
WHITE PAPER

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# Enabling the conscious consumer

Consumers lack the information they need to grasp the environmental impact of their purchase decisions. Advances in technology, dynamic data analysis, and eco-labelling can help fix that.

# Contents



"At Vinted, we believe that resale models are key to enable consumers to make more sustainable choices. An increased focus on circularity will also encourage brands and consumers to think of the longevity of products. This report provides a valuable summary of these developments and adds an even more future-looking perspective, encouraging individuals to take an active role in reducing environmental impact and making informed decisions."

– Marianne Gybels, Senior Director of Sustainability at Vinted.

Vinted is Europe's leading international online C2C marketplace dedicated to second-hand fashion

# Part 1
# The conscious consumer paradox

By the end of the decade, emerging technologies and consumer demands will reshape commerce and usher in "the next economy" — characterized by new ways to exchange value, intelligent experiences that merge physical and digital environments, and a heightened focus on sustainability in product design, manufacturing, delivery, use and end-of-use.

For sustainable products to succeed, they need to be a viable alternative to the less sustainable equivalent product and attract a loyal customer base. At first glance, consumer interest in sustainable products does not appear to be a problem: Evidence suggests strong public support for a sustainable economy:

- Amidst recurring climate chaos — record-breaking heat, fires, storms and droughts — 8 out of 10 respondents to a global survey said they believe the planet is headed for an environmental disaster unless we change our habits.[1]

- Despite recent backlash against sustainability and ESG efforts (which has for example expressed itself as a decrease in sustainable fund investments from the US[2]) this trend is not evident in the opinions of the majority of Americans, as more than 60% stated they would pay more for a product with sustainable packaging[3], and products making ESG-related claims have achieved disproportionate growth 2018-2022 in the US, compared to products without these claims.[4]

- In a recent Mastercard survey, 85% of respondents said they "were willing to change their behavior to get a more sustainable world" and want their everyday purchases to be more sustainable.[5]

- Half of the consumers in Mastercard's survey said they are willing to pay slightly more for sustainable products.[6]

The key challenge is this positive intent often doesn't translate into new purchasing behaviors. The Boston Consulting Group found that 80% of consumers say they consider sustainability when they're making purchase decisions, but less than 10% will pay a premium for sustainable products and services.[7] Similarly, among people who said it was important for them to buy products produced with minimal environmental impact, only about half had made a conscious decision to do so in the previous month.[8]

1. IPSOS Global Trends, 2023
2. The Real impact of ESG backlash, Financial Times, 2023
3. Mastercard proprietary survey with US consumers, July 2023
4. Sustainability in packaging, McKinsey, 2020
5. Consumers care about sustainability, McKinsey, 2023
6. Consumers want it all, IBM Institute for Business Value and the National Retail Federation, 2022
7. Consumers are the key to taking greed mainstream, September 2020
8. Addressing the Sustainability Say-Do Gap, Ipsos, July 2021

## The say-do gap

This gap between what people say and what they do, sometimes called the intention-action gap, is a significant hurdle to sustainable consumption. Why are consumers' day-to-day actions inconsistent with their stated values? The answer is complex and multi-faceted:

- **It's challenging to identify sustainable products and services**
  Most consumers say they don't know which products are good for the environment[9] and they would make greener choices if it was easier to do so.[10]

- **Greenwashing has eroded trust in sustainability claims**
  Consumers often suspect corporate environmental claims to be false or misleading,[11] a practice known as greenwashing. Their skepticism is justified: The European Commission found that more than 40% of online sustainability claims were "exaggerated, false or deceptive and could potentially qualify as unfair commercial practices."[12]

- **Being sustainable is not the consumer's only priority**
  In a 2023 Mastercard survey, consumers said sustainability was not the only factor influencing their purchase decisions. They are also driven by cost, quality, and convenience.[13]

- **Financial pressures impact purchase choices**
  Half of all consumers globally are very or extremely concerned about their personal financial situation.[14] This could cause them to pass up green products which typically carry price premiums close to 30%.[15]

- **There is not a single type of conscious consumer**
  Companies need to be sensitive to nuances in consumer sentiment across regions, product categories, worldviews, and demographics. For example, conscious consumers in different regions or socioeconomic groups might differ in their sustainability practices and the extent to which environmentally conscious decisions influence their everyday habits.

