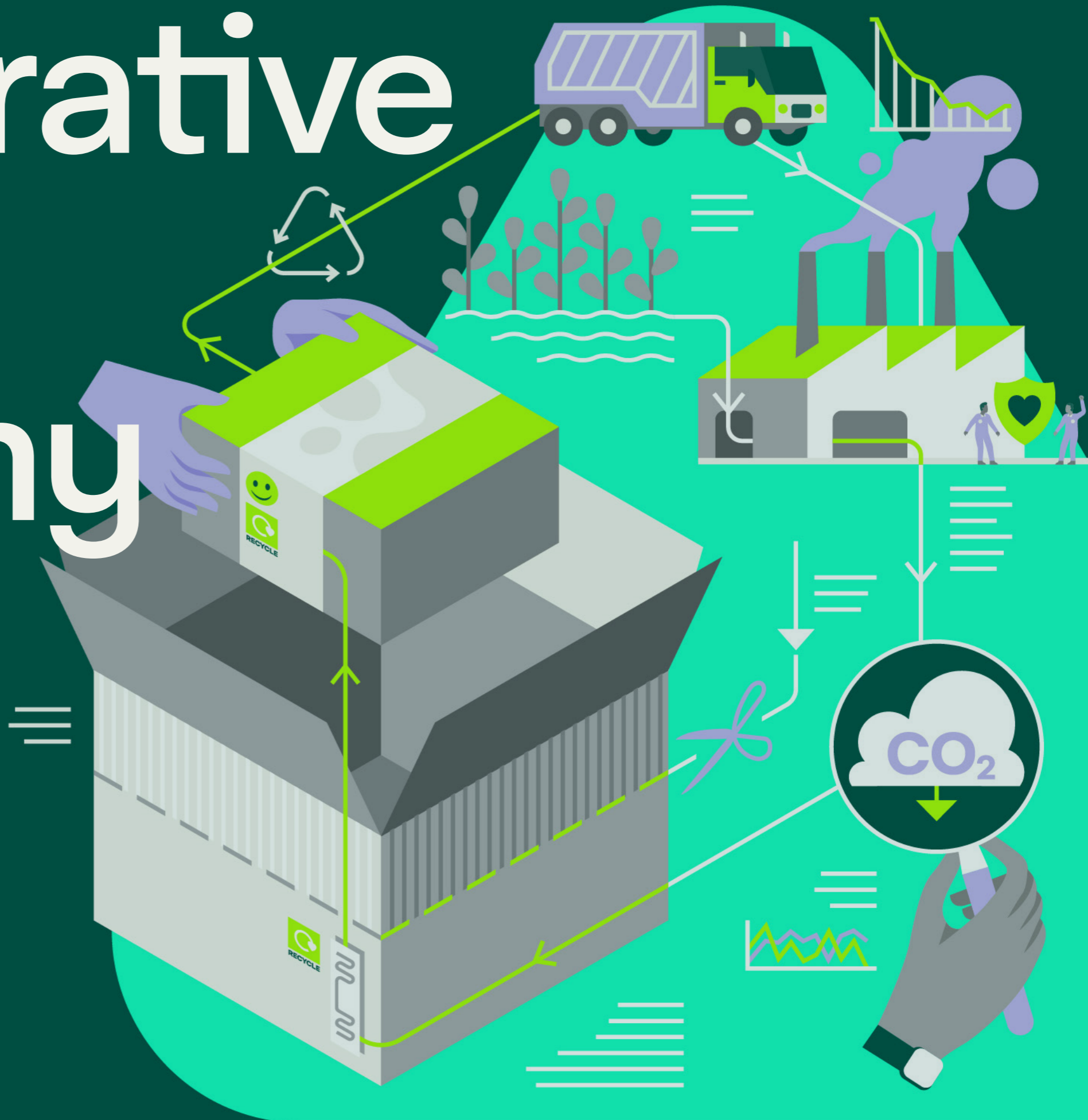


# Regenerative Retail Economy



# Driving a move toward

While sustainability has long been a watchword among businesses, it has taken on new levels of urgency during the Covid-19 pandemic. The link between human behavior and the environment has never been starker, as is the need for collective action.

In November 2021, delegates from around the world will gather in Glasgow for the 26th UN Climate Conference (COP26) to finalize the Paris Rulebook. As governments work toward securing global net-zero emissions by 2050 and prevent the planet from warming beyond 1.5°C, businesses are setting their own sustainability targets. At least one-fifth (21%) of the world's 2,000 largest public companies, representing \$14 trillion in sales, have committed to net zero. In the US, large retailers including Target and Walmart have committed to reaching net-zero emissions by 2040. As part of its updated 2030 goals, Avery Dennison has a focus on reducing its own emissions (scope 1 and scope 2) by 70% as well as its supply chain emissions (scope 3), with an overall aspiration of net zero by 2050.

This corporate movement toward net zero is in light of shifting consumer sentiment as well as looming government legislation. The UK government announced in November 2020 that climate risk reporting will become mandatory for large companies and financial firms. In Germany, a new supply chain law requires large businesses to prevent human rights and environmental abuses within their global supply chains, with fines of up to 2% of annual turnover for breaching the rules.

For retail specifically, the pandemic has brought latent problems to the surface. The fragility of just-in-time global supply chains, the undervaluation of factory and warehouse workers and the lack of digitalization have all become crisis points during a year when many retail stores remained closed and consumers pivoted to e-commerce.

As the world opens up, retailers will have to address these problems head on while catering to consumers' demands for sustainability and convenience.

'Consumers probably still don't fully understand the impact that convenience has versus sustainability,' says Tyler Chaffo, manager of global sustainability at Avery Dennison Smartrac. 'To highlight this fact, 23% of global climate pollution was emitted in one country while the goods were consumed elsewhere... it's become a moral hazard where we've outsourced our greenhouse gas emissions.' And yet, nine in 10 global consumers say the pandemic has affected their views on environmental sustainability. A majority (55%) now says sustainability is very or extremely important to them when choosing a brand – 22% higher than consumers surveyed pre-pandemic.<sup>1</sup>

This attitudinal shift is driving a move toward regenerative retail systems. This means recovering and recycling materials at a faster rate than we are using them and creating greener last-mile solutions for packaging, shipping and returns as e-commerce grows. It means digitizing the supply chain so retailers

can have a better understanding of their inefficiencies and waste to create more circular business models. And it means not only promising not to do harm to the planet, but also proactively contributing to make the natural world a better place for all its inhabitants.

