AutoStore

Sustainability in Business

And Why It Can't Be Ignored

Green consumerism is on the rise, but what does that mean exactly and why should companies care?

AutoStore Insight Series |
White Paper

Underpinning the
New Fabric of Society

With increased understanding in recent years of the damage to the environment brought on by climate change, pollution, and waste, the importance of sustainability as a key brand tenet has expanded beyond specific niche products into something every brand and organization should consider. The onset of the pandemic supercharged this evolution and permanently changed the way we shop and engage with businesses.

How Did We Get Here
The Shift in Shopping Habits Driven by Millenials and Gen Z.

The demand for corporate responsibility around sustainability has reached a tipping point. Everyone, regardless of their companies' sizes or sectors, is striving to implement as many green initiatives as possible.

The driving force behind this shift is from the two youngest and largest generations: Millennials (often called Gen Y) and Gen Z; basically, a generation of parents and their children, each influencing the other. These two generations are increasingly aware of their place in the world and are very untrusting of marketing hype.

But this is more than just two generations demanding a wider range of environmentally friendly products from brands. This represents an entire rethink of the purpose of brands and how consumers shop.

Due to the digital revolution in how we shop, today's consumers are becoming more informed about their buying impact, and this is reflected in their increasing prioritization of sustainability.

Consumers have come to expect a greater integration of their online and in-store shopping experiences, whether using physical retail locations for online order pickups or researching online before shopping in-store. Due to the increased integration and number of channels presented to consumers and the level of information they can reach, today's consumer is buying with greater insight and diligence and is realizing the power they wield to impact the world through their spending, especially when it comes to social issues and demanding sustainability.

As modern technology makes the world smaller, consumers are frequently adopting social causes. A recent study by IBM and the National Retail Federation polled about 19,000 shoppers in 28 countries ranging in age from 18-73 (Generation Z to Baby Boomers).

The clear result of the survey show shoppers are no longer brand loyal. The study showed most consumers fall into one of two segments: value-driven consumers (41%) who are primarily concerned with getting their money's worth and select brands based on price and convenience, and purpose-driven consumers (40%) who select brands based on how well they align with their personal values and who are willing to "walk the talk" when it comes to sustainability. These consumers will even pay a premium for "brands to get it right."

This same study showed that 6 in 10 stated they were willing to change shopping habits if it reduced their environmental impact while 8 in 10 stated sustainability is important to them. Meanwhile, 9 in 10 Generation Z customers believe corporations have a responsibility to address climate change and social issues.

Likewise, a survey conducted by Boston Consulting Group (BCG) showed the pandemic has not lessened this drive, rather it's heightened shoppers' awareness of sustainability and environmental impact. Their survey showed 90% of shoppers stated they were "equally or more concerned" about environmental issues after COVID and nearly 95% believed "their personal actions could help reduce unsustainable waste, tackle climate change, and protect wildlife and biodiversity."

81%

of respondents worldwide belong to one of two shopper segments: Value-driven consumers (41%) or purpose-driven consumers (40%).

57%

of consumers are willing to change their purchasing habits to help reduce negative environmental impact.

Credit: NRF/IBM Consumers Driving Change

People's intention to adopt more sustainable behaviors has accelerated during the pandemic