9. KANTAR 2023
10. Mastercard Proprietary Survey with Consumers, US (July. 2023)
11. More than half of global consumers are skeptical of sustainability claims of most brands, YouGov, May 2023
12. Screening of websites for 'greenwashing': half of green claims lack evidence European Commission, January 2021
13. Mastercard Proprietary Survey with Consumers, US (July. 2023)
14. PWC Global Consumer Insights Pulse Survey, February 2023
15. Sustainable Market Share Index, New York University Center for Sustainable Business, April 2023

# Part 2
# Market and regulatory pressure

Despite these challenges, there are signs that the market for sustainable products is viable:

- Products marketed as sustainable are growing their market share and increasing sales at twice the rate of conventional products.[16]
- A new study found that products making claims about their environmental, social and governance (ESG) performance generated outsize growth in 11 of 15 food categories and three out of four personal-care categories.[17]
- A third of UK consumers favor brands with strong ethics and sustainability credentials.[18]

There are ample incentives for companies, regulators, and other stakeholders to equip consumers with the information they need — and can trust — to make more conscious decisions and close the say-do gap. Brands that lead in this effort can bolster their reputations and customer loyalty and seize a competitive advantage.

Ultimately, regulatory efforts to ensure integrity, provide consistency and advance sustainable consumption will force brands to act regardless of their preparation — and sustainability will shift from a first-mover advantage to a marketplace imperative.

## A regulatory push

There is regulation being implemented around the world, enabling a more low-carbon, regenerative economy. For example, in 2022, the state of California, USA, adopted legislation requiring all packaging in the state to either be fully recyclable or compostable by 2032.[19] Additionally, the EU have made a regulatory push with the EU Green Deal, implementing an ambitious climate policy agenda, leading a path which other regions may follow. Specifically, regulators in the EU have taken steps to advance a circular economy that would shift from the conventional linear "take-make-waste" approach towards a system based on the reuse and regeneration of materials and products. Upcoming regulation will enforce more sustainable production and business practices, making it easier, cheaper, and more accessible for consumers to choose more sustainable products and services, acting in alignment with their intentions, and closing the say-do gap.

16. Sustainable Market Share Index, NYU Stern Center for Sustainable Business (April 2023)
17. Consumers Care about Sustainability and Back It up with Their Wallets, McKinsey & Company, February 2023
18. How consumers are embracing sustainability, Deloitte, April 2021
19. A Brief Overview Of California's Plastic Pollution Prevention And Packaging Producer Responsibility Act Sb 54, May 2023

**The Ecodesign for Sustainable Products Regulation (ESPR)** mandates digital product passports (DPP) that enable products to be tagged, identified, and linked to data relevant to their circularity and sustainability. The regulation covers 31 product groups including electronic goods, apparel and accessories, and construction products. Similarly, both the UK and France have adopted national requirements for increased circularity in the fashion industry. The UK has launched a digital ID for the fashion industry to "inform customers of the sustainability credentials of their purchases and facilitate the delivery of circularity at scale."[20] France has adopted a climate and resilience law, including requirements for the fashion industry to analyze and report on the footprint of each garment.[21]

The proposed **EU Green Claims Directive** sets out specific criteria for environmental claims and prohibits unsubstantiated claims. It would require companies to conduct data-intensive life cycle assessments (LCAs) on a regular basis to validate their environmental claims.[22]

The proposed **directive on common rules promoting the repair of goods** would make it easier and more cost-effective for consumers to repair goods rather than replace them. This regulation would establish an online national repair platform and create an obligation for manufacturers to repair products and to inform consumers accordingly.[23]

Finally, the European Commission in 2023 proposed new EU rules to make producers responsible for the full lifecycle of textile products and to support sustainable management of textile waste throughout EU.[24] This initiative is set to accelerate the development of the separate collection, sorting, reuse and recycling sector for textiles in the EU, in line with the EU Strategy for Sustainable and Circular Textiles.