Technological investment will be crucial to building a regenerative retail economy. In one survey, 77% of business leaders listed environmental sensors and the Internet of Things as important to meeting their sustainability goals, and in another, more than one-fifth said they had accelerated their digitalization plans by three years.<sup>2</sup>

In this emerging model, retailers, manufacturers, suppliers, brands and consumers will each take responsibility and ownership over the collective need for a more sustainable future. 'If we do it correctly, within 10 years we won't even talk about sustainability,' says Chaffo. 'We won't call it sustainability. It's just the way business is done.'

# regenerative retail systems



The systemic cracks in the current retail model, the rise of e-commerce and its consequent environmental impact, alongside consumers' ethical mindsets and a renewed interest in stakeholder capitalism, are all driving a need for regenerative retail models.

# Drivers





For its Good Nature windows, Selfridges collaborated with creatives and suppliers who have a focus on sustainability

## Stakeholder Capitalism

Stakeholder capitalism – the belief that companies’ operations shouldn’t be geared towards short-term profits for shareholders, but long-term value creation for all their stakeholders including employees, customers, suppliers, communities and society at large – is gaining popularity.

Big businesses are integrating sustainability into their investor strategies with some CEO pay now being linked to environmental, social and governance (ESG) targets – 41% of companies in the S&P 500 included ESG targets in senior pay packages last year, up 35% since 2019, according to WWD. In 2020, over \$40 trillion was invested in ESG assets, and PwC predicts ESG funds in Europe will outnumber conventional funds by 2025. In 2021, **ExxonMobil** lost three of its board seats to members of the ‘purpose-driven’ hedge fund Engine No 1, which received the votes after a campaign arguing that the company needs to evolve to survive in a decarbonized world. While seemingly removed from retail, ExxonMobil produces the raw material used in a significant amount of retail packaging, and the reshuffle of its board is emblematic of wider shifts towards purpose-driven profits in retail.

Business leaders are already seeing the benefits of a sustainable approach. Companies that receive positive media coverage about climate change in the preceding 12 months see share price outperformance of 26%, while 99% of CEOs from world-leading organizations say sustainability is critical to their future success.<sup>5</sup> ‘If new business models are designed well enough, it can be good for business too,’ says Marc Howard, co-founder and director of The Retail Summit. ‘Sustainability programs can benefit a retailer in numerous ways, such as improving supply chain resilience or reducing the organization’s cost base. Which in turn can make a real difference to a retailer’s bottom line.’

In September 2020, the World Economic Forum announced the release of the Stakeholder Capitalism Metrics, a universal set of non-financial ESG metrics, such as greenhouse gas emissions and board diversity, that companies can report on. ‘If we are to safeguard the planet for future generations, every stakeholder will need to take responsibility for its part in it,’ says Klaus Schwab, founder of the World Economic Forum.

## Ethical Awareness

The last decade has been defined by a growing ethical consciousness among consumers. Pew Research Center data published in 2019 shows that 67% of the global population believe climate change to be a major threat to their nation, compared to 56% in 2013.

A majority (70%) of global consumers say they are more aware now than before Covid-19 that human activity threatens the climate. This realization is spreading to our shopping habits, with over a third of consumers saying they are more aware of how their online shopping habits affect the environment than prior to the pandemic, and 57% stating they are willing to change their shopping habits to reduce environmental impact.<sup>3</sup>

There is also a growing understanding that sustainability expands beyond preserving the natural world. During the pandemic,

the social, racial and gender inequalities embedded within society were laid bare. In retail, exposed supply chains and reports of warehouse workers’ contracting Covid-19 while fulfilling online orders exemplified the need for a collective reconsideration of what constitutes essential work and how it should be valued. The global growth of the Black Lives Matter movement is sparking consumers to demand greater action from companies.

In 2020, 66% of American Generation Z said a company’s reaction to Black Lives Matter will permanently affect whether they buy from them in the future.<sup>4</sup> Activism and socio-political awareness have become defining features of Gen Z and, as digital natives who use social media deftly to amplify their voices and organize movements, they will gain political and spending power in the coming years.

Loanhood is taking a community approach to inspire clothing rental and educate users



**There is also a growing understanding that sustainability expands beyond preserving the natural world.**





Through its Modular Mailbox, Klarna is exploring how to improve the e-commerce experience by placing lockers in neighborhoods where people can collect online orders, rent items or even 3D-print products

## The demand for convenience is reshaping physical touchpoints such as packaging.

### Convenience Conundrum

Years of race-to-the-bottom tactics to capture consumer spend has led to convenience being the predominant deciding factor for many shoppers. The National Retail Federation's Consumer View Winter 2020 report found that over nine in ten consumers are more likely to choose a retailer based on convenience and 83% say convenience is more important when shopping than five years ago.

Incentives such as free shipping and same-day delivery are capturing new customers, creating an expectation that convenience should be fast and free. This is true across the globe, with 75% of consumers in France saying the availability of free shipping impacts their purchase, 57% in the UK and 55% in Japan. On average, American shoppers are willing to wait a maximum of 3.3 days for a package in 2021 versus 5.5 days in 2012, a 40% drop in under a decade.<sup>6</sup>

Online grocery delivery – which is expected to exceed \$100bn in sales for the first time in 2021 – is set to remain post-pandemic because of the convenience factor. More than 60% of shoppers plan to continue to buy their groceries online at the same frequency or even more frequently post-pandemic.<sup>7</sup> The demand for convenience is also reshaping physical touchpoints such as packaging. Grocery retailers, for example, now have to ensure packages are easy to open, smaller and can keep pre-portioned food fresher for longer.

In a global survey, 92% of consumers said they believe the way we treat our planet now will have a large impact on the future, and 48% also said that convenience takes priority.<sup>8</sup> Retailers are now tasked with a conundrum – to balance the desire for convenience with the societal and environmental imperative of sustainability.



