



The materials ecosystem

Unlocking the value of waste

How connected systems and people are helping plastic waste reach its full potential

CHAPTER 1

Eco-conscious consumers: How purchasing power drives systems change

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Today's consumers are increasingly purchasing products based on the product's impact on the planet.

In [an extensive 2023 study](#), McKinsey and NielsenIQ examined spending behavior and consumer sentiment related to products with environmental, social and governance claims.¹ The takeaway for consumer packaged goods (CPG) companies is a fact-based business case for making environmentally and socially responsible products and packaging.

An increasing number of companies have set sustainable packaging commitments. Brands are redesigning products to enable recyclability and use of recycled content and incorporating more recycled content to meet consumer brand preference and differentiate from competitors.

Here, we look at a few examples of how consumer support for sustainability impacts the materials ecosystem.

Connections:

Consumers seek sustainable choices — labeling leads the way

The shift in consumer demand for sustainable choices is revolutionizing the plastics industry — and research shows sustainable packaging and labeling is resonating with today's shoppers.

An essential component of achieving sustainability-based brand loyalty is labeling. Veronica Riojas, chief marketing officer, PepsiCo in Latin America, foresees consumers examining sustainability information on packaging similar to how they read nutritional labels now. Consumers will increasingly want to know where a product was manufactured, what kind of "footprint" it left and what natural resources were used in its production.

[McKinsey & Company reports](#) that consumers are willing to pay more for sustainable packaging and buy more products that offer sustainable packaging if these products are available and clearly labeled.² According to a [recent study by Deloitte](#), consumers look at factors such

"They're going to look at the packaging and judge whether it meets their expectations on recyclability," Riojas said at the recent [Sustainability Next Summit hosted by Dow and Fast Company](#).³ "This is going to be a different consumer."

as whether a product is made from recycled materials, how it's sourced, whether it minimizes packaging, its carbon footprint and whether it enables biodiversity.⁴

While consumers are looking to brands to make products more sustainable, a majority would also be willing to take more responsibility for recycling if they had the correct information and access to recycling infrastructure.



Consumers can drive entire industries to change. A growing consciousness about climate change, paired with fast access to information and influence, is rapidly shaping how consumers buy and recycle.



Influences:

Policy for label standardization is gaining momentum



Studies show that recyclability claims are the most important to consumers because they're actionable; these claims tell people whether an item can be recycled.

However, recycling infrastructure is a highly localized system. Depending on where an item is sold, state-level or country-level marketing regulations and guidelines may require a label to specify recyclability based on the availability of recycling facilities in each state or country — and sometimes, in a particular community.

Research by [McKinsey & Company](#) shows that of 30 countries surveyed, representing all regions, most are stepping up efforts to tackle waste management — with more than 40% already having Extended Producer Responsibility (EPR) efforts in place.⁵ Regulatory

measures include reduction and limitation; packaging design and safety; labeling and traceability; collecting, sorting and EPR; and recycling and reuse. Policies to standardize and increase transparency will further empower customers but also highlight challenges, such as confusion about recycling.

A major challenge is that not all plastics marked as recyclable are collected and recycled in all communities. There is no harmonized approach. An example of how an organization is addressing the gap between labels and recycling is [Recycle Check](#), a package-specific labeling platform launched by [The Recycling Partnership](#). This dynamic platform provides localized, real-time package-specific recycling information in seconds.

“Eight in 10 people believe in recycling’s positive impact, yet two-thirds of U.S. household recyclables are wasted each year. Confusion about what and how to recycle is a key driver of this loss. Dynamic labeling solutions such as Recycle Check can help to reduce this loss.”

— Keefe Harrison, CEO,
The Recycling Partnership

Gaps:

Infrastructure challenges create opportunities for collaboration and new economic models



While the increased development and use of transparent labeling can empower consumers in their decision-making — both while purchasing products and while disposing of products — there are new models, like refill and reuse packaging. With refill options, brands offer refillable packaging for items such as detergent, soap and more. This allows the consumer to refill and reuse the original packaging. Plastics continue to play an important role in these new models, as they have the lowest carbon footprint over other materials and can help maintain the properties needed to protect the product.

At the forefront in consumer interest is the U.K., where [more than 70% of citizens](#) are willing to use refill packaging in an effort to make more sustainable choices.⁶ While some brands have begun refill and reuse pilot programs, the [Ellen MacArthur Foundation](#) noted in their 2022 progress report, “Reuse ambitions remain limited, as very few brands and retailers have a reuse strategy in place. Despite an increasing number of reuse pilots, many are fragmented and not embedded in a business strategy that could lead to reuse at scale.”⁷ This remains a complex opportunity with solutions needed to address the logistics, cleaning and economic hurdles to scale these new models further.

Key takeaways

- Brands that use recycled materials in their products and packaging and retailers that curate more sustainable products are wisely pacing their investments to build brand loyalty among consumers, as more brands transition to sustainable materials use and recyclability.
- Consumers will increasingly rely on labeling and clear sustainability information to guide product purchasing decisions. However, consumer interest in sustainable products is outpacing standards in labeling.
- Variabilities in methodologies and local recycling affect how policymakers and brands work together, to provide consumers with more and better sustainability-related information.

Packaging is changing with reuse innovations

In collaboration with our value chain partners, Dow enables reusable packaging. For example, Boox, in partnership with Dow and Pregis, have incorporated [REVOLOOP™](#) recycled plastics resins with 50% post-consumer recycled (PCR) content into the Boox bag, a reusable poly-mailer that can be used 10-plus times before being repurposed into more bags.

Another example is Kimberly Clark’s refillable liquid soap flexible pouches via their Kleenex brand, developed by Printpack, Codiqindsa and Dow to enable recyclability.



UNLOCKING the value of waste

Brands meet consumer demand for sustainability in new ways

Although ideal for food protection and production efficiency, traditional flexible plastic packaging is much harder to recycle. To tackle this challenge, Yooji brought together three pioneers in sustainable packaging: [ePac](#) brought expertise in printing and manufacturing; [Leygatech](#) brought its pioneering film extrusion and machine-direction orientation technology; and Dow provided high-performance polyethylene resins, for the necessary combination of stiffness, orientability and sealability — as well as unique design for recyclability and testing capabilities at [Dow's Pack Studios](#) in Tarragona, Spain.

The result is revolutionary; a film pouch offering outstanding food protection with a transparent section to view the food inside. Crucially, the pouch achieves all this using just one material — polyethylene — to enable recyclability.



“Our customers are parents who particularly care about the way we produce and package our food – and its impact on our environment. Creating a fully recyclable packaging, with zero compromise on food safety, was the natural next step.”

*– Isaure Laguens,
Product Innovation Manager, Yooji*

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