20. Sustainable Markets Initiative announcement, October 2021
21. Climate and Resilience Law, August 2021
22. Proposed new law on green claims, March 2023
23. Rules promoting the repair of goods, March 2023
24. Circular economy for textiles, July 2023

# Part 3
# Eco-labelling will be a game-changer

Eco-labelling, the use of a symbol or label to signify that a product meets specific environmental criteria, is an attempt to give consumers credible sustainability information.

It's a complex landscape that can be difficult to navigate: There are more than 450 eco-labels in use in 199 countries and 25 economic sectors.[25] A label might testify that a product can be recycled, has a low carbon footprint, was sustainably sourced or is energy efficient. A range of organizations are involved in setting criteria, assessing performance and issuing eco-labels — government agencies, non-profits, industry associations, certification bodies, and companies themselves.

They often but don't necessarily require Life Cycle Assessments (LCAs) to verify eco-criteria. These assessments attempt to track the ecological footprint of the product throughout its life cycle — raw material extraction, manufacturing, distribution, consumer use, and end-of-use.

There are three types of eco-labels, according to the International Organization for Standardization:

- **Granted or verified by third-party organizations:** Considered the most credible and comprehensive labels, they assess overall environmental impact throughout the product life cycle. Examples include the EU Ecolabel and Green Seal.
- **Self-declared:** Deployed by manufacturers based on their own assessments and claims, often related to energy efficiency and recyclability.
- **Environmental Product Declarations (EPDs):** These are comprehensive, standardized product information documents that disclose the environmental impact of products based on LCA data. They provide transparent and quantifiable data on various environmental indicators, which allows consumers to compare products.[26] They are commonly used in the EU and US. An example is Declare.


25. Ecolabel Index, accessed September 19, 2023
26. EPD International, 2023

## The future of eco-labelling

Companies need to consider these eco-labelling trends:

- **Eco-labelling will become more prevalent** as more brands seek labels reflecting global standards, moving towards a landscape where not having eco-labels could cause a product to stand out, rather than the other way around.

- **Consumers can become confused and disempowered** by the multitude of eco-labels. This could be addressed by regulations that promote standardization as well as by apps that help people navigate this evolving landscape. The Ecolabel Guide, for example, lets people scan an ecolabel to access its criteria and compare it with other eco-labels in the same product category.

- **The role of big data analytics** will continue to grow because eco-labelling requires extensive data input.

- **AI may play a role** in assisting consumers to select products that best match their individual preferences, e.g. by detecting which types of product attributes a consumer is interested in and thus reducing the complexity and necessity of studying each product's labels.

- **Increased transparency of the sustainability impacts of production** can create pressure on companies to improve their sustainability efforts. If transparency becomes the norm, products without transparent, easily accessible sustainability information could become products avoided by customers.

- **Label data will become more integrated into supply chains**, enabled by blockchain technology that captures traceable, transparent, and unfalsifiable information. For example, Circularise is a supply chain software platform built on a blockchain ledger. It allows companies to validate sustainability claims.

- **Future eco-labels will be based on static *and* dynamic data**. Some aspects of sustainability, such as raw material composition, are static while others are variable — such as product use, reuse, durability and disposal. Companies must consider the dynamic features of sustainability data to ensure their eco-labels are accurate and up to date.

