to seamlessly buy them online. The company worked with electronics retailer MediaMarkt during the pandemic so that customers could book video call appointments with store employees to help them select and buy the items they needed. In addition, ValueLenz builds tools that power automated checkouts, contact-free shopping, and assisted shopping for people with special needs.

**Founder(s):** Jenny Tantidou, Panos Konstantinidis

**Stage:** N/A

**Total funding to date:** N/A

### ▶ ViSenze (Singapore)

Singapore-headquartered ViSenze has developed AI-powered computer vision technology in order to improve search and discovery in e-commerce products. The company's platform helps e-commerce brands to boost their products' SEO by automatically identifying and tagging items so that prospective customers get improved personalized recommendations, while merchants get data insights on their listings as well as customer behavior.

**Founder(s):** Chua Tat-Seng, Li Guangda, Oliver Tan, Roger Yuen

**Stage:** N/A

**Total funding to date:** \$34 million







## Q-commerce and Fulfillment



Last-mile and micro-fulfillment remain some of the biggest challenges in the retail value chain. As the importance of a robust omnichannel framework increases for businesses, these final stages of a product reaching a customer become more pivotal than ever. Warehouse automation is a particularly large piece of this puzzle. These startups seek to improve fast delivery of goods or create more efficient fulfillment for businesses.

### ► Fabric (USA, Israel)

Fabric specializes in automated micro-fulfillment centers that are located in urban areas and are able to fulfill orders quickly and efficiently. The company prides itself on the concept of a fully robotic mini-warehouse that enables delivery within one hour for businesses like pharmacies and grocery stores. The company is currently valued at over \$1 billion.

**Founder(s):** Elram Goren, Eyal Goren, Ori Avraham, Shay Cohen, Tom Bassett

**Stage:** Series C

**Total funding to date:** \$336 million

### ► Pop Market (Greece)

Athens-based Pop Market offers its own version of grocery delivery in an already competitive Greek market. The startup is developing end-to-end infrastructure, operating its own network of hyper-local dark stores and last-mile delivery. This way, it claims to be able to deliver orders within 15 minutes. Pop Market seeks to take advantage of what it sees as a gap in its native market, noting that online grocery delivery has a mere 2% penetration in Greece.

**Founder(s):** Nick Telecki, Takis Malavetas

**Stage:** Seed

**Total funding to date:** \$8.5 million

### ► Overblue (Greece)

Overblue tackles last-mile delivery through an online platform that connects retail businesses with transportation vehicle owners and logistics operators - a sort of Uber for last-mile delivery. Businesses can choose through a network of distributors on Overblue's platform

and engage their services for as long as they need them, while distributors get a steady flow of clients for their vehicles and fleets.

**Founder(s):** Christos Giakimtsoukis

**Stage:** N/A

**Total funding to date:** N/A

### ► GreyOrange (India, USA)

GreyOrange builds warehouse robotics and AI software for warehousing and fulfillment operations. The company uses predictive and real-time data about orders, inventory, shipping times, and resources to optimize processes between its robots and human workers - or to better "orchestrate" them, as it puts it. Through the combination of hardware and software, GreyOrange wants to help businesses "master fulfillment".

**Founder(s):** Akash Gupta, Samay Kohli, Wolfgang Hoeltgen

**Stage:** N/A

**Total funding to date:** \$293.1 million

### ► Myrmex (Greece, USA)

Myrmex develops completely automated systems for fulfilling click & collect-style online orders, from groceries to parcels. The company's autonomous mobile robots transport items within a micro-fulfillment center and deliver them where customers can pick them up by simply displaying their order through their smartphone. The company claims its micro-fulfillment centers can be placed within stores or at other hyper-local points.

**Founder(s):** Ioannis Kanellos, Orestis Fainekos

**Stage:** Series B

**Total funding to date:** \$5 million



## Payments

As we have seen, the payments sector has mostly been dominated by larger financial institutions and multi-nationals in recent years. However, there are still innovative solutions to be found - whether powering omnichannel experiences for consumers and retailers or getting more mileage out of BNPL offerings, these startups are helping drive further change in the space.

### ▶ Throo (Greece, Lithuania)

Vilnius-based Throo offers a payments and loyalty marketplace for online and offline commerce. Merchants can deploy a POS system and payments platform that speeds up clearance and improves customer stickiness. Shoppers get a payments wallet and contactless payments app, as well as access to a rewards system that gives them exclusive discounts at partner stores and cashback with every purchase.