1/3
are currently practicing green behaviors consistently

25%+
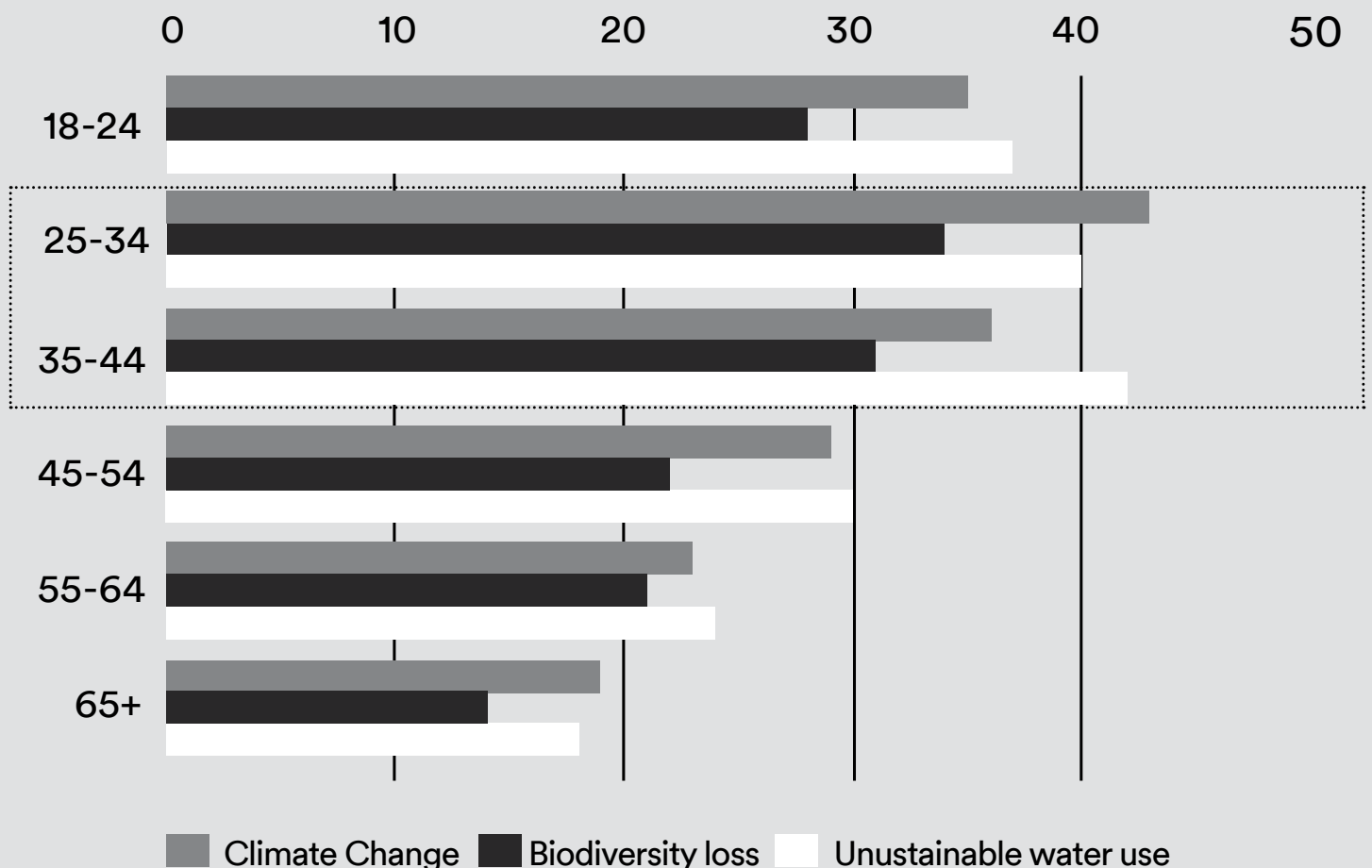say they have been doing this more since the crisis started

Nearly
40%
intend to integrate more sustainable behaviors in the future

Respondents aged 25 to 44 tend to have more concerns about environmental issues post COVID-19 than members of other generations.

Legend:
- Climate Change
- Biodiversity loss
- Unustainable water use

Share of respondents, by age category, who say their concern about the following issues has inceased since the outbreak (%)

Doing Business is Riddled With Challenges

For businesses, brands, and retailers, this new world is exceptionally challenging though full of opportunity

– The digital revolution has increased the customer expectation for speed and convenience, while providing unparalleled insight into where their products are coming from.

– Consumers demand brands and organizations be transparent with their sustainability initiatives and they are quick to switch when a brand falls short.

– Staying profitable while juggling the challenges of increasing service levels and sustainability is an enormous challenge.

However, brands doing this successfully will not only capture market share through increased consumer engagement but also see their profits increase due to the efficiencies they build into their business.

There Are Solutions

So where do we start? Of course, having an overall sustainability plan is key — one which can provide an integrated vision for how the business will put sustainability at the center of everything and which provides a strategy to reflect these plans to consumers. This plan needs to be unique to each business and needs to be carefully considered and developed.

Within this wider plan, there are fundamental things a business can change that will have immediate effects on its environmental footprint.

1. From reducing packaging waste to using recycled materials to create products, there are practical changes which can be worked on today.