# Part 4
# Dynamic data

There is progress to be made before consumers have thorough and reliable information on products' environmental impact that can inform their purchase decisions. Today, only one company in eight can map their supply chain end-to-end,[27] and executives say inadequate data is the biggest obstacle facing their environmental, social and governance (ESG) objectives.[28]

Challenges include:

- Assigning static product-level CO2 data early in the value chain relies on assumptions likely to **yield inaccurate and incomprehensive estimates**. (Unravel Carbon)
- It is **difficult to track downstream emissions** generated during some stages of the product life cycle, including distribution, retail operations, use and end-of-life management. (European Environmental Agency)
- Initial **calculations can become outdated** due to technological changes in the supply chain relating to manufacturing processes — e.g., new energy sources, materials, or technologies. (PwC | Supply Chain Digitization)
- Calculations early on in the value chain have **limited scope** as they ignore indirect emissions from logistics and customers. (fibrenet.eu)
- Assumptions when calculating downstream carbon footprints tend to **overlook the circular aspects of a product** such as reuse, repair, or the extension of product longevity. (Circularise)

Over the next decade, environmental calculations will become more accurate and bring more credibility to the concept of dynamic impact data, as supply chains leverage emerging technologies that:

- Connect and provide visibility into fragmented supply chains, including the environmental impact of suppliers.
- Share this information with consumers precisely when, where, and how they want it — online or in store.
- Capture and calculate dynamic data.

27. Supply chains playing catch up on visibility technology, Supply Chain, February 2023
28. New IBM Study Reveals Inadequate Data Hinders Progress Against Environmental, Social and Governance Goals; IBM, April 2023

An increasing number of companies are reporting on sustainability indicators, with 96% of the world's 250 largest companies reporting on sustainability in 2022.[29] Furthermore, the EU Corporate Sustainability Reporting Directive will gradually require many more companies operating in EU regulated markets to perform sustainability reporting in the coming years, mandating that companies report on their scope 1-3 emissions.[30] In the US, The United States Securities and Exchange Commission have also proposed legislation that would require companies to report on their greenhouse gas emissions, including scope 3 reporting for certain companies.[31]

## Why dynamic environmental data will matter

Here are four reasons dynamic environmental data will be important in the future:

- **Legislation** requiring brands to display product-level environmental data is on the way, requiring greater transparency and connectivity across value chains. This could further increase the pressure on brands to switch to more sustainable practices. Moreover, businesses will need to collaborate to comply with reporting standards.

- The emergence of **re-commerce marketplaces** has created the need to distinguish the environmental impact when a product's life is extended through reuse, rental, repair, recycling or resale — including the reduction in emissions by delaying or eliminating the need for a replacement.

- **Brands that quantify and publish the dynamic characteristics** of their product's carbon/environmental footprint can **differentiate** themselves as leaders in the transition towards the low-carbon, regenerative economy.

- In the future, product-level **environmental data could be personalized**, meaning it will be linked to the individual behavior of consumers — which exhibit significant variation in product use and disposal. For example, consider the impact of a consumer who wears a shirt five times before relegating it to a landfill versus an individual who wears a shirt 500 times and then sends it to a textile recycler. Accounting for this heterogeneity will empower consumers to manage their personal carbon balances based on their consumption, usage patterns, and engagement with the circular economy.

29. Key global trends in sustainability reporting, September 2022
30. Corporate Sustainability Reporting Directive, 2022
31. SEC's climate disclosure rule proposal explained, 2023

## The recommerce market

The recommerce sector includes peer-to-peer and business-to-consumer second-hand marketplaces as well as brand-operated resale. It is projected to double to $350 billion by 2027, three times the growth rate for the clothing industry overall.[32]

Without comprehensive and dynamic information on the entire product life cycle, it is difficult to demonstrate the environmental benefits of participating in these re-commerce marketplaces — but companies including Vaayu and Carbon Trust are working on it:

| | |
|---|---|
| Vinted | Vinted, an online marketplace for second-hand items, estimates that on average, shopping second-hand fashion on Vinted instead of buying new, demonstrates an emission saving of 1.8 kilograms of carbon dioxide equivalents (kg CO2e). |
| THREDUP | ThredUp, a leading online thrift store, says the purchase of a used item of clothing can have an 82% lower carbon footprint than the purchase of a new clothing item. |
| UPTOWN CHEAPSKATE | Uptown Cheapskate Franchise estimates that choosing used products over new ones can reduce a consumer's carbon footprint by 60% to 70%. |
| Rumage | Rumage estimates that consumers save approximately 500 pounds of CO2e every year when they are buying second-hand clothing instead of new. |

