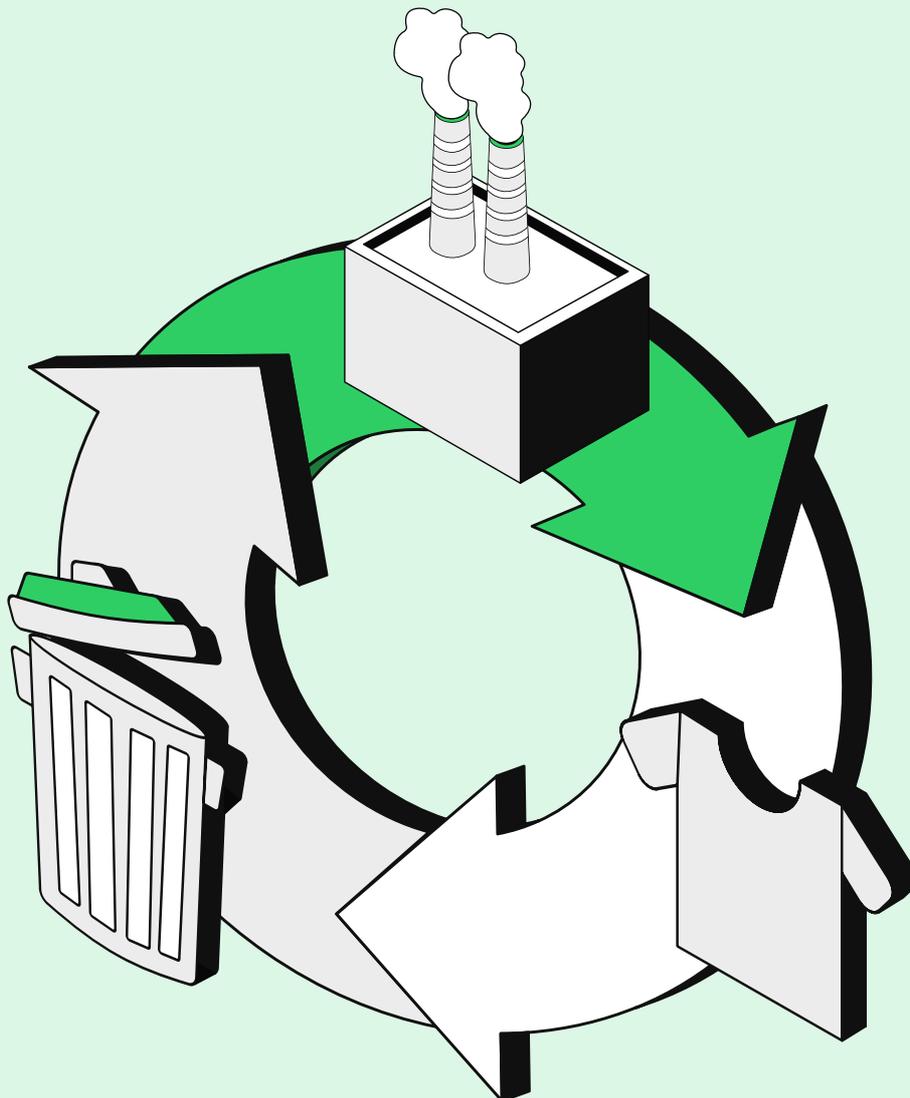


# From Polluter to Pioneer: Can Retail Rewrite its Climate Story Before It's Too Late?

A Sustainability Guide for Future-Proofing Your Business



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# The Retail Industry's Environmental Impact and Decarbonization Efforts

## The retail sector's contribution to global GHG emissions

The retail sector plays a significant role in global greenhouse gas emissions. Scope 3 emissions account for

**98%** of the total emissions generated by the industry (CDP, 2024). These emissions stem from supply chains, store operations, and waste generation, which collectively create complex challenges for retailers.

Store energy use also contributes to the sector's emissions. Retail facilities consume between 500 and 1,000 kWh per square meter annually. Grocery stores are particularly affected due to energy-intensive refrigeration systems, which are prone to leaks and inefficiencies (Plan A, 2024). Scopes 1 and 2 emissions, which include direct energy use in lighting, heating, and transportation, make up only 2% of the retail sector's emissions. These operational emissions are much smaller than those from supply chain activities (CDP, 2024).

Supply chain emissions are the largest contributor to the retail sector's carbon footprint. Upstream processes such as feedstock production, raw material extraction, and packaging generate 80% of Scope 3 emissions. Logistics and manufacturing also contribute significantly. Many retailers are addressing these emissions by working with suppliers to adopt renewable energy and improve production methods (Plan A, 2024). Packaging is another critical area, with many companies transitioning to recyclable or biodegradable materials to reduce emissions (Ellen MacArthur Foundation, 2017).

Waste generation from unsold inventory and packaging adds further to the sector's emissions. Many retailers produce substantial waste that ends up in landfills or incinerators. Efforts to mitigate this include employing circular economy practices, such as recycling and repurposing materials, to minimize waste (CDP, 2024).

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## Decarbonization trends in the retail sector

Retailers are adopting aggressive strategies to decarbonize their operations and supply chains. Many companies have set ambitious targets aligned with international climate goals. Around 63% of major retailers have energy targets in line with the Paris Agreement's targets, and 56% aim for significant emissions reductions or net-zero commitments by 2050 (Ferreira et al., 2019). Companies like Walmart and Carrefour have committed to transitioning to the use of renewable energy and enhancing energy efficiency in their operations (Carrefour, 2024; Walmart, 2024).

Frameworks and regulations play distinct roles in corporate emissions management. Regulations such as ISO 14064 and the Corporate Sustainability Reporting Directive (CSRD) establish requirements for emissions reporting, while the Greenhouse Gas Protocol provides a widely used framework for corporate emissions accounting (GHG Protocol, 1 2024). In the retail industry, the Global Reporting Initiative (GRI) is adopted by 78% of major retailers, while the CDP and GHG Protocol are used by 81% and 89% of companies, respectively (Ferreira et al., 2019).

Sustainable packaging has emerged as a critical focus area. Many retailers are adopting biodegradable materials and increasing the use of recycled components. This shift is helping reduce value chain emissions by up to 15% in some cases (Ellen MacArthur Foundation, 2017). Renewable energy initiatives are also gaining momentum, with investments in solar panels, wind energy, and other renewable sources providing long-term environmental and economic benefits. Waste reduction programs are helping redirect surplus inventory to charitable organizations, reducing waste and emissions (CDP, 2024).

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## Challenges and opportunities for sustainability in retail

The retail sector faces significant challenges in reducing emissions. Retrofitting older buildings to meet energy efficiency standards requires substantial capital investment (CDP, 2024). Supply chain complexity adds to these challenges. Emissions management across vast and diverse supplier networks requires significant coordination and collaboration (FAO, 2006). Waste management presents additional difficulties, especially in food retail, where perishable goods frequently lead to waste (CDP, 2024).

At the same time, the sector is seeing a shift toward sustainable business practices. Many retailers are investing in renewable energy, using solar and wind power to reduce their reliance on fossil fuels. This transition lowers emissions and, in the long run, reduces operating costs (CDP, 2024). Circular economy strategies are also becoming more prevalent, focusing on recycling, reuse, and waste reduction. The adoption of recycled materials in packaging is one example that has already resulted in measurable emissions reductions (Ellen MacArthur Foundation, 2017). These efforts reflect a broader industry push to balance environmental responsibility with financial viability.

### Circular supply chain practices offer a big opportunity for the retail industry.

They are promoted through recycling initiatives. According to the Independent Commodity Intelligence Services (ICIS), the Polyethylene terephthalate (PET) collection rate in 2022 increased to 60%, equal to 3 million tons. Out of that 2.6 million tons were directed to recycling facilities, an increase of around 7% from 2020 (2022). Within the EU, recycling is promoted through Deposit Return Schemes, which reward good customer behaviour. In this mechanism, customers are charged an extra fee when buying a product, which is refunded if the product packaging is returned to recycling points (European Union, 2021). In 2023, 14 European countries implemented a deposit system for beverage packaging (Tugran, 2023). Across those, the collection rates were the highest in Germany, Finland, Denmark, and Slovakia (Alves, 2024). According to the US government Environmental Protection Agency, as of 2025 recycling rates were equal 32%, an increase of more than 25% since 1960, on a trajectory to meet the goal of a 50% recycling rate by 2030 (2025).