## Retail Reality Check

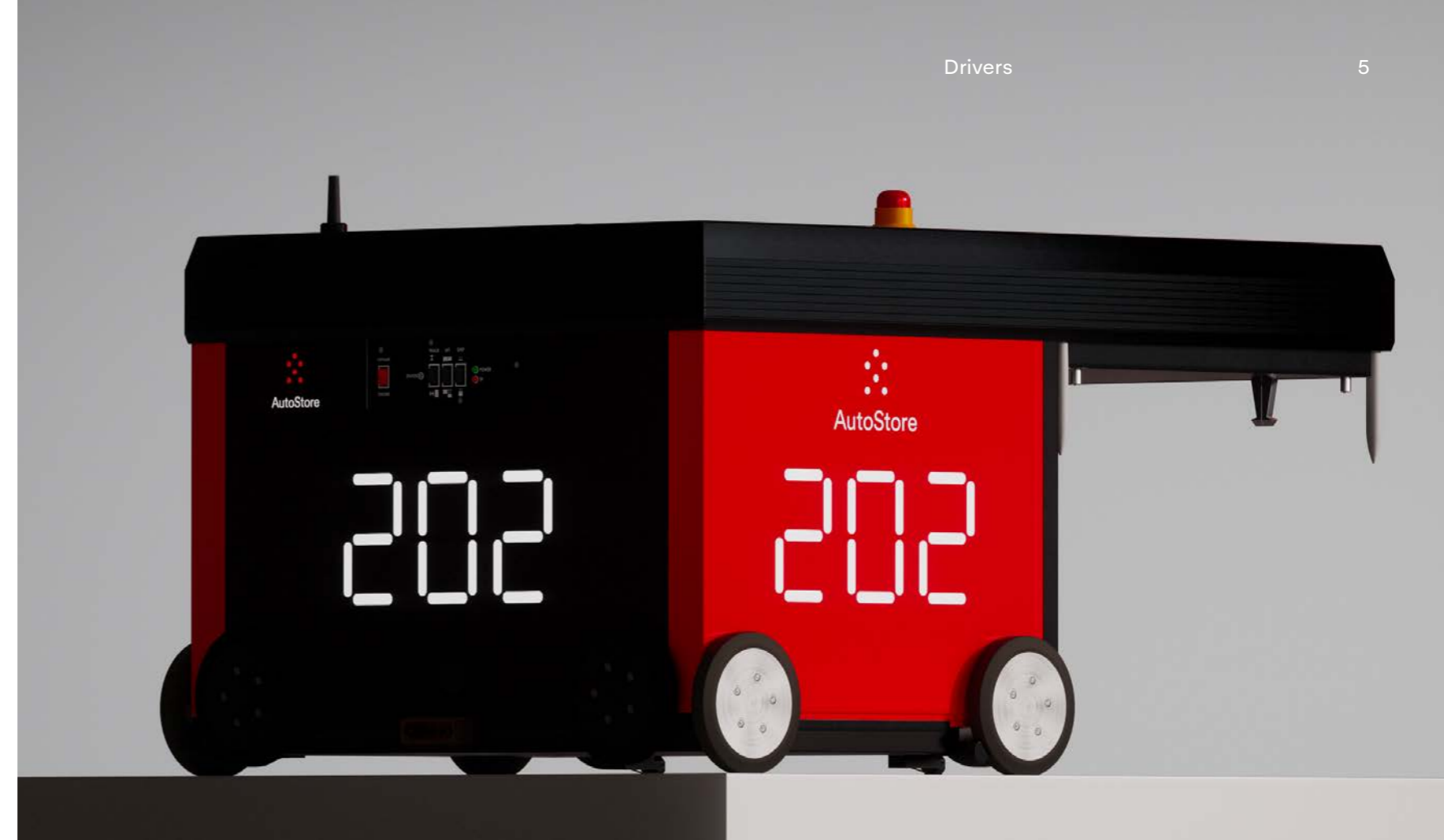
The pandemic exposed cracks in the current retail model, with global just-in-time supply chain failures causing empty shelves and delays in e-commerce fulfillment. In the early days of the pandemic, lead times from input manufacturers increased by over 200% in China, Europe and the US. Some 85% of global supply chains faced a reduction in operations during the pandemic, while 6% shut down altogether.<sup>9</sup>

E-commerce, already growing prior to 2020, skyrocketed during a year when many physical stores were closed. In the UK, more than 17,500 chain store outlets disappeared from high streets, shopping centers and retail parks in 2020 while online retail sales grew 36% year-on-year<sup>10</sup>, the highest annual growth since 2007.

Even in sectors such as beauty, where physical touch points are considered crucial, e-commerce boomed.

Beauty retailer **Sephora** saw its e-commerce sales double in 2020, while competitor Ulta's sales grew by 90% even after stores reopened, indicating the stickiness of digital retail. 'We have seen a profound shift in consumer purchasing behavior as a direct result of the pandemic,' says Howard. 'The sharp increase in e-commerce penetration has been well documented. What is perhaps more interesting is that nearly 30% of consumers expect to shop in-store less than they did pre-pandemic for the foreseeable future.'

But the systems that prop up the global retail market are inherently detrimental to the environment. The global supply chain and the production and export of goods contributes 22% of global greenhouse gas emissions. And the rise of e-commerce is also a cause for concern: without any interventions, it is expected that as a result of urban delivery traffic carbon emissions will jump 32% by 2030.<sup>11</sup>



AutoStore is a robotic technology company that develops reactive solutions to fulfillment and warehouse spaces

Sustainable shopping start-up Olive consolidates multiple online purchases into a single weekly delivery with reusable packaging



## With the rise of e-commerce, it is expected that delivery carbon emissions will jump 32% by 2030.

### Packaging Overload

People are consuming at a faster rate than ever. The US population is 60% larger than it was in 1970, but consumer spending is up 400%. Earth Overshoot Day – the day when we have exceeded the Earth's natural resources faster than it can regenerate them that year – keeps moving forward. In 2021, the date was July 29, while a decade earlier it was August 3. Humanity currently uses 74% more than the planet's ecosystems can regenerate – meaning we need 1.6 Earths to satisfy our growing consumption. The more we purchase, the more packaging there is, as a result of traditional retail and the rise of e-commerce.<sup>12</sup>

In the European Union, individuals generated 174.1kg of packaging waste in 2018, up 12.5kg from 2008.<sup>13</sup> With more people buying online, there has been increased demand for the materials for shipped goods. Corrugated box shipments jumped 9% year-on-year in March 2020, while secondary packaging, such as filled-air products, are predicted to be a \$1.16bn market by 2024.<sup>14</sup> 'With a lot of product, you open it and half of the box is air,' says Luuk Zonneveld, product manager for select solutions, label and graphic materials at Avery Dennison. 'Shipping companies are realizing that with the increase of parcels

shipped due to e-commerce, they need to reduce how much air they are shipping.' One report found that 40% of online deliveries came in packaging too big for the item ordered.