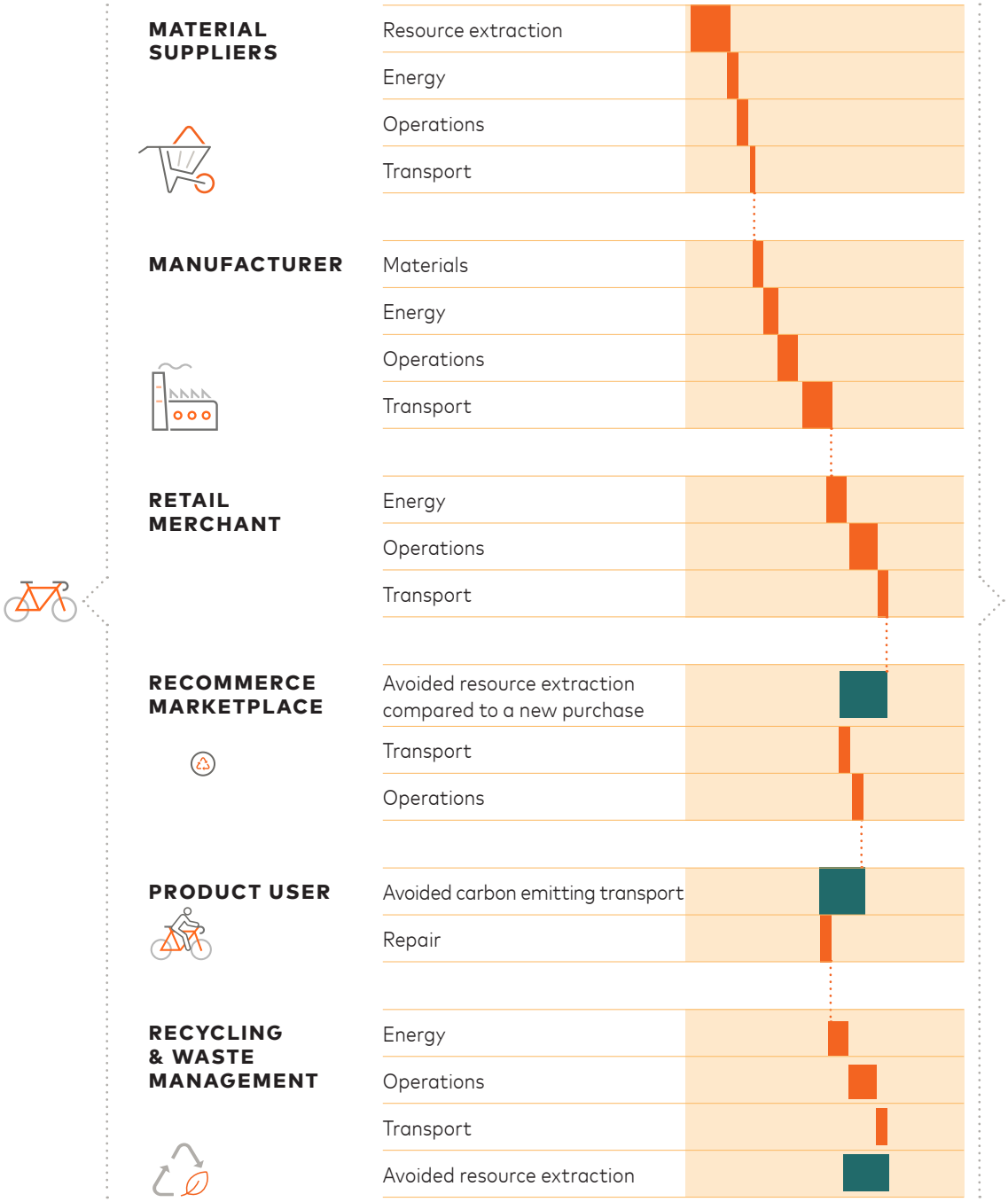
If each stakeholder in a product life cycle provides relevant information on their environmental impact, data input would be streamlined, data analytics standardized, data quality improved, and emission reductions accounted for.