# 03

**The Polyethylene terephthalate (PET) collection rate in 2022 increased to 60%, equal to 3 million tons.**



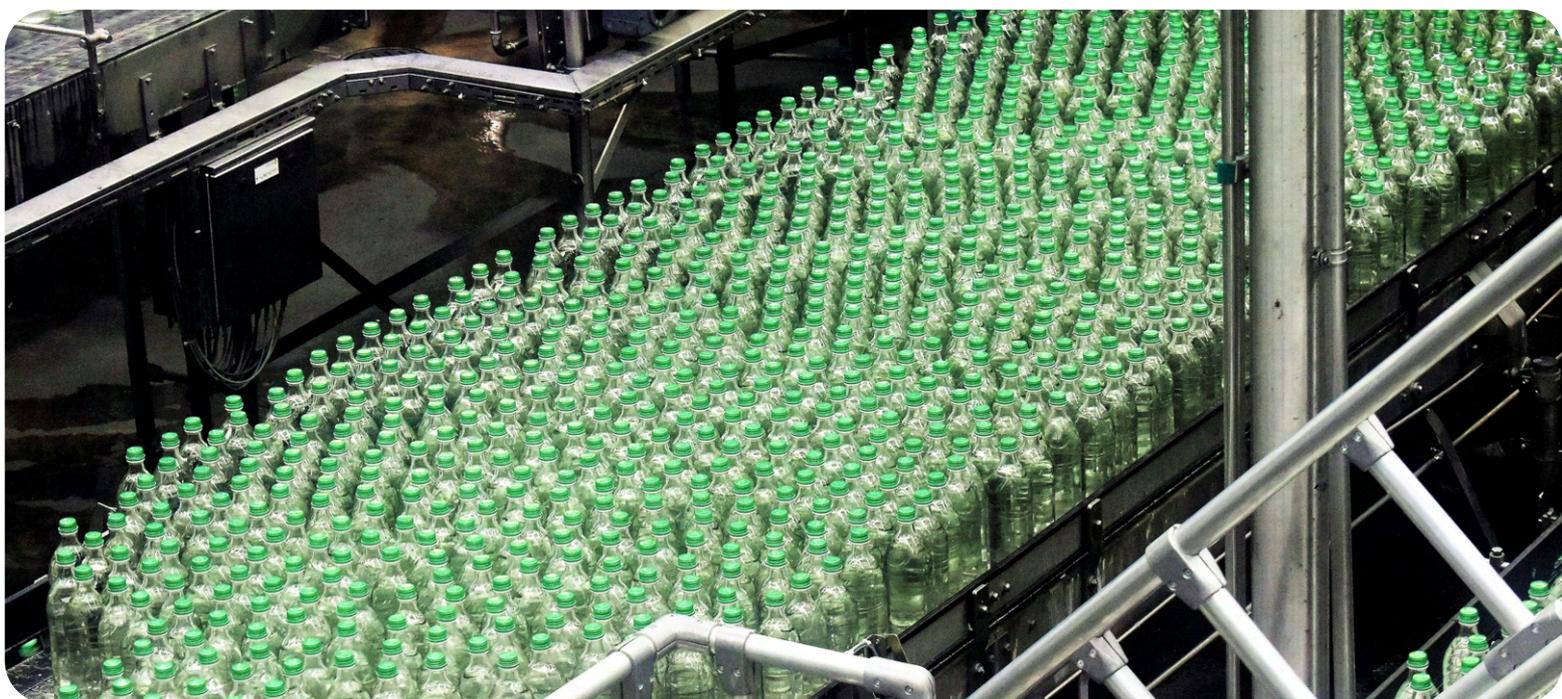
However, not all bottles are recycled. Instead they often tend to be downcycled - a process of using waste materials or used objects to make a new product, usually of lower quality than the original input (Cambridge Dictionary, 2025). On one hand downcycling allows to put the weaker structurally recycled materials into new use promoting circular economy. Additionally, downcycling usually does not require sorting, significantly reducing associated costs (O.Berk, 2018). However, unlike recycling, which keeps the item in circulation, downcycling cuts the item's life cycle short since new, lower value products cannot be recycled again (Nuñez, 2021). This practice is common for PET bottles, commonly downcycled into benches, car parts, or railroad ties.

In contrast to downcycling, upcycling transforms waste materials and used objects to new, higher quality products. The European Commission promotes upcycling initiatives, as an example through the 2020 upPE-T campaign, a €7.8 million Research and Innovation project working on upcycling bioplastics of food and drinks packaging. The goal of the project is to upcycle up to 60% of such packaging plastic waste by 2030 (European Commission, 2025). Upcycling has been common in the retail industry, with PET being used for the production of textiles.

This new development promotes a circular economy and offers a competitive advantage to clothing firms. Upcycling practices have been adopted by many global leaders such as Patagonia, Urban Outfitters, or RE/DONE (Weavabel, 2022).

Digital tools have introduced new possibilities for tracking and reducing emissions across supply chains. Technologies like blockchain and artificial intelligence allow retailers to monitor environmental impact at a granular level, making it easier to target inefficiencies. Carrefour, for example, has integrated blockchain to track product-level emissions, giving the company a more transparent view of its supply chain (Carrefour, 2024). However, the effectiveness of these tools remains an open question.

Implementation is costly, and smaller retailers may struggle with the financial and technical demands. Blockchain, in particular, requires substantial computing power, raising concerns about the emissions generated by the technology itself. The extent to which these digital solutions lead to actual emissions reductions depends on their adoption at scale and their ability to deliver actionable data rather than just increasing administrative complexity.



Another promising development is the shift toward plant-based proteins in food retail. Reducing reliance on livestock farming could significantly cut emissions, given the high carbon footprint of meat production (Broom, 2023; Garrett & Hayek, 2018). Consumer demand for sustainable food alternatives has grown in recent years, pushing retailers to expand their plant-based offerings. While this transition holds environmental benefits, it also raises economic and logistical questions. Supply chains need to adjust to accommodate new products, and the long-term viability of plant-based alternatives will depend on consumer acceptance and cost competitiveness.

The retail sector's influence on emissions is undeniable. Scope 3 emissions account for the bulk of its carbon footprint, making supply chain interventions essential. Retailers have already made progress in areas like renewable energy, sustainable packaging, and circular economy practices, but deeper commitments are needed. Addressing energy costs, supply chain complexities, and waste management will require continued innovation. Given its reach across industries and consumers, the sector must push for ambitious targets and use emerging technologies to drive measurable reductions in emissions.

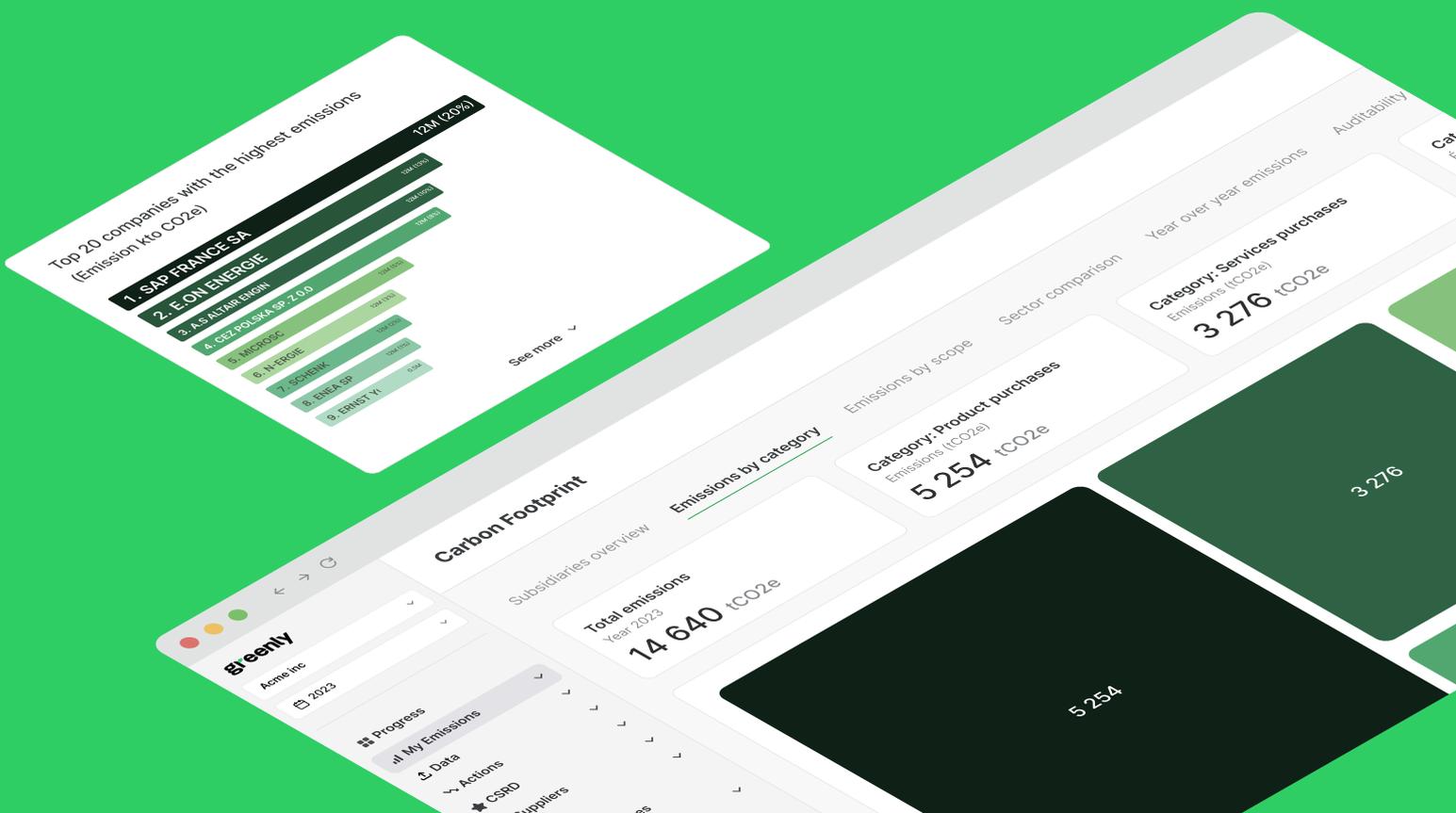
According to the US government Environmental Protection Agency

**as of 2025 recycling rates were equal 32%, an increase of more than 25% since 1960, on a trajectory to meet the goal of a 50% recycling rate by 2030.**



# How Greenly can benefit the retail sector

Greenly provides retailers with tailored tools to measure, monitor, and reduce carbon emissions. Its solutions combine advanced technology with industry-specific features, enabling businesses to address complex sustainability challenges effectively. By focusing on automated carbon management, life cycle assessments, regulatory compliance, and support for climate commitments. Greenly helps retailers align with environmental standards and achieve meaningful progress toward decarbonization goals.