    [The order] makes its way to an automatic lidding process. This [machine] reduces the height of the box so it fits exactly the contents inside, reducing the amount of space waste."
    PUMA North America

2. Despite the efforts of a large proportion of businesses to improve their carbon footprint and environmental impact, the logistics and wider supply chain side of business is often not given the same level of focus as the pieces the customer can see and touch.

3. Buildings account for 40% of total direct and indirect CO2 emissions, so when you consider the warehouse space often used as part of logistics operations, it is clear that this should be considered as a key part of the sustainability shift.

4. Investing in a warehouse automation system is an underutilized player in a green initiative. Solutions are available offering high-density storage and low energy consumption modules.

The Automation Revolution

Automation, robotics, and micro-fulfillment centers (MFCs) represent some of the best ways to increase a business' sustainability while increasing profitability, helping businesses reach their goals and outperform their peers. Here are some examples of the ways they can drastically improve a business' efficiency, speed, and environmental reputation.

Less Space, Less Waste

Some automation systems provide ultra-high-density storage, which increases the volume of inventory stored fourfold compared to conventional storage systems. Warehouses can either be used to store increased product or smaller warehouses can be built. Either way, this increases the efficiency of the use of space, so less construction is needed to meet our increased warehousing needs and less energy is needed to run these spaces. The automated robots picking and packing within the space are also far quicker, which boosts fulfillment times and reduces the time stock is left sitting, taking up space before being replenished.

Lower Energy

For larger warehouses, many robotic solutions save energy in the warehouse by cutting down on the need for heat and lighting. Forward-thinking companies create robots running on regenerative energy, meaning they constantly return energy to their batteries. This reduces the amount of energy needed to run each robot. In some cases, solar energy powers robots and systems. Another factor is robots can work in complete darkness and don't need heating or cooling to work, so the running costs of

the warehouse fall drastically. The less energy used, the better for business and the environment.

Less Travel

One of the biggest opportunities for retail is to use existing retail space for storage and fulfillment, to create MFCs. Whether for click-and-collect, in-store fulfillment, or local warehousing, automation works equally well in retail locations as it does in warehouses.

The opportunity to streamline the delivery and fulfillment process, bringing the product closer to the consumer and reducing the number of times it is shipped and travels, reduces environmental impact and helps retailers and brands meet consumer expectations for speed and convenience.
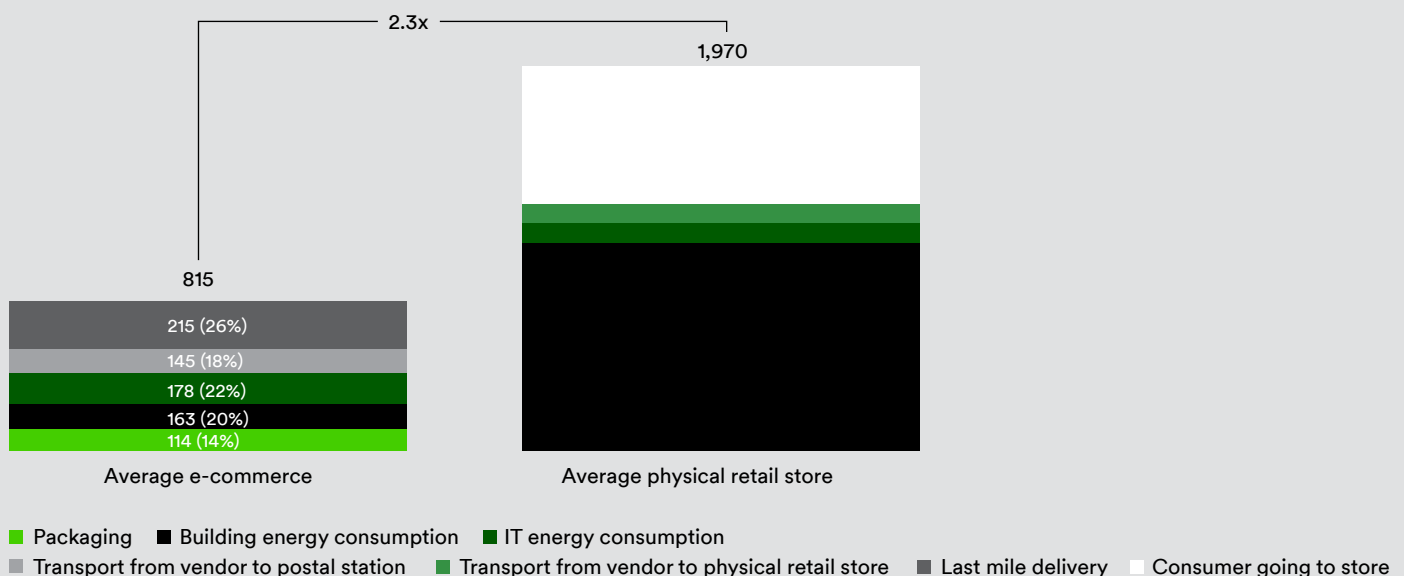
A report from Oliver Wyman looked at the economic and environmental impact of e-commerce on Europe. Looking at eight European countries, the report showed that in 2019, e-commerce reached 11% of total sales. While the worldwide pandemic has skewed the true growth, indicators show e-commerce grew by 31% from 2019 to 2020.