Another enabler supporting the recommerce sector, is the re-sale as a service market. This emerging sector allow for brands to partner with re-sale as a service solutions, supporting opportunities for brands to implement re-sale opportunities for their products, increasing the lifespan and use of products. Examples of companies working with re-sale as a service include Trove, Recurate, and Archive who are all service providers for brands' in-house resale services

32. 2023 threadUP Resale Report

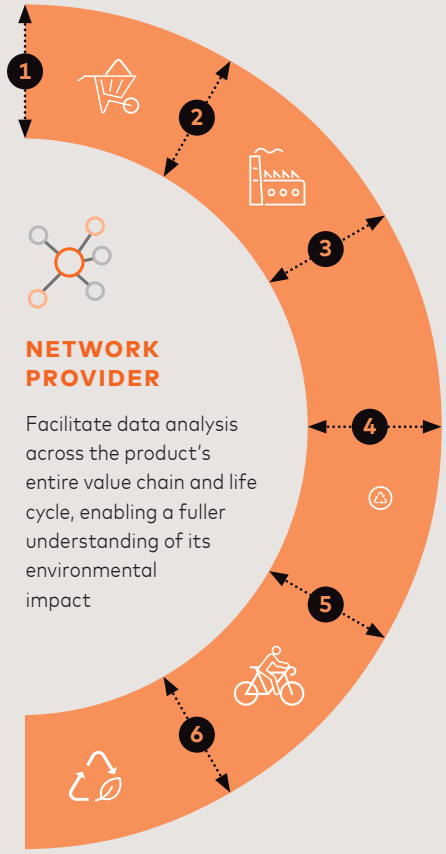
Below is an example of the multidirectional CO2 data flow of a bicycle traversing the entire value chain. Each stakeholder contributes data relevant to their position in the value chain. The bike's environmental impact is thus subject to constant change. The technology provider facilitating the network can then utilize these data inputs to deliver dynamic, real-time analytical insights based on the bike's digital product passport.

## DYNAMIC CARBON DATA




**NETWORK PROVIDER**

Through collecting data and enabling data sharing, the network of dynamic carbon data can enable stakeholders to understand and access their impact of the bike through its value chain, empowering each stakeholder to take action to minimize negative impact




## DYNAMIC CARBON DATA

**1. Material suppliers**
Provide data on origin, composition, and marginal environmental impact of product components

**2. Manufacturers**
Provide data on design, marginal emissions from production, transport and sourcing of product components

**2. Retail Merchants**
Provide data on transport of the product, energy use in facility, marginal emissions from operations, refurbishments and repairs, etc.

**4. Recommerce Marketplaces**
Provide data on transport of the product, transactions, product quality, required repair, pricing trends etc.

**5. Product Users**
Provide data on product performance, durability, repairability, usage patterns, maintenance requirements, and consumer behavior

**6. Recycling & Waste Management**
Provide data on emissions, energy and water consumption from recycling of the product as well as what components can be reused/ recycled to what degree and how waste is disposed of

In this visionary concept of dynamic, multidirectional data flows, impact data could be instantly accessible to all actors through a single value chain network, thereby enabling them to interact and exchange data in a circular manner. As a result, carbon offsetting and carbon taxes could become more accurate and targeted on the journey and usage of individual products.

## Personalized Environmental Impact data, linked to the individual consumer

A lot of work is being done on impact and carbon calculations. A growing number of start-ups and established companies are using AI for data collection, adopting internationally recognized standards for emission calculation, and developing methods for capturing environmental data throughout the value chain to understand the environmental impact of both companies' and the individuals' consumption. If this work continues, there is potential for all stakeholders throughout the value chain to become better informed about their environmental impact, and how to reduce negative impact.