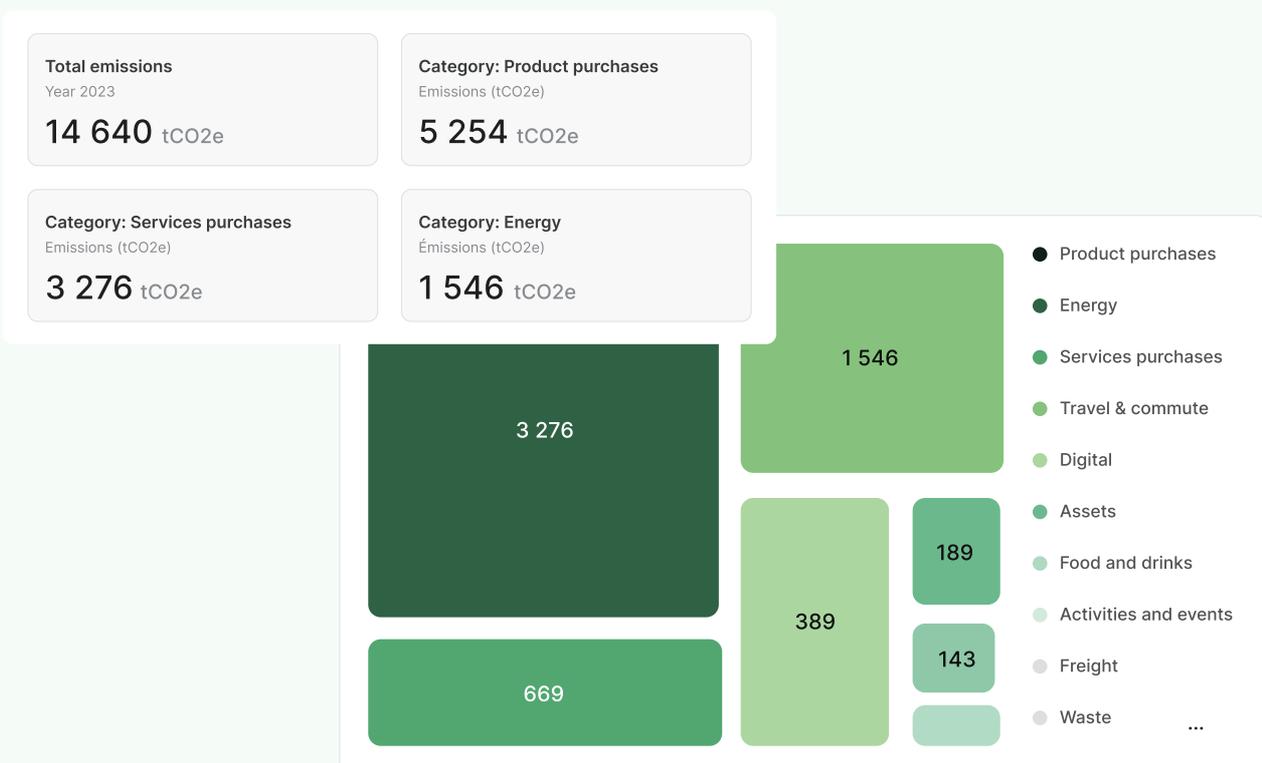
# 01

## Carbon management

Greenly makes carbon management more efficient by automating data collection while ensuring human oversight. Retailers can connect their management systems to Greenly’s platform, where automated tools assist in tracking emissions, and experts validate the results for accuracy. This approach reduces the time required for manual data entry while maintaining precise monitoring of Scope 1, 2, and 3 emissions (Greenly, 2024).

Scope 1 and 2 emissions, which include direct energy use from store operations and indirect emissions from electricity consumption, represent only a small portion of a retailer’s total footprint. Scope 3 emissions are often the largest contributors, covering supply chain activities such as manufacturing and transportation. For instance, Ikone’s first carbon footprint assessment revealed that 91% of its 1,779 tons of CO<sub>2</sub> emissions came from textile purchases alone (Greenly, 2024). Similarly, Cabaia found that upstream production processes accounted for most of its emissions, while operational activities contributed less than 1% (Greenly, 2024). These insights highlight the importance of addressing emissions across the entire value chain.

Greenly’s dashboard displays emissions data in real time and categorizes it by operational areas and scope. This feature helps retailers identify hotspots in their operations or supply chains and take targeted action. The platform also provides some comparative emissions data to support decision-making (Greenly, 2024).



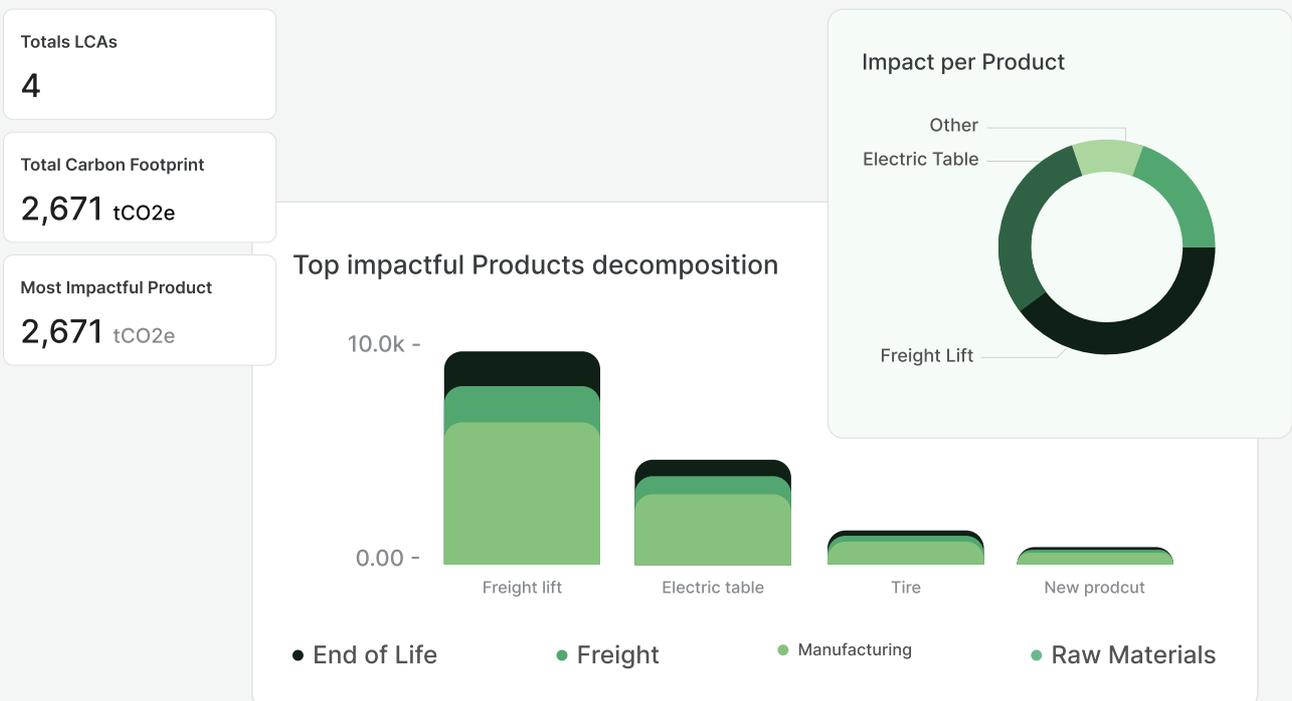
# 02

## Life cycle assessment

Greenly's life cycle assessment (LCA) tool helps retailers understand the environmental impact of their products at each stage of production. LCAs evaluate emissions generated during raw material extraction, manufacturing, distribution, use, and disposal. This information enables retailers to identify the most carbon-intensive stages and develop strategies to address them (Greenly, 2024).