This overabundance of packaging in retail is driving a mission to make packaging more sustainable through material innovation and increased recyclability. In June 2021, **Amazon** announced it is expanding its Frustration Free Packaging incentives, encouraging 100% recyclable, easy-to-open packaging that doesn't require additional protective packaging.

# Trends



Retailers are using technological and material innovation to transform retail logistics, packaging and marketing and build sustainable retail systems with lower environmental impact.





Hyundai is exploring the future of shopping with the opening of a hyper-connected and data-driven store, designed to test and inspire the future shopping behaviors of young consumers

## Omnichannel Oversight

Shopping habits that grew during lockdown such as Buy Online Pick-up In-Store (BOPIS) and curbside delivery may become permanent behaviors as physical stores become important hubs of fulfillment rather than just a customer-facing experience.

Nine in ten consumers who used BOPIS during lockdown rated it as convenient, and 88% of consumers are interested in trying it.<sup>15</sup> At the same time, the predicted growth of e-commerce over the next few years will necessitate more warehouse space, with CBRE predicting the US will need an additional 330m square feet by 2025 to meet the needs of online fulfillment. The NRF and CBRE suggest the temporary pivot to stores as mini fulfillment centers may become permanent.

In order to implement this hybrid, omnichannel experience retailers are looking to digital solutions such as RFID, which give them greater oversight of their stock and improves efficiency and access to information. 'Being able to RFID-tag items and get data about exactly what you have allows a lot more flexibility and knowledge about your supply chain,' explains Kris Barton, director of market development at Avery Dennison Smartrac. 'Better visibility means retailers can leverage their stock as best as possible.'

Fashion brands Ganni, **Scotch & Soda** and **Levi's** have begun to RFID-tag their inventory to achieve full stock visibility, which means that in-store stock can be used for web and store orders. Pointing to the sustainable advantage of RFID-tagged inventory, Karolin Stjerna, supply chain director at Ganni, comments: 'The opportunity to consolidate store and distribution center inventory allows us to use items where we need them. This eliminates overstocking and overproduction, while we make sure our customers are still happy with us.' French lingerie brand Etam is also using RFID and a try-at-home service to build a hybrid retail model, where online customers can choose up to five items to try on at home and pay afterwards.

Having omnichannel oversight will be necessary when consumers demand seamless, connected physical and digital experiences. Digital-first beauty brand **Glossier** shut down its pop-up stores during the pandemic, going back to its e-commerce format, but founder Emily Weiss recently announced plans to open three permanent stores saying, 'At a time when the appetite for online shopping, accelerated by the pandemic, has never been stronger, the promise of immersive, real-life experiences rooted in discovery and connection is paradoxically also more resonant than ever. We imagine a future where digital and offline experiences exist in harmony.'





Design studio Forest & Whale has created a container for takeaway food that can be eaten or composted once its contents have been consumed

## Sustainability Delivered

The continued growth of e-commerce means there is a pressing need for sustainable packaging across sectors. Consumers expect retailers to offer sustainable packaging options – 73% of people want online retailers to use recyclable packaging and 74% expect them to minimize their use of packaging.<sup>16</sup> In response, brands and retailers are reducing the footprint of their packaging by enhancing its recyclability and increasing the use of sustainable materials.

Orders for online food, whether groceries, offerings from restaurants or meal kits, grew considerably during the pandemic. The need for food to be well packaged and secure during transit has led to waste, but British meal kit delivery company **Gousto** has introduced initiatives including reducing the size of its plastic sauce sachets by 25%. In 2020 it launched the Eco Chill Box, a thermally insulated delivery box made entirely from recyclable cardboard.

Direct-to-consumer wine deliveries also grew during the pandemic, with sales rising 27% in 2020 by volume.<sup>17</sup> But shipping fragile glass wine bottles is a costly business. Liviri's hard, reusable thermoplastic box is designed specifically for direct-to-consumer wine shipments. The box has vacuum-insulated panels and reusable ice-pack inserts that can keep the product at a consistent temperature for up to a week, enabling ground shipping, rather than using faster, more carbon-heavy air mail. Once the wine is delivered, the box is sent back to the winery to be reused.

Many brands and retailers that traditionally use plastic packaging are experimenting with compostable materials instead. **Riverford Organic Farmers** has partnered with packaging firm TIPA to replace 1m plastic bags with compostable bioplastic bags for its fresh produce. In Vietnam, the start-up **Wave** is using a bio-based

polymer made from cassava root to offer a compostable alternative to the polypropylene garment bags used in online apparel orders.

But what's the use of a compostable bag if it has a label which interferes with its composting? 'The primary packaging holds true value, but if the label hinders recycling, you waste a lot of packaging,' says Zonneveld. Avery Dennison's portfolio of compostable labels ensures that all elements of the package can be composted. The company has also created a recycled direct thermal paper, a sustainable label which contains post-consumer recycled waste, ensuring the label on an e-commerce shipment is as sustainable as the packaging.

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The primary packaging holds true value, but if the label hinders recycling, you waste a lot of packaging.  
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Luuk Zonneveld, Product Manager, Select Solutions at Avery Dennison

Champagne brand Ruinart and James Cropper have developed a 100% recyclable 'second skin', providing a circular alternative to traditional gift packaging





## Values-first Commerce

A 2020 global study by IBM found that 40% of customers now seek out products and services aligned with their values. The B Corporation organization verifies businesses that meet high social and environmental standards, thereby helping the public to identify ethical firms. The number of companies registered with B Corporation has grown from 82 in 2007 to over 3,000 in 2021, with large enterprises including French multinational company **Danone** and the Brazilian global cosmetics group **Natura & Co** now certified.