**Founder(s):** Panos Zeppos, Sotiris Syrmakezis

**Stage:** Pre-seed

**Total funding to date:** \$271,000

### ▶ Sunbit (USA)

Sunbit puts forward its own take on BNPL with a digital platform that enables flexible installment payment plans for customers at over 16,000 partner businesses across the US, including auto service centers, dentist offices, and vet clinics. The company claims to perform the necessary credit checks and offers favorable terms to shoppers, but also says that 90% of applicants to its services are approved. Besides its online platform that helps merchants and shoppers monitor their plans, the company also makes available a Visa payments card to qualifying customers.

**Founder(s):** Arad Levertov, Ornit Dweck-Maizel, Tal Riesenfeld, Tamir Hazan

**Stage:** Debt financing

**Total funding to date:** \$460 million

### ▶ Finloup (Greece)

Athens-based Finloup has created a BNPL platform enabling installment payments and rental plans for electronic products such as laptops, tablets, game consoles, and more. The startup says it ensures responsible spending by using the Open Banking protocol. Customers connect to the platform through their e-banking service in order to be evaluated for creditworthiness, and then pay through their credit or debit cards. Shoppers can then pick up their chosen item at a partner business or have it delivered.

**Founder(s):** Antonis Prentzas, Kyriakos Georgiou, Marios Noutsos, Stelios Gasparinatos

**Stage:** Pre-seed

**Total funding to date:** \$1 million



## Customer Experience

In an increasingly competitive environment, improving customer experience helps keep customers engaged and coming back, and helps retailers gain valuable feedback so they can adjust their strategies, attract new customers, and get more value out of existing ones. There are several areas to address in this regard, and these startups offer their own takes on the challenge.

### ▶ **Simpler (Greece, UK)**

Simpler goes after the inefficiencies of currently shopping online. The company creates what it calls a “single online identity” that shoppers can use to check out at any e-commerce website without having to enter their details and credit card information every time. The one-stop solution promises to both make checkout faster and less tiresome for customers, and also increase revenue for online retailers by reducing abandoned carts and improving conversions.

**Founder(s):** Alexandros Kyriakopoulos, Rania Lamprou, Spyros Mandekis

**Stage:** N/A

**Total funding to date:** N/A

### ▶ **Pobuca (Greece, UK)**

Pobuca provides AI-powered software aiming to improve customer engagement. It offers turn-key solutions for businesses including consulting, loyalty metrics, strategy, marketing, and support. The company has worked with brands and retailers like IKEA, Intersport, Gant, and BSB and claims to have sales in over 30 markets.

**Founder(s):** George Sachpatzidis, Iro Karsou, Isidoros Sideridis, Stavros Langousis

**Stage:** N/A

**Total funding to date:** \$6.6 million

### ▶ **Way (USA)**

Way provides a software platform that allows businesses to create, monitor, and measure unique experiences. Through these brand activations, the startup claims to help retailers and brands increase revenue, customer engagement, and customer satisfaction by creating memorable experiences that elevate a brand and create a loyal audience.

**Founder(s):** Jake Luster, Michael Stocker

**Stage:** Series A

**Total funding to date:** \$20 million



# Afterword

Retail exists in a pivotal nodal point between the economy, society, and technology. As such it affects, and is affected by all of them as it continues to evolve. As we have seen in this report, technological innovation is inextricably linked to this evolution.

In some areas, innovation is improving practices that have existed for decades or even centuries. In others, we see completely new paradigms emerge that present fresh opportunities for retailers and brands that are ready to embrace them.

For new generations of consumers, the always-connected world is the norm, and their choices and demands will shape the next evolution of retail and their relationship with it. Armed with communication tools and access to information that their predecessors never had, these shoppers will continue challenging the status quo and retailers will need to keep up.

Luckily, retailers are not alone. A thriving innovation ecosystem, in Greece and abroad, stands ready to offer connections, solutions, and breakthroughs, no matter the scale of the business - or the problem.

A wealth of technologies and resources that had previously only been available to large-scale players with deep pockets, are now accessible even to small local businesses. This democratization will continue benefiting businesses and will give rise to a host of new opportunities for growth.

Retailers increasingly have the opportunity and the means of reaching more customers with tailored services and products, gaining new insights by processing unprecedented amounts of data, and lowering their costs by streamlining their operations.

Omnichannel strategies, efficient automation solutions, and AI-powered insights will be powerful tools in their belt. How a business implements those resources will determine how it navigates challenges down the line.



# Retail Innovation Hub by Cardlink: Shaping the future of retail

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## Mission

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The Retail Innovation Hub by Cardlink is a regional platform with the ambition to facilitate the evolution of retail in the digital era. It is created by Cardlink, the biggest provider of electronic payments solutions in Greece, and the innovation experts of

Foundation. It is a place where retail experts and technology leaders shape the future of the industry, exchange knowledge and insights, learn how to adjust to the digital transformation landscape, and keep up with the latest developments.