Picture this: in the future, product-level environmental data will be linked to individual consumers and individual products— enabling consumers and stakeholders throughout a product's value chain to manage their own carbon balances with credits and debits based on their consumption, usage patterns, and engagement with the low-carbon, regenerative economy.

In a dynamic model, consumers would see real-time data reflecting how their individualized carbon balances are affected when they extend the lifespan of products through reselling, recycling or reuse. Companies and authorities could use the information to switch to more sustainable production practices, reduce negative environmental impact, and nudge consumers toward sustainable choices by implementing incentive and reward schemes (BCG, 2022).

# Part 5
# Navigating the future

Companies today can leverage technological advancements in digitization, AI, and machine learning to reimagine their data strategy — streamline data collection, improve data accuracy, and facilitate better data-sharing practices. This, in turn, will enable them to explore new digital tools that encompass logistics visibility, prescriptive supply chain analytics, and proactive response management. This work has begun at many companies:

IKEA is leveraging AI and machine learning data analytics to enhance its supply chain and inventory management.

Starbucks has a feature powered by blockchain that shows customers the farm where their coffee was grown and how it was produced and brewed. [33]

Uniqlo has promoted smart logistics and other technologies, such as radio frequency identification technology, to illuminate every node across the supply chain.

Digital tools that provide a comprehensive view of the entire supply chain, primarily used to boost supply chain resiliency and responsiveness, can also provide the data needed to quantify a products' environmental footprint. Companies can use this information not only to reduce negative environmental impact from their business, but also to close the consumer say-do gap, comply with current and future reporting requirements, and enable the low-carbon, regenerative economy.

33. Digital Transformation, May 2019

# Part 6
# One possible path for the next decade

**OUTLOOK**

## 1-3 years

- Regulatory pressures and consumer expectations push the circular economy forward.
- Continued maturing and growth of brand and community led recommerce.
- More companies can test the viability of sustainable products in more markets.
- More information is likely to be available, explaining the environmental impact of purchasing decisions. Consumers will follow the information they trust, enabling them to choose sustainable alternatives and avoid unsustainable ones.