Some retailers are announcing their values and using them as gatekeeping criteria for the products they sell. In the US, **The Goods Mart** is a convenience store designed around the principle of 'do good.' Everything must be organic or locally sourced, free of artificial colors, flavorings and sweeteners and any animal products must be humanely raised. Its 'better packaging' criteria means any plastic has to be BPA free. 'Our product mission makes it easier for our customers to pick anything, knowing that we have already done all of the hard work for them,' explains founder Rachel Krupa.

The New Deli by **PlantX** similarly sets a strict criteria for what it sells – everything has to be plant based, including the packaged food, wines and beauty products. For brands looking to showcase their vegan values, Avery Dennison has created a first-to-market portfolio of vegan labels, which contain no animal-derived components or those which have been tested on animals. It includes five paper stocks, three adhesives and two liners. 'Veganism is a lifestyle, not just a dietary choice,' says Zonneveld. 'Vegan consumers care about animal exploitation for food, clothing and everything else you can think of – this now extends into the world of packaging. We're excited to help brand owners take their dedication to being cruelty free to the next level.'

Digital retailers are also putting values at the forefront of their user experience. **Hive** is an online grocery store that stocks items based on five criteria, including low-carbon footprint and commitment to social good. German e-tailer **Itsapark**, owned by H&M Group, only showcases products that meet six standards, including supporting communities, being designed for circularity, accelerating positive change, and using responsible materials and processes. These companies exemplify a more holistic approach to sustainability, where retailers are focused on environmental as well as social impact.







Klarna is enabling consumers to see the carbon footprint of their purchases at checkout

## Informed Impact

In order to be more conscientious shoppers, consumers are looking to retailers to help them make informed decisions about their purchases. In response, retailers are using technology and labeling to communicate the impact of a product and make it simpler to understand.

Carbon labeling – stating the amount of carbon emitted in the production of a good – is becoming a popular way for brands to communicate a product's impact. Retail service providers such as fintech company **Klarna** and e-commerce platform **Shopify** are letting shoppers view the carbon footprint of their purchases at checkout. **Unilever** has announced that it hopes to introduce carbon-footprint details for its 70,000 products.

Crucial to accurate carbon labeling is having a full understanding of the supply chain. Avery Dennison's **atma.io** enables retailers to give every product a digital ID which is connected to the cloud. This means it can be traced along the supply chain and enables retailers to determine the carbon cost of each product, from manufacturer to store shelf. For example, one major sports retailer is piloting **atma.io** to trace the carbon footprint of its raw materials. 'The product becomes a direct communication channel for the brand to inform consumers about its carbon footprint or the journey it has traveled,' explains Max Winograd, VP connected products at Avery Dennison Smartrac. 'A brand can share this information with consumers while they are shopping and help them pivot towards more sustainable decision-making.'

**Crucial to accurate carbon labeling is having a full understanding of the supply chain.**

Businesses are also using simplified labels and tools to make sustainability credentials more understandable. The **World Resources Institute** launched the Cool Food Meal badge to identify low-carbon dishes on restaurant menus. Rather than giving a numerical carbon footprint, the badge – a green smiling face emoji – lets customers know that the dish meets the carbon emissions requirements needed to help cut food-related emissions by 2030. **Whole Foods Market's** Sourced for Good labels show that products have undergone third-party certification covering support for workers, communities and the environment.

**Finch** is a new Chrome browser extension currently in beta that ranks consumer packaged goods available from Amazon on their environmental impact. It hopes that by offering a comparative tool, consumers will be guided to purchase better-rated products in the same category. 'If we have greater visibility on products, maybe we would choose differently,' says Chaffo.



## Eco Educators

While many consumers have intentions to be more sustainable, they are often left confused about what they can do, especially when it comes to recycling. A study of 5,500 consumers in Mexico, Spain, the US and the UK found that 91% believe recycling plastic is beneficial, but 60% do not know how to recycle some types of plastic.

For plastic packaging, education about recycling is paramount. 'What we do with the afterlife of plastic is key,' says Rob Groen in 't Wout, marketing director paper and films at Avery Dennison. 'We should make it convenient for consumers and deliver solutions that enable a circular economy.'

New systems such as the How2Recycle label offer clear and accurate information about how to recycle. Used by businesses in the US and Canada, the label tells people whether an item is recyclable and whether they should rinse it or leave the cap on, for example. In the UK, non-profit organization

On-Pack Recycling Label changed its labeling in 2020 to a simple 'recycle' or 'don't recycle' instead of the 'widely recycled' or 'check locally' options which were considered confusing.

Retailers are also making it easier for consumers to be sustainable, offering education and assistance on what to do with packaging and products at the end of their life. Online grocery store **Thrive Market** informs consumers about how to reuse or recycle every piece of packaging as well as implementing a pilot program for those who do not have access to curbside recycling. Participants gather their recyclables in a box with a prepaid label and ship it to **WasteZero**, who will sort and either recycle or upcycle the materials. 'It's about driving a culture of reductionism,' explains Jeremiah McElwee, chief merchandising officer at Thrive Market.

A desire to reduce environmental impact is powering the growth of the recommerce

market. Retailers such as **John Lewis**, **Ikea** and **Selfridges**, and brands including **Levi's** and **Adidas**, are all launching buyback options for old products. In 2021, 17% of retailers in the UK plan to start selling secondhand goods while 32% are considering offering product recycling.<sup>18</sup>

As recommerce and in-store recycling gains in popularity, digital labels could offer a way for consumers to quickly learn how to dispose of their goods once they have finished with them. Levi's partnered with Hong Kong upcycling brand **The R Collective** to create a fully traceable denim collection. Each item has an Avery Dennison-enabled digital label with a QR code that informs consumers how to care for their garment and how to recycle at its end of life.