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## Activities

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**Business Factory**

A framework for the collaboration of startups and solution providers with industry stakeholders

**Workgroups**

Creating small discussion groups among experts of the industry

**Meetups**

Supporting a vibrant community of founders and makers

**Insights Reports**

Mapping trends and insights for retailers

## ▶ Business Factory

The Cardlink Business Factory is a structured and agile framework, bringing together startup teams or technology solution providers with industry stakeholders under a common vision: accelerate the conversion of needs to solutions, and available products to successful business partnerships as well as the development of new tech products, or services, thus allowing the sector to innovate faster and offer a better, more unique customer experience.

Business Factory invited experts, startups and technology solution providers to submit their idea and participate in the 1st cycle of the program, in order to develop, in collaboration with Cardlink, new technology products and services that will improve customer experience, providing innovative solutions to the challenges the retail industry is facing. It was successfully completed with four companies making it to the final phase: Throo, Finclude, Shiplemon and Simpler. Their innovative ideas are being studied in depth in collaboration with Cardlink to jointly develop products that will add value to the company's customers while contributing to the evolution of the retail industry as a whole.

The Retail Innovation Hub remains open to new ideas throughout the year. The 2nd cycle of the Business Factory is expected to open in early 2023.

## ▶ Innovation Workgroups

Leveraging the power of experienced leaders and tech experts of the local community, Cardlink invited selected stakeholders from Greek and international companies to take part in closed group discussions that would produce real insights and a rare insider's view of the challenges and their solutions.

### **Retail Tech Communities Workgroup**

Technology executives, developers and other experts gathered to map out retail innovation, deep diving in technologies like big data, machine learning and IoT, prioritizing the transformation of the sector and accelerating the tech leap with the customer at the center.

### **Retail Innovation Leaders Workgroup**

A workgroup that brought together the thought leaders, top level executives and stakeholders of the industry and aimed to facilitate the evolution of retail in the digital era. Executives from the companies L'OREAL Hellas, Kotsovolos, Oracle, OPAP, Eurobank, Vodafone, Microsoft, PwC, Quest Group (you.gr), Cardlink, Foundation, VelocityPartners, Stanton Chase, istorm, and Venture Friends participated in the workgroup.

## ▶ Meetups

Aiming to help the community understand the innovation opportunities and discovering champions, the organizers of Retail Innovation Hub engaged with tech communities in the form of meetups sponsorship. Being part of the discussion is an effective first step to set the spark of true innovation in the wider ecosystem.

► Retail Insights Reports



download

**“Retail is Changing”  
Insights Report**

“Retail is changing” is the first Insights Report of the Retail Innovation Hub. It was created by Foundation following research and analysis of everything discussed at the Retail Leaders Workgroup, the first initiative of the Retail Innovation Hub by Cardlink. It presents the insights and challenges discussed, and suggestions for moving forward, coming from important executives of the Greek business ecosystem, retail experts who have in-depth knowledge of the challenges that widely affect the industry, have a big impact, and need solutions.



download

**“Retail Tech Challenges and Solutions”  
Insights memo**

The many issues discussed in the 1st Retail Tech Communities Workgroup are included in the Retail Insights Memo, a short report gathering the tech experts’ opinions on pressing matters of the industry. Among others: the problem of returns that can be turned into an opportunity from which merchants can benefit, the ever-increasing influence of Generation Z buyers in the retail sector, the impact of the GDPR legislation in Europe, as well as issues such as the ROI justification of innovation, especially for small businesses.

The **Retail Innovation Hub** invites all **technology companies** and **startups** in the retail ecosystem, as well as big corporations, to **join their forces in fostering innovation**.

Be a part of it! <https://cardlink.gr/innovation/>



## ▶ About Cardlink

Cardlink was founded in 2004 and is the largest payment service provider in Greece with more than 290,000 POS, 25,000 e-Commerce stores and 400 million transactions per year. Cardlink helps businesses with their day-to-day transactions with quality, security and speed. The Cardlink team monitors developments in the field of electronic payments and adopts the latest technologies and services that continuously improve the trading experience in physical and electronic commerce. Since September 2021, Cardlink has been a Worldline company, a leader in the European payments and transaction management services market.  
[cardlink.gr](http://cardlink.gr)

## ▶ About Worldline

Worldline [Euronext: WLN] is a global leader in the payments industry and the technology partner of choice for merchants, banks and acquirers. Powered by 18,000 employees in more than 40 countries, Worldline provides its clients with sustainable, trusted and innovative solutions fostering their growth. Services offered by Worldline include in-store and online commercial acquiring, highly secure payment transaction processing and numerous digital services. In 2021 Worldline generated a proforma revenue close to 4 billion euros.  
[www.worldline.com](http://www.worldline.com)

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