Ikone used Greenly's LCA tool to analyze the impact of its flagship products and to create a responsible purchasing policy focused on reducing the environmental impact of textiles. This analysis provided detailed insights into how emissions are distributed across the supply chain, allowing Ikone to establish an effective carbon reduction plan (Greenly, 2024). Cabaia leveraged LCAs to compare the emissions of products manufactured in China and France. The results showed that production in China had a significantly higher carbon footprint, prompting the company to consider repatriating parts of its manufacturing process (Greenly, 2024).

Greenly accelerates the traditionally time-intensive LCA process, enabling assessments to be completed in days. Retailers benefit from Greenly's extensive database, which includes over three hundred thousand emission factors. This level of detail helps businesses evaluate alternative materials and identify production methods that align with sustainability goals (Greenly, 2024).



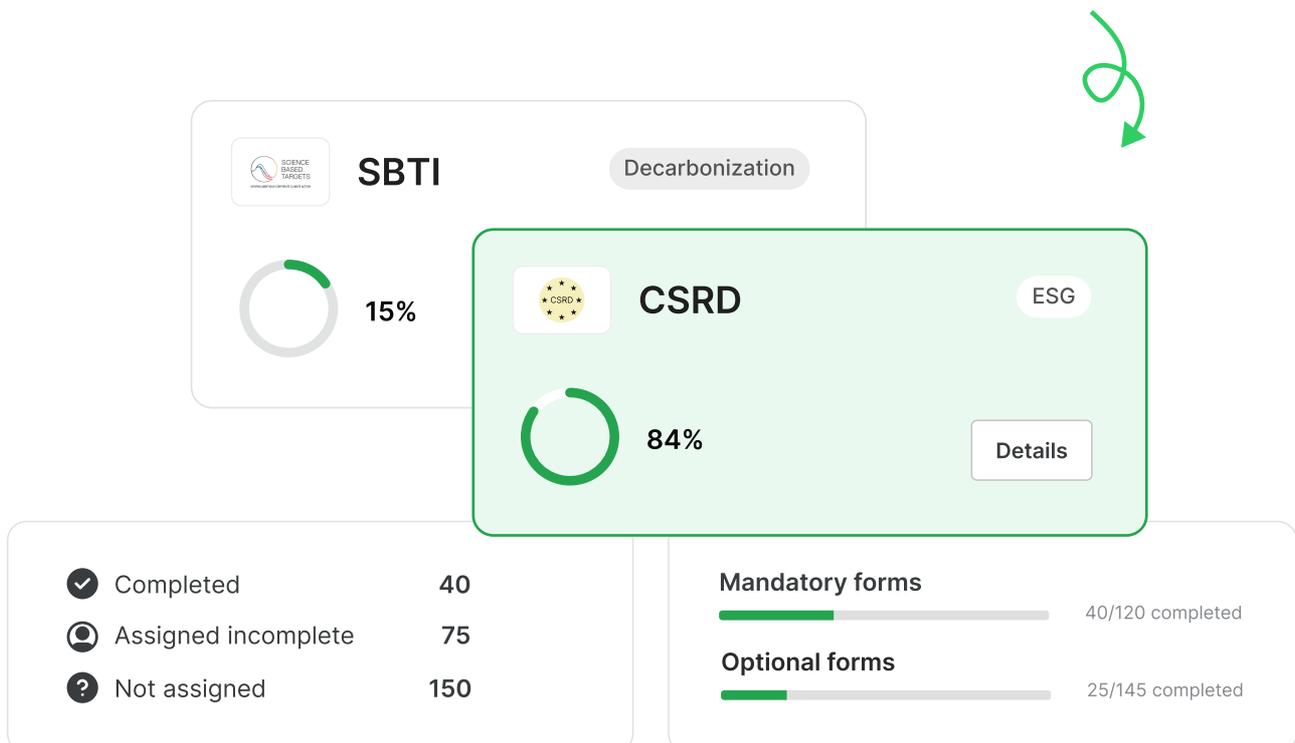
# 03

## Support for regulatory compliance

Environmental regulations are becoming increasingly strict, and Greenly provides the tools retailers need to comply. In Europe, the Corporate Sustainability Reporting Directive (CSRD) requires companies with more than 250 employees or €40 million in turnover to report their carbon emissions. The Climate Products Law mandates precise environmental labeling for products sold in France. Greenly ensures compliance by simplifying the reporting process and enabling accurate carbon assessments (Greenly, 2024).

The platform supports global frameworks, addressing both emissions reporting and strategic climate commitments. It aligns with the Greenhouse Gas Protocol (GHGP) for standardized emissions accounting and reporting, ensuring accurate measurement across Scope 1, 2, and 3 emissions. For strategic target-setting and disclosure, Greenly integrates with the Science-Based Targets initiative (SBTi) and the Carbon Disclosure Project (CDP), helping businesses define and communicate their climate strategies. The platform’s reporting tools generate emissions reports that meet regulatory standards, reducing the administrative burden of compliance and allowing businesses to focus on decarbonization efforts (Greenly, 2024).

Greenly’s tools also support retailers in meeting environmental labeling requirements. The platform calculates eco-scores for products, helping companies comply with the Climate Products Law. For example, ManoMano used Greenly to score more than 500,000 products, ensuring alignment with French regulations and improving the company’s reputation as a sustainability leader (Greenly, 2024).



## Facilitating climate commitments



Greenly provides comprehensive support to retailers aiming to set and achieve ambitious climate commitments. The platform includes tools to establish emissions reduction plans aligned with global climate targets, such as limiting global warming to 1.5°C under the COP21 agreement. These tools help businesses define clear reduction trajectories and monitor progress over time (Greenly, 2024).

Educational resources provided by Greenly are another essential feature. The platform offers newsletters, quizzes, and training programs through the Greenly Academy to help employees and stakeholders understand the importance of sustainability. This approach builds internal momentum for climate initiatives and ensures that businesses maintain their focus on decarbonization (Greenly, 2024).

Greenly's tools also address Scope 3 emissions by engaging suppliers. The platform allows retailers to identify greener suppliers and implement responsible purchasing policies. These measures are critical for reducing the carbon footprint of supply chain activities, which represent a significant share of retail emissions (Greenly, 2024; IPCC, 2022).

Greenly offers tailored solutions that address the specific needs of the retail sector in decarbonization and compliance. Its automated carbon management tools streamline the process of emissions tracking, while its life cycle assessments provide valuable insights into product-level impacts. The platform's regulatory support ensures that retailers meet the requirements of the CSRD and Climate Products Law, reducing compliance challenges and enhancing transparency (IRENA, 2023).

The tools offered by Greenly enable retailers to set and achieve climate commitments. Features such as benchmarking, supplier engagement, and employee education make Greenly a comprehensive partner for businesses looking to reduce their environmental impact. Examples from companies like Ikone and Cabaia demonstrate the practical benefits of Greenly's solutions, from identifying emissions hotspots to creating actionable carbon reduction plans.

**Greenly offers tailored solutions that address the specific needs of the retail sector in decarbonization and compliance.**



For example, Cabaia's carbon assessment revealed that upstream production accounted for the majority of its emissions, with operational activities contributing less than 1% (Greenly, 2024). Based on these findings, the company implemented a structured reduction plan that focused on two key areas: supplier selection and transportation emissions. Cabaia committed to working with more sustainable textile suppliers, prioritizing materials with lower environmental impact and ensuring that its partners adhered to stricter sustainability standards. Additionally, the company optimized its logistics operations by reassessing transportation routes and reducing reliance on carbon-intensive shipping methods. These changes helped lower emissions at critical points in the supply chain while aligning with broader sustainability goals (Greenly, 2024).

The retail sector faces mounting pressure to address its role in global emissions. Greenly equips businesses with the tools needed to align with climate goals, enhance operational efficiency, and gain a competitive advantage.