Fashion rental platform Rotaro has teamed up with Airbnb to encourage guests when travelling, to dress more sustainably and reducing wasteful consumptions



Spruce refillable cleaning products use minimal and clean brand labelling to communicate their low environmental impact

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**What we do with the afterlife of plastic is key. We should make it convenient for consumers and deliver solutions that enable a circular economy.**

” Rob Groen in 't Wout, Marketing Director, Paper and Films at Avery Dennison



## Returns Revolution

In the US, consumers returned an estimated \$428bn of merchandise in 2020, leaving behind mountains of packaging and potentially out-of-date products, and causing carbon emissions. Returns cost retailers \$106m for every \$1bn of sales, generate an estimated 5bn pounds of waste each year<sup>19</sup> and contribute 16m metric tons of carbon dioxide to the atmosphere. Yet most consumers do not realize this, and in the UK, the Republic of Ireland and France the majority (71%) say they would change their shopping habits if they knew that returned items go to landfill or are destroyed.<sup>20</sup>

A returns revolution is brewing, making the process more sustainable while maintaining the convenience consumers crave.

**Olive**, founded by e-commerce veteran Nate Faust, aims to reduce the pain points – and the carbon emissions – of delivery and returns through a bundled approach. The start-up consolidates shoppers' purchases with participating retailers, packs them in reusable packaging and sends them in a single weekly delivery. By increasing the number of items in each delivery, the service reduces the per-item carbon footprint and results in fewer 'last-mile stops.' Faust's mission is sustainability, but he believes Olive's convenience is its ultimate selling point. 'Our value proposition to the consumers and retailers is not to help the environment but because they absolutely prefer it over any alternative,' he says.

Elsewhere, retailers are creating third spaces for returns, between home and store. Russian retailer **Wildberries** has added fitting rooms to its own-brand pick-up points where customers can try on items straight after collection and return items if needed. In Helsinki, the postal service **Posti** has launched Box, a self-service point for customers to collect items, try them on, recycle their packaging and manage returns. In the US, reverse logistics firm **Optoro** has partnered with **Staples** to allow customers to return products from different brands in one packageless, labelless and contactless transaction.

Ultimately, to make returns more efficient, retailers will need to have more visibility over items, using technologies such as RFID. Digitally connected products will enable retailers to make the best decisions about stock, ensuring that items can be resold rather than discarded. 'The retailers that can have better visibility into their inventory can make more educated decisions on how to manage it,' says Barton. 'If every product has a unique digital identity, you can manage it more intelligently and optimize your operations.'



Box by Posti positions logistics as a consumer-facing service in urban districts



# Futures

In the future, a more sustainable retail model will be defined by a circular approach to packaging, greater transparency around environmental impact and the rise of radical collaboration.





## Pro-planet Packaging

Currently the infrastructure for compostable packaging is sparse. Packaging either has to be sent to an industrial composting center or put in a backyard compost bin, and even then compostable bioplastic doesn't break down very easily or quickly; if it does, it can leave plastic microparticles behind. Seeking alternatives, scientists are developing more circular packaging through material innovations or enhancing the recyclability of products.

In Finland, start-up **Sulapac** has created a bio-based material made from wood and plant-based binders that biodegrades without leaving microplastics behind. The materials have been developed to be processable within current plastic product machinery, making it a scalable option. Meanwhile, **Intropic Materials** in San Francisco is working on a solution that breaks down bioplastics more quickly. It embeds enzymes into plastic that helps it degrade in the right conditions of heat and water. Since the enzymes are in the plastic, they break it down more completely, leaving no microplastics and degrading within days or weeks. Intropic is also looking to develop alternatives to difficult-to-recycle plastics such as films and bags.

Avery Dennison is working on a label that can be thrown into any home composting bin. These types of labels are being developed at a time when countries are considering banning fruit and vegetables labels that are not home compostable – legislation to that effect in France will come into force in January 2022 and in the US, similar proposed legislation has been submitted to Congress.

While true compostability remains elusive, enhancing recyclability will offer better circularity. 'Compostable materials are a very good solution, but recycled content and recycling of products is a smarter way of being sustainable,' says Zonneveld.

Packaging that enhances recyclability can close the plastic production loop and keep the material in use for longer. Avery Dennison is helping to keep plastic out of waste streams with its portfolio of recycled plastics, the rRange. Its rPP label requires 99% less fossil fuel material to manufacture, while its rPE Top White film is made from 100% recycled post-consumer and post-industrial waste.

UK firm **Aquapack** has developed Hydropol, a hydrophilic polymer that is water soluble, so if it should end up in a marine environment it will dissolve leaving no toxins or plastic behind. It is investigating Hydropol's use as a barrier for paper packaging, with a recent study finding that not only does it offer grease resistance and increase the strength of the paper, most importantly it does not impede the paper's recyclability since Hydropol will break down completely in the recycling process. This is especially important for paper food packaging, which is often lined with a non-recyclable film, and ends up in landfill.

Elsewhere, **Aptar** has developed the first monomaterial pump for personal care and home products. While pumps are normally made of mixed materials and are therefore hard to recycle, this pump is made exclusively from polyethylene, meaning it can be easily sorted and recycled. 'Generally, recycling is a good thing to do because you recapture the value of the material,' says Ashley J Holding, founder of circularity consultancy Circuvate and former innovation manager at Fashion for Good.



The Beyond Bag Challenge, organized by Closed Loop Partners and IDEO, asked innovators across the globe to explore how the future of packaging and retail bags might look in a sustainable future





Air Company's premium vodka is made by turning captured carbon into alcohol

## Proof of Impact

As environmental impact becomes a metric by which retailers are judged, they will need to offer transparency and traceability, and to back up sustainability claims with evidence. Retailers will calculate and share their impact with consumers, and technology will allow consumers access to end-to-end transparency across the supply chain.

'Impact is the bedrock of brand purpose, and without proof that you are having a positive impact – demonstrated and disclosed in a credible way – your brand purpose will become meaningless,' says Jessi Baker, founder of **Provenance**, a digital platform that enables brands to track the journey of their products. Provenance's Transparency Framework helps companies evidence their marketing claims and avoid greenwashing, turning supply chain data into consumer-facing information. Working with Provenance, New Zealand dairy brand **Anchor** added QR codes to its milk bottles to verify its sustainability claims, from its bio-based bottle to its grass-fed cows.