The big questions are how this e-commerce growth is impacting retail and the environment.

With regards to the environmental impact, the results showed that "offline shopping results in between 1.5 and 2.9 times more greenhouse gas emissions than online shopping." Even when taking delivery vans into consideration, e-commerce reduces "car traffic by between four and nine times the amount they generate."

CO2e impact of a product purchased through different sale channels in Europe (Average case)

Credit: Oliver Wyman

Grams of CO2 equivalent emissions for an average non-food product

2.3x

1,970

815

215 (26%)
145 (18%)
178 (22%)
163 (20%)
114 (14%)

Average e-commerce   Average physical retail store

■ Packaging   ■ Building energy consumption   ■ IT energy consumption
■ Transport from vendor to postal station   ■ Transport from vendor to physical retail store   ■ Last mile delivery   □ Consumer going to store

In another study by Accenture, it was found that MFC technology reduced "last-mile emissions by up to 26%." The study developed a vigorous econometric model of using MFCs for e-commerce order fulfillment in the three large cities of London, Sydney, and Chicago. "The model estimates the impact on outputs such as emissions and traffic congestion, based on inputs including local fulfillment center prevalence, population density, average distance traveled per parcel, delivery vehicle mix, and consumer demand projections."

What the study showed was surprising. Through the adoption of local MFCs, it is believed it could lower "last-mile emissions between 17% and 26% through 2025." Consistent across all three cities, the study found that using MFCs for just half of those e-commerce orders would lead to significant impacts between 2020 and 2025.