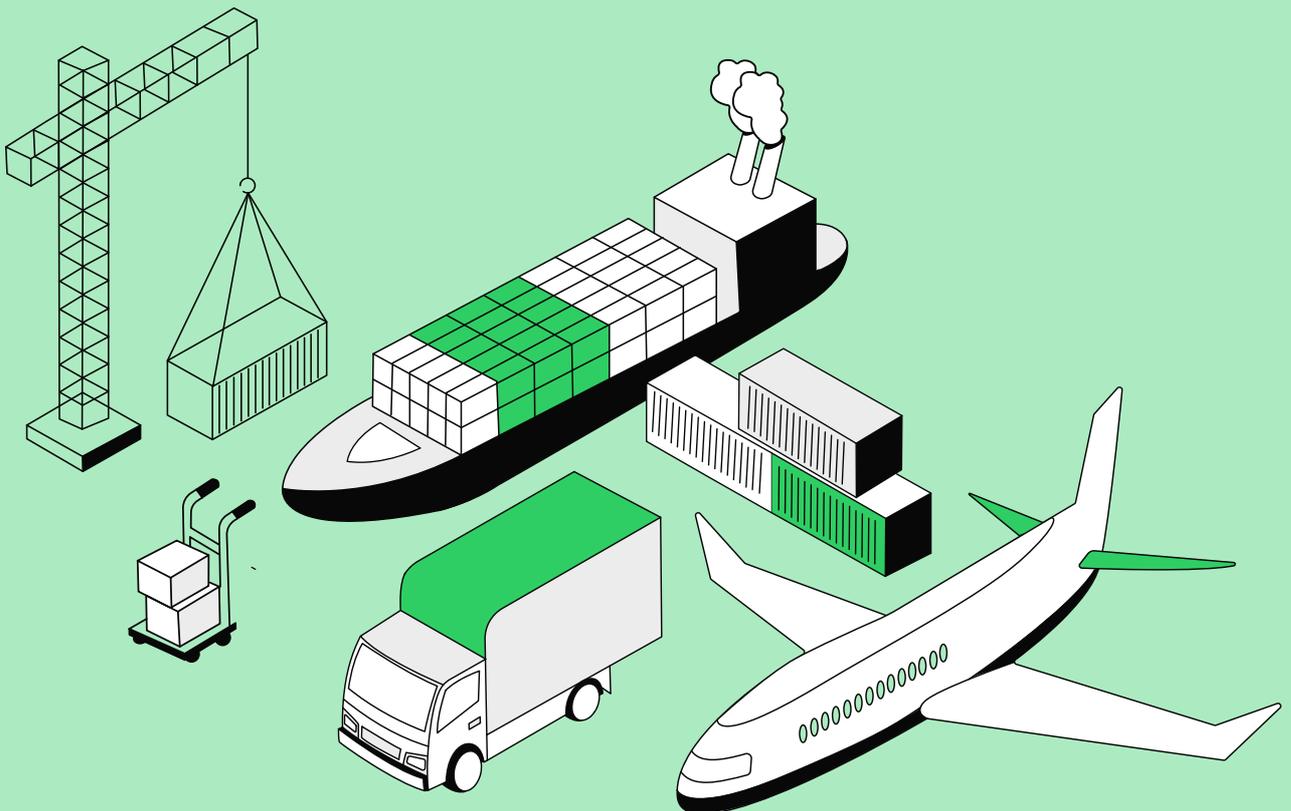
**By focusing on measurable results and regulatory alignment, Greenly helps retailers lead the way in building a more sustainable future.**

A precise understanding of emissions data, energy consumption, waste management, and sustainability commitments is essential for developing effective decarbonization strategies, particularly those supported by Greenly



# Emissions Data: Retail Scope 1, 2, and 3 Emissions

In the retail sector, Scope 3 emissions account for 98% of total emissions, making them the primary focus for reduction efforts (ONS, 2024). Unlike Scope 1 and 2 emissions, which come from direct operations and purchased energy, Scope 3 emissions span the entire value chain, from production and transportation to packaging and disposal (ONS, 2024).



Packaging is a major contributor to retail emissions due to resource extraction, production, and disposal. In Europe, packaging-related emissions account for a significant share of retail's total carbon footprint (Statista, 2024). Many retailers are reducing their impact by switching to biodegradable, recycled, and sustainably sourced materials, cutting emissions associated with virgin plastic production and waste management (Statista, 2024).

Transporting goods across supply chains is a major driver of emissions in retail, particularly in the EU, where logistics account for a significant portion of the sector's footprint (BRC, 2024). Retailers are working to optimize distribution routes and shift to low-emission transport to reduce their reliance on fossil fuels (ONS, 2024).

Store operations contribute to emissions through lighting, HVAC, and refrigeration. Grocery stores, in particular, consume high levels of energy due to refrigeration needs. Retailers are addressing this by investing in energy-efficient systems and increasing reliance on renewable energy (Greenly, 2024; BRC, 2024).

## Energy consumption: patterns in renewable versus nonrenewable energy use

Energy consumption patterns in retail are pivotal in determining the sector's environmental impact. The shift from non-renewable to renewable energy sources is a critical component of sustainability strategies (ONS, 2024). Leading retailers are increasingly investing in renewable energy to power their operations.

For example, Whole Foods Market has committed to using 100% renewable energy in all its facilities across 25 markets (Statista, 2024). Such initiatives not only reduce carbon footprints but also align with consumer expectations for corporate environmental responsibility.

## Beyond sourcing renewable energy, retailers are implementing energy-efficient technologies to reduce consumption.

This includes upgrading lighting systems to LEDs, optimizing HVAC systems, and utilizing energy management systems to monitor and control energy use (BRC, 2024). These measures contribute to both cost savings and emissions reductions (ONS, 2024).

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## Waste and recycling practices: current strategies for waste reduction, inventory management, and recycling

Effective waste management is essential for reducing the environmental impact of the retail sector. Strategies focusing on waste reduction, efficient inventory management, and recycling are integral components of sustainable retail operations (BRC, 2024). Retailers are adopting various initiatives to minimize waste, including reducing single-use plastics, implementing reusable packaging solutions, and optimizing product designs to require less material (Statista, 2024). These efforts not only decrease waste generation but also resonate with environmentally conscious consumers (Greenly, 2024).

Efficient inventory management reduces waste by ensuring that products are neither overstocked nor understocked, thereby minimizing unsold goods that may end up as waste (Statista, 2024). Advanced analytics and demand forecasting tools are employed to achieve optimal inventory levels, reducing both waste and associated emissions (BRC, 2024). Implementing comprehensive recycling programs enables retailers to manage waste effectively. This includes recycling packaging materials, electronic waste, and organic waste (Greenly, 2024). For instance, The Body Shop has implemented sustainable sourcing practices and a recycling program to enhance its environmental performance (Statista, 2024).



# 03

## Sustainability commitments: overview of targets and frameworks adopted by retail companies

Retailers are increasingly setting ambitious sustainability targets and adopting recognized frameworks to guide their environmental initiatives. Many retailers have pledged to achieve net-zero emissions within specific timeframes (BRC, 2024). For example, signatories to the British Retail Consortium's Climate Action Roadmap have committed to net-zero emissions from purchased electricity by 2030 and net-zero emissions from direct operations by 2035 (BRC, 2024).

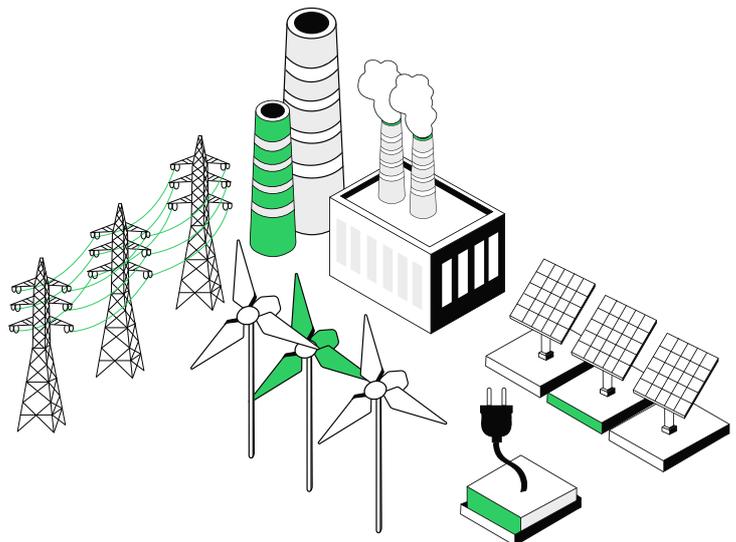
**However, these commitments primarily address Scope 1 and Scope 2 emissions, which represent only a fraction of the sector's total footprint.**

Scope 3 emissions, which account for the majority of retail emissions, remain a greater challenge due to their complexity and reliance on external suppliers, manufacturers, and logistics partners. Some retailers are taking steps to reduce emissions across their supply chains by engaging with suppliers, promoting low-carbon materials, and optimizing transportation networks, but few have committed to net-zero Scope 3 targets with clear deadlines (BRC, 2024).

Without addressing Scope 3 emissions at scale, achieving full decarbonization across the retail sector will remain out of reach.

To structure and validate their sustainability efforts, retailers are aligning with established frameworks such as the Science-Based Targets initiative (SBTi), the Greenhouse Gas Protocol, and the Carbon Disclosure Project (CDP) (ONS, 2024). These frameworks provide guidelines for measuring, reporting, and reducing emissions in line with global climate goals (Statista, 2024).

Recognizing that a significant portion of emissions originates from the supply chain, retailers are engaging with suppliers to promote sustainable practices. This includes setting sustainability criteria for suppliers, collaborating on emissions reduction initiatives, and supporting the transition to renewable energy within the supply chain (Greenly, 2024).



**In conclusion, a comprehensive understanding of emissions data, energy consumption patterns, waste and recycling practices, and sustainability commitments is essential for developing tailored solutions in the retail sector.**

By focusing on these key areas, retailers can effectively reduce their environmental impact, comply with regulatory requirements, and meet the growing consumer demand for sustainable business practices (ONS, 2024).