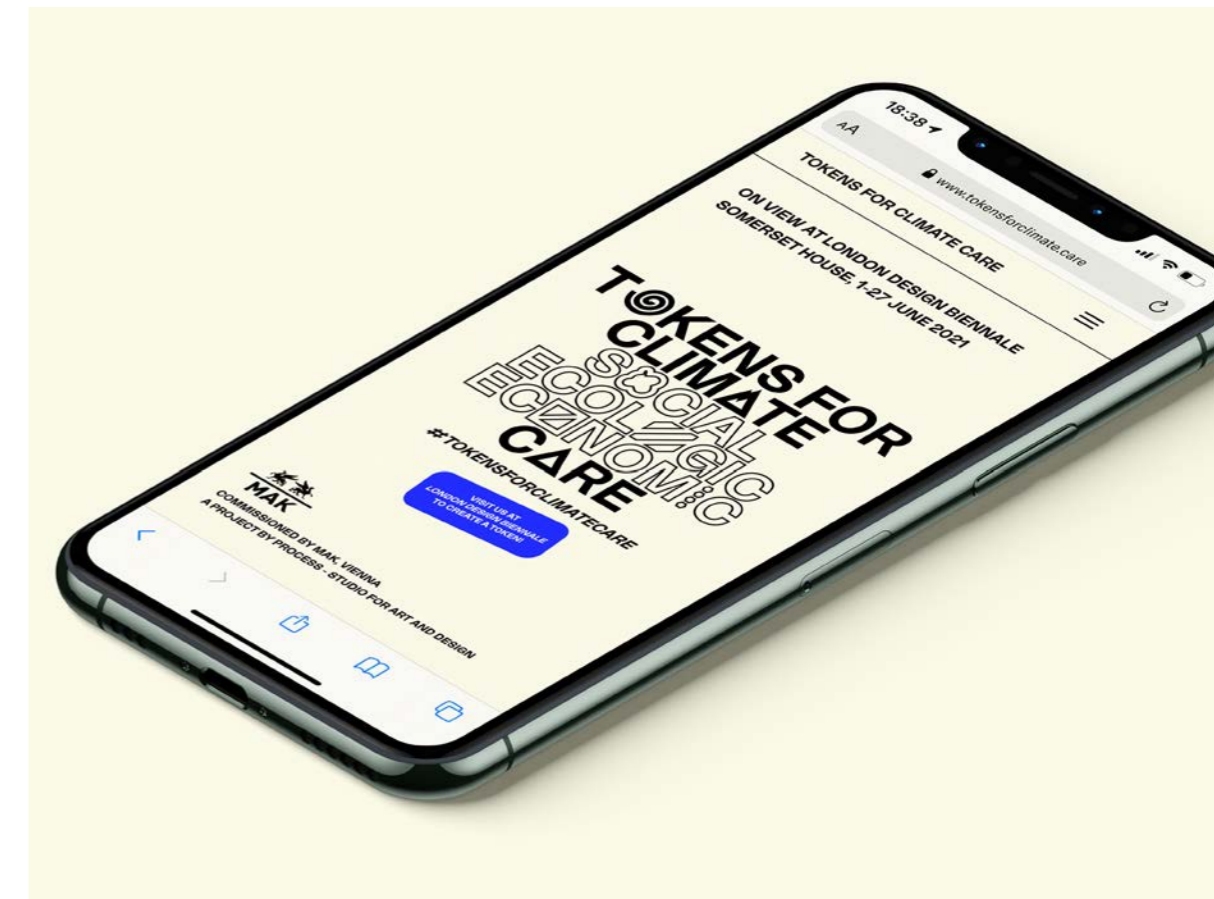
Each claim Anchor makes is backed by third-party verification.

**The Higgs Index** transparency program for apparel brands, meanwhile, aims to be the first holistic system for communicating sustainability performance across a product's lifecycle. In its initial phase it will focus on environmental impact, and aims by 2022 to include social data as well, showcasing the expanding definition of sustainability.

Connecting products to a cloud such as **atma.io** enables brands and retailers to offer proof of every touchpoint along the supply chain, creating a totally traceable product journey that can be used to support a sustainability story. As more products become connected, retailers can be dynamic in their messaging depending on the issues of the day. 'Let's say there is a news story about forced labor,' says Winograd. 'Since you have an underlying digital identity,

you can point to your conflict-free practices. You can enable new content and experience based on shifting demands, trends and macro issues.'

Having proof of impact will become the new standard for retailers looking to deepen their sustainability story. Ultimately, by doing the work to be traceable and transparent, retailers will earn the benefit of long-lasting consumer trust. 'Those that gain trust through deeper levels of transparency will be better off than focusing on one-off activations,' says Chaffo. 'An aspect of companies being verified as sustainable means that I, as a consumer, don't have to do the work. I can trust the company I'm buying from has already done it, and that's more convenient.'



Tokens for Climate Care generates logos which can be used for free by eco-centric initiatives



## Radical Collaboration

One of the goals of COP26 is ‘work together to deliver’ in order to accelerate action to tackle the climate crisis through collaborations between governments, businesses and civil society.

‘This decade is decisive... by committing to work together, we are laying foundations for faster progress in the decade to come,’ reads the mission statement. This understanding that sustainability requires a joint effort is seeping into enterprises as more businesses realize that when it comes to creating sustainable solutions, competitors can become collaborators.

**The Ren Alliance** for instance, was founded by clean beauty brand Ren to combat packaging waste. In an open letter advert in the New York Times, Ren urged consumers to consider buying from four competitors, rather than from any other firms, because each has committed to fully recyclable or reusable packaging by 2025.

Similarly, in a search for an alternative to polypropylene garment bags, fashion label **prAna** has linked with fashion brands **Mara Hoffman** and **Outerknown**, and manufacturer **Seaman Paper** to create Vela, a paper alternative. Separately, prAna has launched the Responsible Packaging Movement to share its learnings about sustainable packaging with other brands.