Whether it be click-and-collect, home delivery arranged online, or in-store purchases, the solution may be one site tasked with managing each different type of demand.
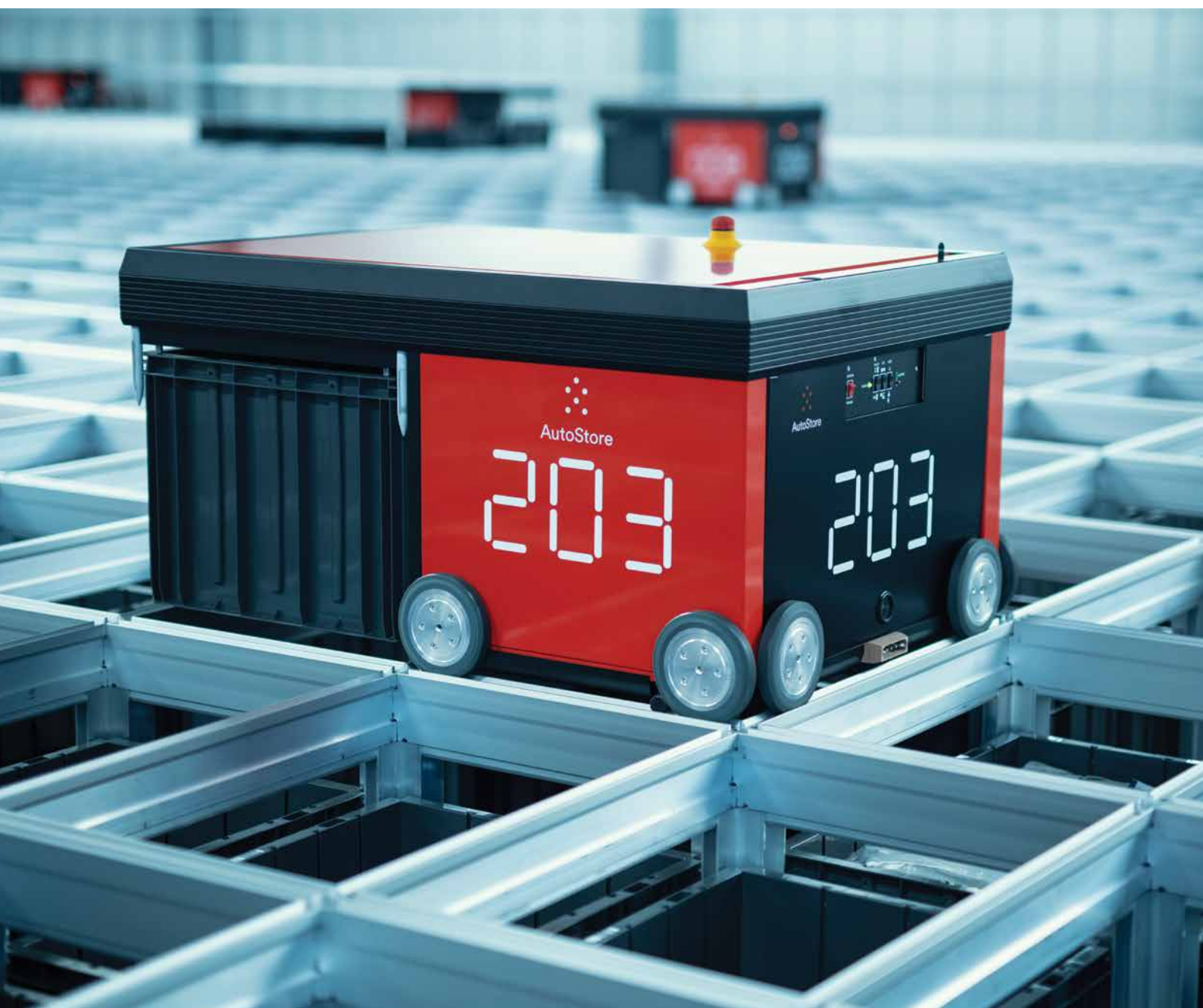
20%

Delivery van emissions saved in Chicago

16%

Delivery van emissions saved in Sydney

17%

Delivery van emissions saved in London

Lessons Learned

Again, from the BCG report, they found companies responding to these consumer demands fall into three general categories:

– At the least, companies are implementing employee-focused programs for welfare and hygiene and support for suppliers.

– Meanwhile, others are incorporating the changing customer demands brought on by COVID-19. These include localizing the supply chain, increasing transparency on product sourcing and manufacturing, and "prioritizing products suitable for home consumption".

– Then there are the companies doing things differently such as searching for "new opportunities by integrating sustainability across core business operations." They are making these changes part of their culture, from minimizing packaging and reducing supply chain waste to optimizing routes.

The shift toward sustainability in business is not easy but it is essential, and yields results. Consumers gravitate toward brands reflecting their values and sustainability is key to their purchasing decisions. In fact, it's a good bet that competitors are aggressively focused on their sustainability agendas.