# Greenly's Customer Reach and the Climate Suite Overview

Greenly has already established a strong presence within the retail industry by providing innovative tools that allow businesses to measure, manage, and reduce their carbon footprint. Its platform caters specifically to retail's unique challenges, helping brands achieve sustainability goals while aligning with evolving regulatory standards. Several key customers, including Givenchy, L'Oréal, Jimmy Fairly, Cabaia, Lucy & Yak, Oh My Cream, Mondetta, and Juliette Has a Gun, illustrate Greenly's ability to address the diverse needs of retail companies at various scales (Greenly, 2024).

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### Customer summary: greenly's retail clients in action

Greenly's solutions have proven effective in helping retailers tackle their most significant emissions sources — Scope 3 emissions arising from upstream supply chains, raw material sourcing, and logistics (ONS, 2024). Retailers such as Cabaia and Ikone have leveraged Greenly's platform to identify emissions hotspots, compare production locations, and optimize supply chain operations to achieve measurable emissions reductions (Greenly, 2024; BRC, 2024).

For example, Cabaia's carbon assessment revealed that 93% of its emissions originated from upstream activities, particularly textile production and transportation (Statista, 2024). By analyzing its supply chain through Greenly's Life Cycle Assessment (LCA) tool, the company demonstrated that shifting production from China to France could reduce emissions by up to 30% (Greenly, 2024). Similarly, Ikone used Greenly's benchmarking features to identify carbon-intensive stages in their textile processes, enabling them to set a Net Zero emissions trajectory (Greenly, 2024).

These success stories underscore how Greenly empowers retail clients to gain granular insights into their operations and implement targeted strategies for emissions reduction, regulatory compliance, and sustainability leadership (Greenly, 2024; EDHEC, 2024)

**15%**

reduction in packaging emissions Cabaia achieved by transitioning to recycled alternatives.

**500,000**

products scored Mano Mano by using Greenly.

# 02

## Greenly's tools for retail: the climate suite

Greenly's Climate Suite is designed to address the complexities of the retail sector, with tools that streamline emissions tracking, support regulatory compliance, and enable sustainability decisions across supply chains and store operations.

### ✓ Carbon Tracking Across Supply Chains

Greenly's automated carbon tracking integrates seamlessly with retail management systems, eliminating the need for manual data collection. By providing real-time visibility into Scope 1, 2, and 3 emissions, the platform allows retailers to identify carbon hotspots across their operations and upstream value chains (ONS, 2024). For example, Ikone's carbon footprint assessment revealed that textile purchases accounted for 91% of their total emissions, highlighting the importance of addressing supply chain emissions to meet sustainability goals (Greenly, 2024).

### ✓ Support for sustainable procurement and packaging

The platform's LCA capabilities enable retailers to evaluate the environmental impact of individual products, from raw material extraction to disposal. By leveraging a database of over 3 million emission factors, Greenly helps retailers select greener suppliers, adopt sustainable materials, and reduce packaging emissions (Greenly, 2024). For instance, Cabaia achieved a 15% reduction in packaging emissions by transitioning to biodegradable and recycled alternatives identified through Greenly's platform (EDHEC, 2024; Brighton, 2024).

### ✓ Store and logistics emissions

Store energy use, often driven by lighting, HVAC, and refrigeration, remains a major source of operational emissions in retail. Greenly's platform enables businesses to monitor energy consumption, benchmark against industry standards, and identify opportunities for efficiency improvements. This feature supports the transition to renewable energy sources, aligning with initiatives like Carrefour's blockchain-enabled emissions monitoring across its operations (Plan A, 2024).

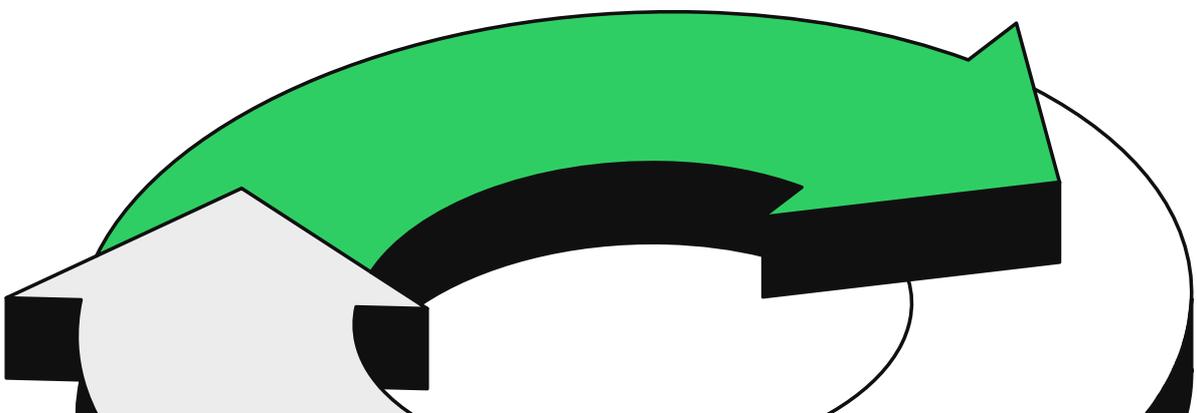
### ✓ Regulatory compliance simplified

As retailers face increasing pressure to comply with regulations like the Corporate Sustainability Reporting Directive (CSRD) in Europe, Greenly's tools simplify emissions reporting by automating data collection and generating compliant reports (BRC, 2024). Companies like ManoMano have used Greenly to meet France's Climate Products Law by calculating eco-scores for over 500,000 products (Greenly, 2024). This not only ensures compliance but enhances transparency and trust with consumers (ONS, 2024).

### ✓ Benchmarking and climate commitments

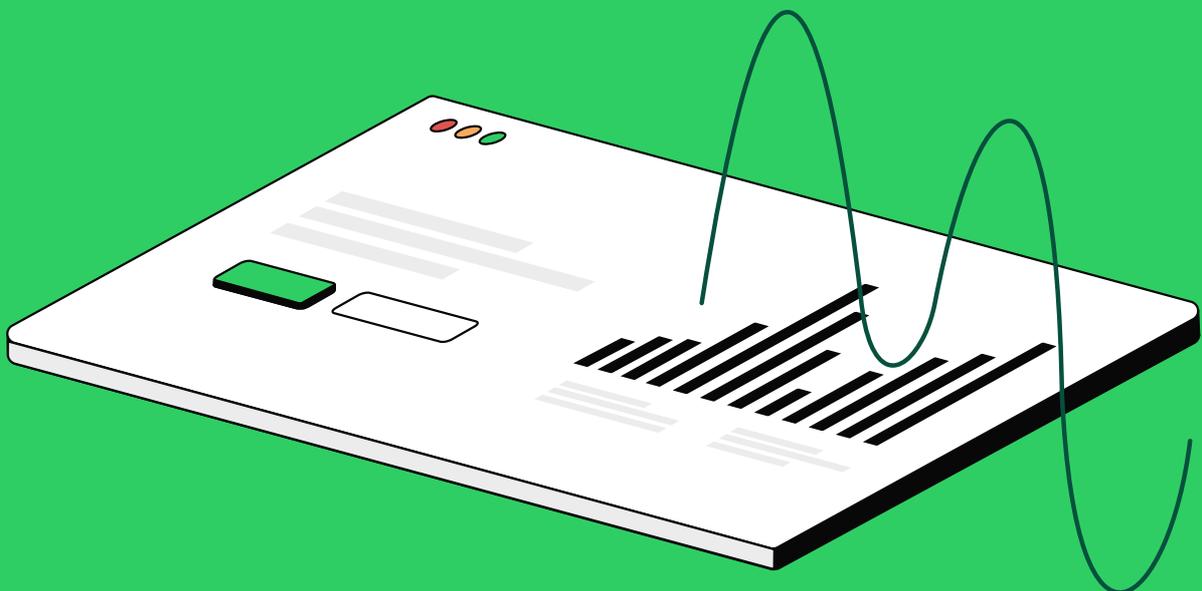
Greenly's benchmarking capabilities allow retailers to measure their performance against industry peers and track progress toward climate goals. By providing tools to set reduction trajectories aligned with initiatives like the Science-Based Targets initiative (SBTi), Greenly helps retailers define and achieve ambitious climate commitments (Statista, 2024).

By equipping retailers with advanced carbon management tools, Greenly enables progress toward decarbonization and regulatory compliance. The platform's tailored solutions—ranging from supply chain tracking to regulatory support—demonstrate its ability to address the retail sector's pressing sustainability challenges while driving measurable results (Brighton, 2024). Greenly's partnerships with leading retail clients like Cabaña, Ikone, and ManoMano serve as proof of the platform's effectiveness in promoting innovation and leadership in sustainable retail practices (EDHEC, 2024).



# Decarbonization Strategies in Retail: A Comparative Analysis of B2B and B2C Sectors

The retail industry stands as a significant contributor to global greenhouse gas emissions, accounting for approximately 25% of the total output (Plan A, 2024). Within this sector, both Business-to-Business (B2B) and Business-to-Consumer (B2C) segments present unique environmental challenges and opportunities. A nuanced understanding of these sub-verticals is essential for developing effective decarbonization strategies.



