

A woman in a blue long-sleeved shirt is working in a warehouse. She is reaching up to a high shelf filled with cardboard boxes. She is holding a tablet computer in her left hand. The background is a blurred warehouse aisle with more shelves and boxes.

How meeting
sustainability
goals can be
wrapped into
packaging

Sustainability is top of mind for many business leaders because of evolving consumer preferences, corporate initiatives and government regulations. Supply chain leaders can help make packaging – often the first impression of a product – a strategic lever to differentiate the brand and improve an organization’s sustainability profile.

Companies that align their brands with their consumers’ sustainability priorities can build brand loyalty and set up the company for future growth. In fact, according to the 2021 [EY Future Consumer Index \(FCI\)](#), 55% of the total consumer packaged goods (CPG) market growth from 2015 to 2019 came from brands investing in sustainability, though they make up only 16% of products.

Traditional packaging encompasses many materials that contribute to excess waste: plastics, corrugate, paper and other materials. Sustainable packaging, on the other hand, helps drive consumer behavior, including purchasing decisions. According to the [FCI](#), 55% of consumers consider the ability to recycle or reuse packaging and the product when making purchasing decisions. So it is not surprising that the majority of the 25 largest CPG companies have [committed to increasing recyclable content, minimizing packaging or reusing material](#).

At the same time, the shift to sustainable packaging is also being driven by various new regulations, such as the European Union’s (EU) January 2021 levy on non-recyclable plastics and the U.S. Security and Exchange Commission (SEC) June 2021 corporate disclosure rules proposal on environmental and climate risks. These moves mean that sustainable packaging is a priority for CPG companies and other companies in all industries that ship a product.





Five pillars of sustainable packaging

How can companies use packaging to reach sustainability requirements and strategic goals? First, they may need to understand the five pillars of sustainable packaging:

- 1 Reductions:** packaging with less material than previous iteration
- 2 Reusable:** can be used multiple times while maintaining functional integrity
- 3 Recyclable:** made from new materials and can be recycled after use
- 4 Post-consumer recycled (PCR):** made from recycled materials collected after consumer use
- 5 Compostable:** materials that degrade or break down when put into a compost post-use



Figure A highlights how CPG companies are approaching the sustainability pillars across both primary and secondary packaging:

	Reductions	Reusable	Recyclable	PCR	Compostable
Primary – flexible film	<ul style="list-style-type: none"> Flexible film is commonly thought of as a reduction from rigid plastic containers 	<ul style="list-style-type: none"> Metal tins and glass bottles that are returnable are available as part of a service with select retailers as an alternative 	<ul style="list-style-type: none"> Recycling infrastructure is lacking: requires more processing due to multiple layers of film Single layer (mono) film has recently launched that can be recycled through in-store drop-off 	<ul style="list-style-type: none"> PCR flexible films are being introduced into the market Prototypes with 30% PCR materials have recently launched 	<ul style="list-style-type: none"> Bio-based films replacing petroleum are available from several packaging suppliers An industrial compostable chip bag has recently been launched
Primary – glass bottles	<ul style="list-style-type: none"> Glass bottles that have a reduced weight are in the beverage market 	<ul style="list-style-type: none"> Glass bottles that are returnable are available as part of a service with select retailers 	<ul style="list-style-type: none"> Glass bottles are commonly recycled 	<ul style="list-style-type: none"> Glass bottles made with 30%-70% PCR materials are in the market Company recently switched to plastic 100% recycled polyethylene terephthalate (rPET) from original glass bottles 	<ul style="list-style-type: none"> Glass does not degrade in compost
Primary – plastic bottles	<ul style="list-style-type: none"> Plastic bottles with reduced size are in the beverage market 	<ul style="list-style-type: none"> Glass bottles that are returnable are available as part of a service with select retailers as an alternative 	<ul style="list-style-type: none"> Plastic bottles are commonly recycled 	<ul style="list-style-type: none"> PCR 100% rPET bottles have recently been launched 	<ul style="list-style-type: none"> Plant-based resins are available from suppliers for bottles that can be composted at industrial facilities Spirit bottles are in the process of being launched
Secondary – cartons	<ul style="list-style-type: none"> Right-sizing of cartons commonly advertised theme in the market 	<ul style="list-style-type: none"> Metal tins that are returnable are available as part of a service with select retailers as an alternative 	<ul style="list-style-type: none"> Cartons are commonly recycled 	<ul style="list-style-type: none"> PCR cartons are available in the market Company recently switched to plastic 100% rPET carton as an alternative 	<ul style="list-style-type: none"> Cartons are compostable, but recycling is more common

Determine what “sustainability” means to your consumer

The definition of sustainability varies for different consumers and business stakeholders. For a shift to sustainable packaging to have the greatest impact, the changes in new packaging may need to align with what target consumers value from a sustainability perspective. For example, if consumers are city dwellers, a home compostable packaging option may not be feasible given urban infrastructure. Instead, a more suitable strategy is reusable packaging or packaging from a brand that has made a concerted effort to make recycling more accessible. A pioneer in addressing the consumer demand for single-serve beverages has successfully rolled out a sustainable packaging initiative to address consumer desires to make single-serve more sustainable. Its single-serve containers are made with 80% recycled aluminum and the company also provides a recycling bag that, once full, can be returned via pre-paid shipping, drop off at a retailer, or through curbside pick-up. In 2019, approximately one-third of the company’s single-serve containers were recycled globally, and that number is anticipated to rise given the additional convenient collection options rolled out in 2021.