Also in the world of packaging, Avery Dennison has partnered with several companies to found CELAB (Circular Economy for Labels), a consortium that seeks to promote a circular economy for self-adhesive label material by-products. The coalition aims to enable collaboration at a global level across the value chain, including suppliers, producers and waste management firms, to find recyclable solutions.

Perhaps the ultimate example of radical collaboration is the joint effort between **Allbirds** and **Adidas** to create the world’s most sustainable sneaker. The Futurecraft sneaker is a combination of the two brands’ green technologies, including Adidas’ recycled ocean plastic and Allbirds’ sugarcane foam, resulting in a shoe with a carbon footprint of less than 3kg of carbon dioxide, 10kg less than the average sneaker. ‘When you think about competition, you just have to change your perspective,’ says James Carnes, VP of brand strategy at Adidas. ‘We’re not really competing with each other anymore – we’re competing with this external force. We hope more companies will think about that and realize that if you work together and one of you wins, then you all win.’



Sportswear companies Adidas and Allbirds have unveiled a low-emission running shoe that unites their expertise in the use of sustainable materials



# Key Takeouts

There will never be a clean swap between an unsustainable option and a completely sustainable option. Every decision will have its own environmental impact and consequences. What is crucial is that retailers take a holistic approach to sustainability, and communicate that to their customers. The more knowledge consumers have, the easier it will be to weigh decisions about their own impact.

Retailers looking to encourage sustainable behaviors and develop their own regenerative strategies should remember:

- **Data is a powerful enabler of sustainability.** The more data you can gather about your emissions, environmental and social impact, the easier it will be to understand where improvements are needed.
- **The stores of the future will have a hybrid model that caters to both convenience and sustainability.** By encouraging shoppers to the store with omnichannel offerings such as BOPIS, retailers can consolidate the carbon-heavy last mile.
- **Technologies such as RFID, digital labels and the connected product cloud enable supply chain visibility and better inventory management.** Tackling these will bring you a long way to reducing waste.
- **More consumers are seeking out retailers who not only align with their values, but have the proof to back up their claims.** With anti-greenwashing legislation looming in places like the UK, now is the time to invest in understanding and proving your impact.
- **Retailers and brands must design for convenience, but with sustainability in mind.** This means taking a smarter approach to packaging that includes reducing the weight and size, and using as many recycled and recyclable materials as possible.
- **No single retailer or brand can bring about the necessary systemic change on their own.** Consider how to open source your sustainability efforts and collaborate with competitors to build a better world together.



# Food & Drink

- Food is perhaps the easiest sector to connect with environmental impact due to its overt link with nature. Make your values as a retailer clear, by promoting your criteria for sustainable food products and make it easy for consumers to access this information and make informed purchase decisions.
- Consumers are short on time and want simple mechanisms to understand their environmental impact. Encourage low-carbon purchases through easy-to-read labeling and use digital labels to provide information about a product's sustainable journey.
- Many people may not realize that the plastic used in food packaging reduces waste. Educate your customer about why you use different types of packaging and how to dispose of it sustainably.



Ratio is a conceptual dining experience created by The Future Laboratory emphasising the various factors affecting the sustainability of different food and drink options and its impact





Beauty brand Hanni's re-usable razor is plastic-free, with recyclable blades made from Swedish stainless steel

## Apparel

- Apparel is one of the most frequently returned product categories in e-commerce. Rather than making returns fast and free, retailers can offer a different value exchange where returns are still convenient but more environmentally friendly through bundled returns, reusable packaging or one-stop pick-up, try-on and return outlets.
- Fashion brands are well positioned to collaborate on the problems that they are collectively facing. Creating open-source toolkits ensures the sector moves forward together.
- Digital labels can not only explore a product's past but also guide consumers on a product's future. Encourage buy-back or recommerce programs, using digital IDs as authentication of a garment's provenance.

## Beauty

- Beauty retailers saw their e-commerce sales soar in 2020. The stickiness of beauty e-commerce means the most successful retailers will be those that can use their stores as mini fulfillment centers and immersive customer experiences.
- Inventory accuracy is vital for beauty brands, especially since much of their product expires and overproduction is the norm to ensure availability. Using RFIDs and connecting tagged items to a cloud will enable beauty retailers to make stock available where needed – online and offline – helping to reduce waste.
- Consumers' interest in clean beauty is moving from ingredients to packaging. Options that are refillable, fully recyclable or biodegrade without leaving microplastics behind will appeal to them.





## Materials

- Consumers want retailers to help them be more sustainable, and this could mean filling the gaps in the current waste collection infrastructure. Consider how to facilitate the collection of hard-to-recycle materials and make recycling more convenient.
- While compostable packaging has a promising future, it is still very nascent. When using compostable packaging, it's important to consider whether all elements of the packaging are compostable so as not to contaminate it.
- Creating products out of 100% recyclable materials is one of the best ways to reduce the production of virgin plastic and to remove plastics from the waste stream. A material's circular journey also offers marketing and educational opportunities about the life cycle of your packaging.



## Avery Dennison

Avery Dennison Corporation (NYSE: AVY) is a global materials science company specializing in the design and manufacture of a wide variety of labeling and functional materials. The company's products, which are used in nearly every major industry, include pressure-sensitive materials for labels and graphic applications; tapes and other bonding solutions for industrial, medical, and retail applications; tags, labels and embellishments for apparel; and radio frequency identification (RFID) solutions serving retail apparel and other markets. Headquartered in Glendale, California, the company employs more than 32,000 employees in more than 50 countries. Reported sales in 2020 were \$7.0 billion. Learn more at [averydennison.com](https://averydennison.com).

## The Future Laboratory

The Future Laboratory is one of the world's leading strategic foresight consultancies. It exists to help companies make a better future by giving them the confidence to take the decisions today that will create economic, environmental, technological and social growth tomorrow. From its offices in London and Melbourne, The Future Laboratory offers a range of strategic foresight products and services to help its clients harness market trends, adapt to emerging consumer needs, and keep them ahead of their competitors. Stay on top of the latest consumer trends and market shifts by visiting its trends intelligence platform, [lsnglobal.com](https://lsnglobal.com), and find out more about its client work at [thefuturelaboratory.com](https://thefuturelaboratory.com).

## Featured Experts

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### Rob Groen in 't Wout

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