## Retail B2B: Navigating Environmental Challenges

In the B2B retail landscape, environmental impacts are predominantly associated with bulk logistics, warehousing, and procurement processes. The extensive transportation of large quantities of goods contributes significantly to carbon emissions, while energy-intensive warehousing operations further exacerbate the environmental footprint (WRI, 2024).

**Beyond sourcing renewable energy, retailers are implementing energy-efficient technologies to reduce consumption.**

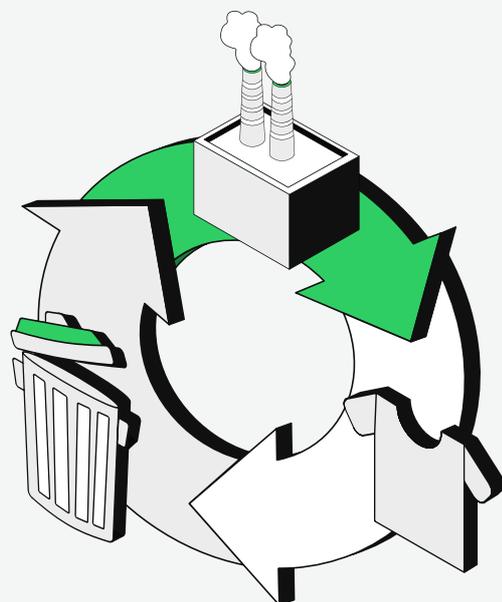
Additionally, sourcing materials sustainably is challenging due to limited visibility into suppliers' practices and the substantial energy demands inherent in large-scale operations (ESG Today, 2025).

However, opportunities for improvement are emerging. The adoption of digital tools can enhance supply chain transparency, allowing companies to track emissions more accurately and identify areas for reduction. Implementing renewable energy solutions in warehouses, such as solar panels, can significantly decrease energy consumption and associated emissions (CSIRO, 2024). Collaborating with suppliers committed to sustainable practices further strengthens the overall environmental performance of B2B operations.

## Retail B2C: Addressing Consumer-Facing Environmental Impacts

The B2C retail sector faces distinct environmental challenges, particularly concerning store-level energy consumption, last-mile delivery emissions, and packaging waste. Physical retail spaces often consume substantial energy for lighting, heating, and cooling, contributing to a considerable carbon footprint (ONS, 2024). The rise of e-commerce has intensified the environmental impact of last-mile deliveries, leading to increased emissions and congestion (Plan A, 2024). Additionally, the prevalence of single-use packaging contributes to significant waste generation.

Decarbonization efforts in B2C retail must address these multifaceted challenges. Implementing circular economy practices, such as product take-back schemes and recycling initiatives, can mitigate waste and promote resource efficiency. Transitioning to renewable energy sources for store operations reduces reliance on fossil fuels and lowers emissions (BRC, 2024). Utilizing advanced tracking systems enables retailers to monitor emissions across various channels, facilitating targeted reduction strategies.



## Greenly's Role in Facilitating Decarbonization

Greenly offers tailored solutions to support decarbonization efforts in both B2B and B2C retail sectors.

### B2B

For B2B operations, Greenly provides tools for comprehensive supply chain emissions tracking, enabling businesses to identify high-emission areas and implement targeted reduction strategies. The platform also supports sustainable procurement by offering insights into suppliers' environmental practices, promoting informed decision-making (ACHR News, 2024).

### B2C

In the B2C realm, Greenly assists retailers in monitoring Scope 1, 2, and 3 emissions, encompassing direct operations, energy consumption, and supply chain activities. The platform supports initiatives for sustainable packaging by providing data on material impacts and facilitating compliance with environmental labeling regulations (Reuters, 2024). By leveraging Greenly's solutions, retailers can enhance transparency, ensure regulatory compliance, and build consumer trust through demonstrable environmental stewardship (Financial Times, 2024).

## Visualizing Decarbonization Pathways

To effectively communicate decarbonization strategies, visual representations can be instrumental. For B2B retail, a breakdown of supply chain emissions, focusing on Scope 3 categories, can highlight key areas for intervention (WRI, 2024). Comparing energy usage between bulk logistics and traditional retail models can illustrate potential efficiency gains (Plan A, 2024).

In the B2C context, a pie chart delineating emissions sources—such as store operations, last-mile delivery, and packaging—can provide a clear overview of impact areas (ONS, 2024). Visualizing circular economy initiatives can showcase the flow of materials through recycling and reuse processes, emphasizing waste reduction efforts. Additionally, illustrating the influence of carbon labeling on consumer purchasing decisions can underscore the importance of transparency in driving sustainable consumption.

By adopting these strategies and leveraging tools like Greenly, retailers in both B2B and B2C sectors can navigate the complexities of decarbonization, contributing to a more sustainable future while meeting evolving regulatory and consumer expectations.

greenly ×  CABAÏA

# Case Study of a Retail Success with Greenly

Cabaïa, a leading retail brand specializing in colorful and eco-designed accessories, has emerged as a strong example of how retailers can leverage technology to address environmental challenges.



Despite its commitment to innovation and quality, the company faced increasing pressure to understand and reduce its carbon footprint. Like many retailers, Cabaia's emissions were primarily concentrated in Scope 3 activities, including upstream supply chain operations, production processes, and logistics. These challenges were exacerbated by a lack of detailed emissions data and the need for compliance with emerging environmental regulations. To overcome these hurdles and align its operations with global climate goals, Cabaia partnered with Greenly to implement a comprehensive carbon management strategy.

Before engaging with Greenly, Cabaia struggled to gain visibility into the environmental impact of its operations, particularly across its supply chain. The company relied heavily on global manufacturing, with a significant portion of its production based in China. This geographic dependence not only contributed to high emissions but also posed difficulties in tracking the carbon footprint of raw material sourcing, production, and transportation. A preliminary analysis revealed that upstream activities, such as textile purchases and logistics, accounted for nearly 93% of Cabaia's total emissions.

Furthermore, the absence of precise data prevented the company from setting actionable targets for emissions reductions. Without a reliable framework to measure its carbon footprint, Cabaia faced challenges in meeting consumer expectations for sustainability and regulatory requirements like the Corporate Sustainability Reporting Directive (CSRD). The increasing demand for eco-friendly products also highlighted the need for sustainable materials and transparent reporting mechanisms.

Greenly provided Cabaia with the tools necessary to measure, monitor, and manage its carbon footprint efficiently. By integrating Cabaia's operational data into its platform, Greenly enabled the company to gain a granular understanding of its emissions across all scopes:

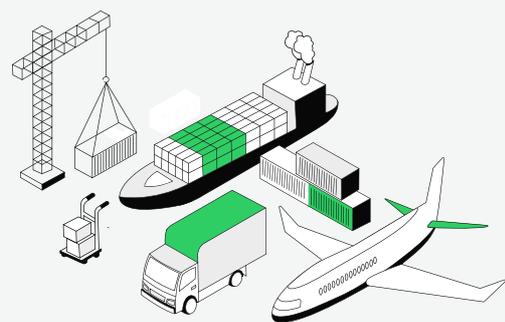
### Scope 1 and 2 Emissions:

Direct emissions from owned or controlled sources, including energy use in stores and offices, as well as indirect emissions from electricity consumption.



### Scope 3 Emissions:

Indirect emissions from upstream and downstream activities, including raw material production, packaging, and transportation.



Using Greenly's automated carbon management tools, Cabaïa conducted a comprehensive carbon footprint assessment. The analysis confirmed that the majority of its emissions stemmed from production in China, where energy-intensive processes and long transportation distances significantly contributed to the company's environmental impact. In response to these findings, Cabaïa implemented several targeted interventions to reduce its emissions.

One of the key initiatives was supply chain optimization. By comparing the carbon footprint of production in China versus France, Greenly's Life Cycle Assessment (LCA) tool demonstrated that local manufacturing could reduce emissions by up to 30%. These insights prompted Cabaïa to explore repatriating parts of its production to France, thereby minimizing transportation emissions and supporting regional sustainability efforts.

Additionally, Cabaïa focused on adopting sustainable materials for its products and packaging. Leveraging Greenly's extensive emissions database, the company identified opportunities to replace traditional packaging with biodegradable and recycled alternatives, reducing packaging emissions by 15%. This transition not only aligned with Cabaïa's sustainability goals but also resonated with eco-conscious consumers seeking greener products.

## Measurable Results

Cabaïa's collaboration with Greenly yielded significant and measurable results across multiple dimensions:

### **Carbon Emissions Reduction:**

By implementing supply chain changes and transitioning to sustainable materials, Cabaïa achieved a 15% reduction in its overall carbon footprint within the first year.

### **Regulatory Compliance:**

Greenly's tools ensured that Cabaïa complied with the Corporate Sustainability Reporting Directive (CSRD) and other reporting requirements. The platform simplified the process of tracking and reporting emissions, enabling Cabaïa to meet regulatory standards with accuracy and transparency.

### **Improved Supply Chain Management:**

Through Greenly's emissions tracking tools, Cabaïa gained visibility into supplier practices, allowing the company to engage with partners to adopt greener energy sources and production methods. This collaborative approach fostered long-term sustainability improvements across the value chain.