**OUTLOOK**

## 4-6 years

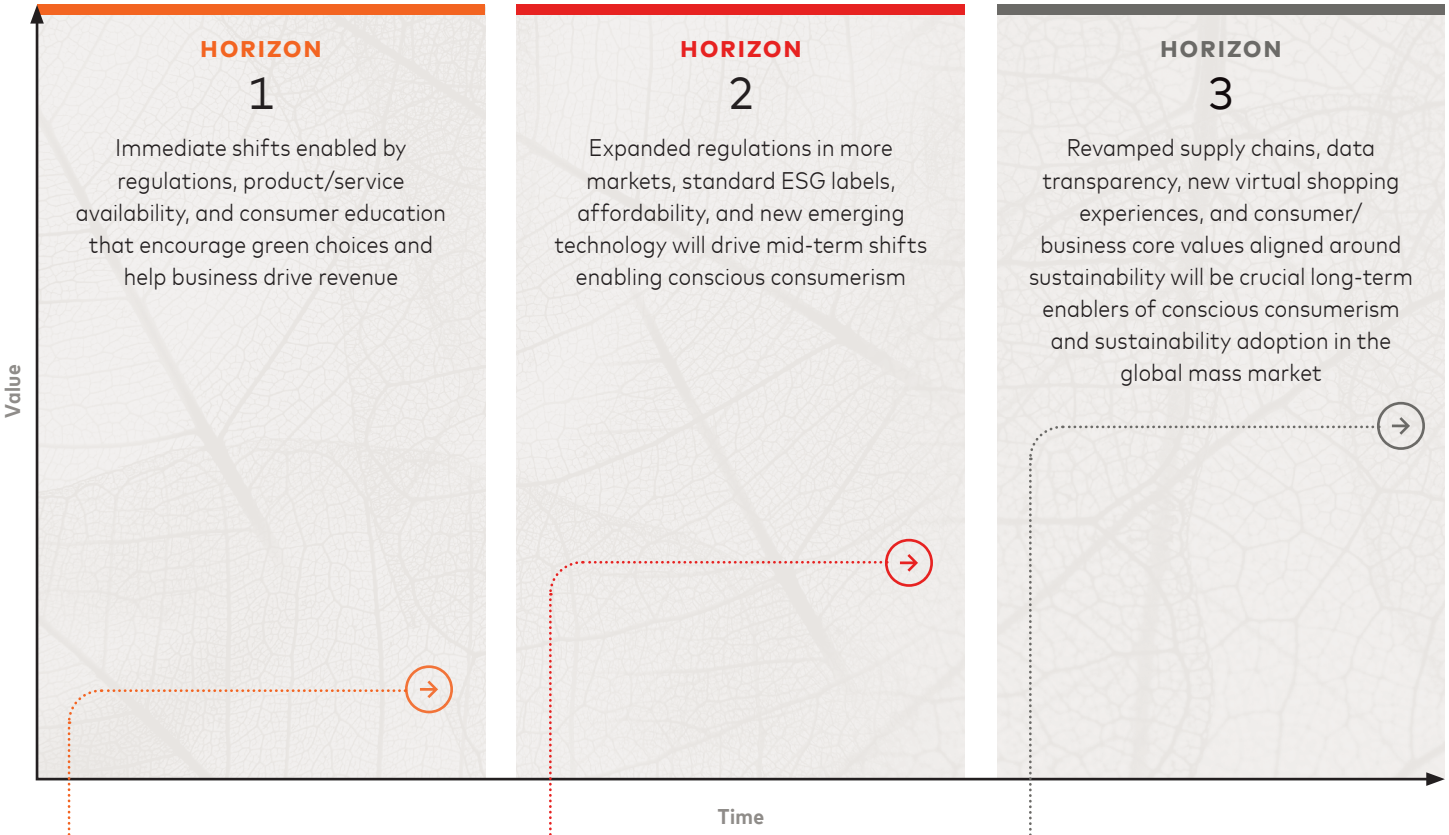
- As the market grows, the green premium will most likely decline — enabling cost-conscious consumers to select sustainable options more often.
- Some jurisdictions might experiment with taxing products and services that are less sustainable to level the playing field.
- Regulations promoting the sustainable economy will likely be enacted beyond Europe.
- New technologies could enter the mainstream:
  - ESG data will be widely available pre-purchase to help consumers understand impact.
  - Advanced carbon calculators could be available to consumers and merchants.
  - Platforms and dashboards will aggregate corporate ESG data to inform business decisions and KPI tracking.
- Digital shopping experiences, powered by augmented and virtual reality, may enable consumers to maximize their shopping experience, while minimizing their environmental impact.

**OUTLOOK**

## 7-10 years

- Standardized eco-labelling could be implemented across markets.
- Supply chain technology might automatically/dynamically quantify product environmental impact for manufacturers, regulators, merchants and consumers.
- Product sustainability standards may converge globally, enabling more consistent and rigorous corporate reporting and the provision of clear, consistent consumer information.
- AI and open data could power product design and business decision making.
- Brands may embed recommerce and circular economy solutions into their business models and build full product life cycle relationships with consumers.

## CONSCIOUS CONSUMERISM HORIZONS




### Stage Unlocks

| | | |
|---|---|---|
| Regulations in Europe like the Green Deal | Reducing the "green premium" | Green supply chains for merchants |
| Diversity in landscape of sustainability offerings for products and services | Regulations in all major global markets | AI and Open Data to maximize business drivers around sustainability |
| Convenient and accessible sustainable products | Standard ESG labels on products across markets | AR/VR shopping journey and experiences |
| Consumer education on how to understand and use sustainability data and impact of purchases | Tech Solutions to manage and share sustainability data | Sustainability as core factor in both consumer purchase decision making and business KPIs |
| | New business models (i.e., Recommerce) | |