Taking steps toward sustainable packaging

To move toward packaging sustainability, companies should take the following steps:

- 1 Conduct in-depth consumer research to determine what sustainability means to your core consumer
- 2 Determine how you may need to change your packaging in terms of functionality, appearance, manufacturing processes, material availability, supply chain constraints and product shelf life
- 3 Develop the business case to ascertain financial impact, both in terms of costs to make the change and potential increased long-term value, and create a timeline for the transition

Shifting to fully sustainable packaging could take years, but leaders can approach the task in a phased, strategic approach. They can initially tackle preliminary elements of the packaging value chain that are low in effort and cost but offer visible improvements to the consumer and other stakeholders. Focusing on potential quick wins resulting in cost savings or otherwise creating value can build momentum for the more complex initiatives. Considering a pilot rollout of a sustainable packaging initiative in a targeted test market can help companies validate demand and further understand challenges at risk of being overlooked during planning.

Figure B highlights some additional transition considerations when evaluating initiatives across the five pillars of sustainable packaging:

Approaches to sustainable packaging		Example transition considerations
Recyclable**		<ul style="list-style-type: none"> ▶ Review and update any recycling constraints – inks, labels, ways to avoid food matter
Reductions		<ul style="list-style-type: none"> ▶ Shipment testing to ensure product integrity
PCR		<ul style="list-style-type: none"> ▶ Shelf life testing (primary only) ▶ Component cost ▶ Machinability, plant run rates
Compostable		<ul style="list-style-type: none"> ▶ Home vs. industrial compostable ▶ Supply availability ▶ Shelf life testing ▶ Component cost ▶ Machinability, plant run rates
Reusable		<ul style="list-style-type: none"> ▶ Supply chain or fulfillment model ▶ Shelf life testing ▶ Costs ▶ Partnerships

**Exception is recyclable flexible packaging – recycling infrastructure, supply availability, shelf life, component cost, machinability and plant run rates to be considered

Beware of potential challenges in changing packaging

Shifting to sustainable packaging may have considerable challenges. It is important to evaluate potential pitfalls in your sustainable packaging road map. Is there a consumer subset who may perceive the change to sustainable packaging as lower quality? Is there pending legislation in a particular country that could shift the economics in favor of sustainable packaging? Educating the public about the benefits of sustainable packaging and helping to ensure the messaging is understood before purchasing behavior is affected is key.

Internal resistance to change can also pose a significant challenge. For example, finance can contest a change to sustainable packaging due to a potential cost increase, especially when the cost of goods is already running high and in the face of constrained raw materials. If that is the case, perhaps the first sustainable packaging initiative can be rightsizing or packaging reductions that will result in cost savings.

At the same time, operations can contest sustainable packaging due to the impact on production line run rates. Current packaging materials and manufacturing processes are fine-tuned over decades; introducing new materials and methods will likely require capital expenditures for retooling, thorough production line trials and operator training. One approach can be to leverage third-party manufacturing to initially produce the sustainable packaging offering while demand is validated. Third-party manufacturing can also provide ample time to retrofit company-owned facilities properly.

Change management can be essential in the shift to sustainable packaging. To help overcome transition concerns, supply chain leaders should confirm early buy-in within their organizations. To support this, leaders will need to share a vision of the future and how sustainable packaging is a key component of the organization's future. Companies implementing these changes now will be prepared when consumer sentiments or regulatory changes require shifts in the future.

How to accelerate sustainable packaging initiatives

To make the shift in packaging, supply chain and operations leaders can help companies consider several options to accelerate their evaluation and transition:

- 1** **Take a centralized approach** and start with a global-level inventory of all ongoing sustainable packaging initiatives to identify opportunities to leverage lessons learned and consolidate efforts. For example, Kroger is establishing a benchmark of its current product packaging footprint to develop an informed strategy to achieve a goal of transitioning to 100% recyclable, reusable and/or compostable packaging by 2030.
- 2** **Educate key stakeholders**, including customers, distributors and suppliers, about packaging R&D and innovation and leverage suppliers' consumer research capabilities to identify and validate sustainable packaging initiatives. For example, Rheem Manufacturing, a US-based water heater and HVAC manufacturer, has made educating stakeholders on sustainable installation and sustainable product recycling a top priority.
- 3** **Develop partnerships with companies throughout the packaging value chain** to reap opportunities for scaling, exposure and speed to market, such as Procter & Gamble's agreement to replace some virgin plastics with recycled plastic materials from Eastman. Companies can work with suppliers to develop proprietary offerings that can lead to a competitive market advantage.



Conclusion

Consumers are increasingly placing a high premium on using products from companies that are making environmentally conscious decisions. Businesses that invest in packaging sustainability are positioning themselves to provide long-term value for their organizations by building trust with their consumers and investors, deepening supplier relationships and contributing to the drive toward more responsible business practices throughout the industry. The journey is a long-term commitment, but to meet evolving consumer preferences and be prepared for regulatory changes, it is one worth taking.

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