Beyond engaging with consumers, having a clear sustainability strategy is a valuable way of giving an organization's teams a goal to unite. Automation, robotics, and MFCs provide key ways to bring together strategy and processes to improve consumer engagement and profitability to create customer-winning logistics.
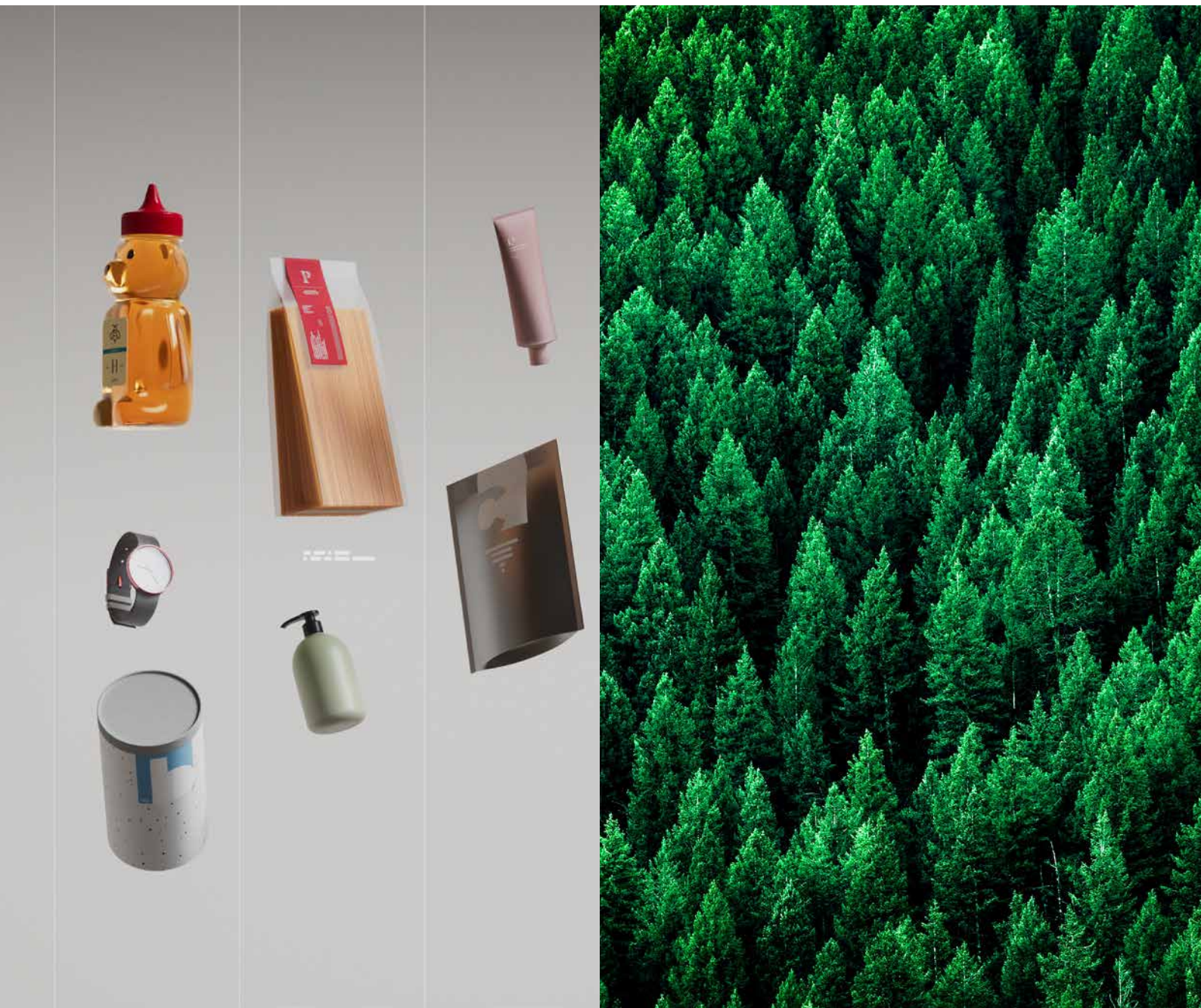
About AutoStore

With over 950 installations in over 30 countries, AutoStore is trusted by some of the biggest brands. For over 20 years AutoStore has continued to innovate and improve its system for its customers. It delivers the density, flexibility, and dependability you need to excel in this race called e-commerce grocery.

AutoStore, founded in 1996, is a robot technology company that invented and continues to pioneer Cube Storage Automation, the densest storage solution in existence. Its focus is to marry software and hardware with human abilities to create the future of warehousing.

The company is global with installations in a wide range of industries. All sales are distributed, designed, installed, and serviced by a network of qualified system integrators called partners.

The corporate headquarters is in Nedre Vats, Norway, with offices in Austria, France, Germany, Italy, Japan, Korea, Poland, Spain, the UK, and the US.

Resources

1. *https://www.statista.com/statistics/534123/e-commerce-share-of-retail-sales-worldwide/*
2. *https://www.digitalcommerce360.com/article/us-ecommerce-sales/#:~:text=Online's%20share%20of%20total%20retail,2019%20and%2014.3%25%20 in%202018.*
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