### **Consumer Engagement:**

Cabaïa's commitment to sustainability and its transparent reporting enhanced its brand reputation, attracting environmentally conscious customers and strengthening consumer trust.

By addressing its initial sustainability challenges, Cabaia demonstrated the power of data-driven solutions in driving environmental progress. Greenly's comprehensive platform enabled the company to identify emissions hotspots, set actionable goals, and measure the impact of its interventions.

## Conclusion

Cabaia's success story highlights how retail companies can overcome sustainability challenges by adopting innovative carbon management solutions. Through its partnership with Greenly, the company not only achieved measurable emissions reductions but also improved its operational efficiency and regulatory compliance. By leveraging Greenly's tools for carbon tracking, life cycle assessment, and supply chain optimization, Cabaia has positioned itself as a leader in sustainable retail. This case study serves as a testament to the importance of technology, data, and collaboration in building a low-carbon future for the retail industry.

Cabaia's experience demonstrates that meaningful emissions reductions are achievable when companies commit to data-driven sustainability strategies. By adopting similar approaches, other retailers can accelerate their own decarbonization efforts, proving that sustainability and business performance can go hand in hand. Greenly's expertise continues to support businesses in navigating these challenges, making carbon reduction a tangible reality across the sector.

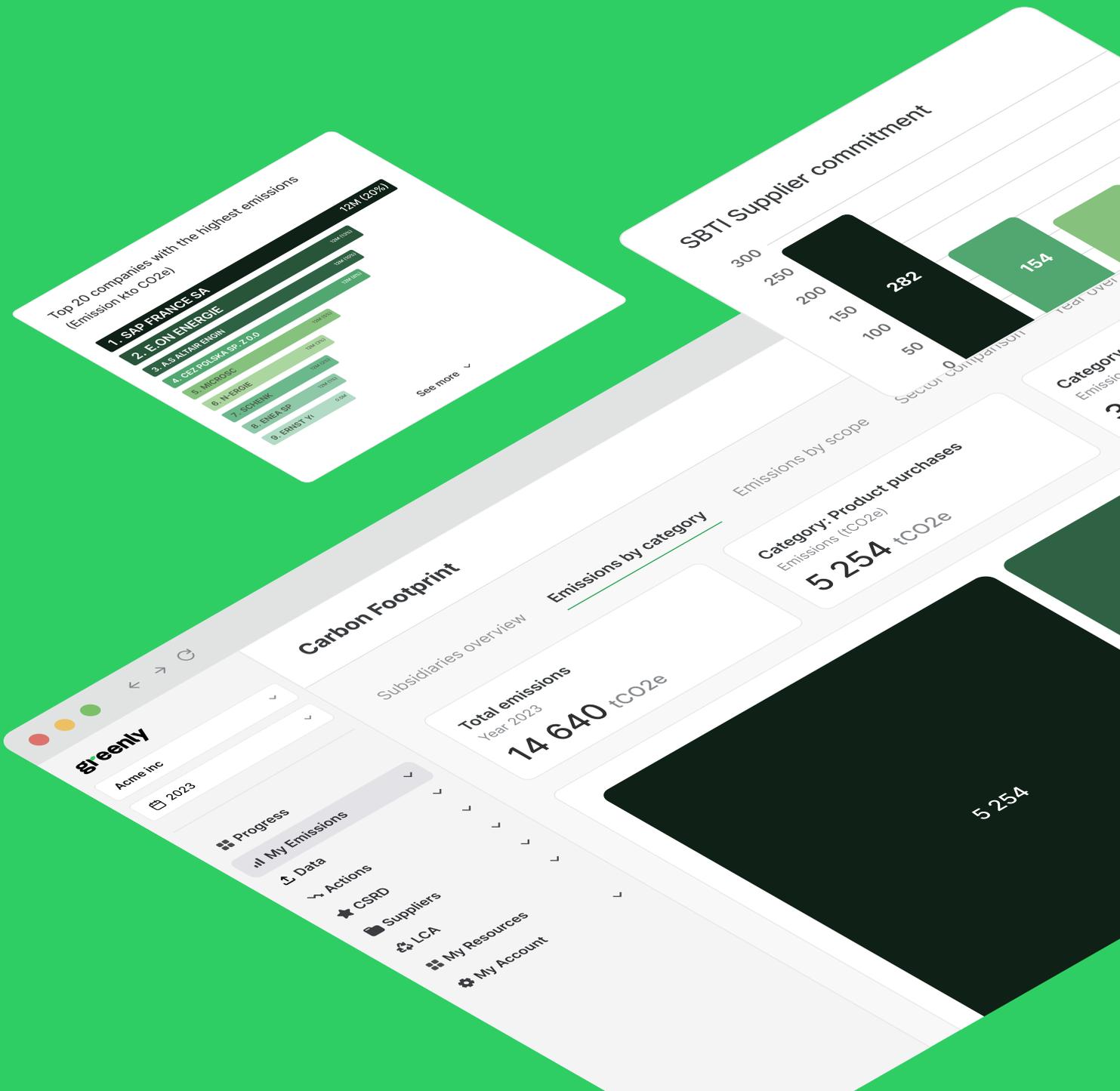


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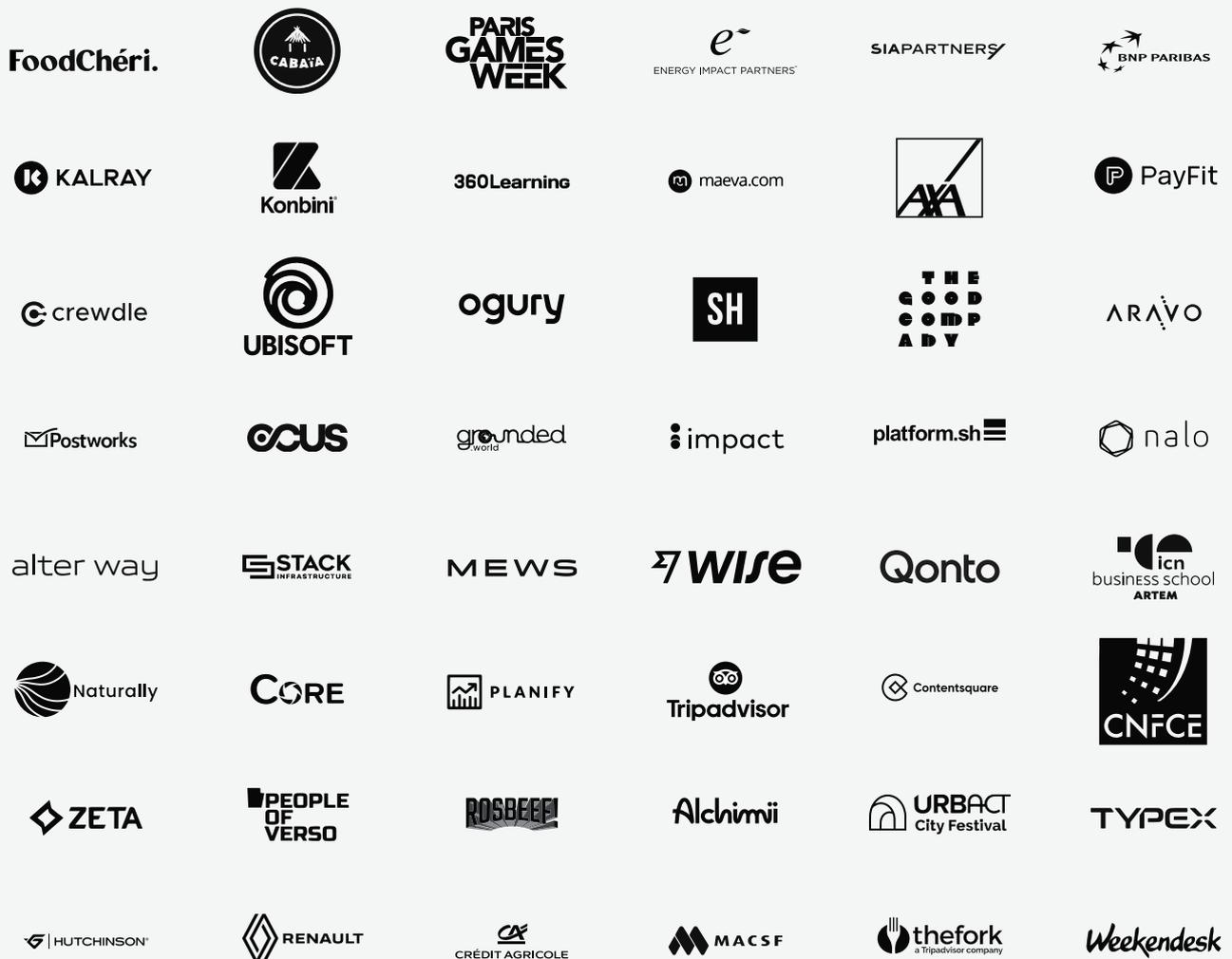
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