Supply Chain Top 25: What the Leaders Are Doing to Enable Sustainable Packaging

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Initiatives: CSCO Strategic Leadership

The purpose of the Gartner Supply Chain Top 25 is to share lessons from leaders, raise the bar for all and cross-pollinate ideas. In this year’s Top 25, sustainable packaging was a common theme. Supply chain leaders can use this research to learn about leading strategies and best practices.

Get the full story
This content is part of a larger body of research on this topic.

The Gartner Supply Chain Top 25 for 2021: Insights on Leaders

Overview

Key Findings

- Waste reduction is the leading sustainable packaging approach in 2021, overtaking recycling from our 2019 assessment. Leaders are focused on reducing overall packaging waste, reducing the amount and types of plastics used, and eliminating problematic packaging materials.

- Recycling initiatives, although second behind waste reduction, have shown a steady increase over the past two years. The primary focus is on plastics, but initiatives also include increasing the recycled content in all packaging materials and assuring that packaging manufactured and sold can be recycled.

- A commitment to packaging and product innovation is one of the most significant findings from this analysis. Many Top 25 organizations have committed to redesigning their packaging, focusing on alternative delivery systems and delivering new sustainably packaged products.

- The emerging trend to watch is the implementation of internal, self-governing, sustainable packaging guidelines and criteria for new products and packaging.
Recommendations

Supply chain leaders responsible for strategic leadership to support environmental and social governance (EGS) goals should:

- Drive sustainable packaging strategy discussions across your broader organization by referencing examples in this research and identifying where they should be applied to support the biggest opportunities and challenges in your business.

- Build a comprehensive sustainable packaging strategy by embracing the importance of packaging waste reduction. Reducing the amount of packaging used, thus reducing waste, is the best starting point for the environment and drives efficiencies across the supply chain.

- Reduce the reliance on costly substitution of packaging materials and downstream manipulation by promoting the importance and benefits of upstream innovation to improve both product and packaging to meet sustainability goals.

Analysis

In 2019, Gartner published *A Guide to the Packaging Sustainability Initiatives of the 2019 Gartner Supply Chain Top 25*. The years immediately preceding that inaugural assessment of the Top 25’s sustainable packaging strategies and commitments were marked by several events that heightened the global awareness of the harm occurring to the planet from mismanaged packaging waste. These events led to unprecedented corporate commitments:

- Increased social activism led by individuals such as Greta Thunberg, the 16-year-old climate change activist from Sweden

- Greater awareness of the crisis of plastics in our oceans

- China's refusal to be the end destination for the world's unwanted used packaging
The 2021 analysis of the Gartner Supply Chain Top 25’s sustainable packaging strategies reveals the evolution and maturity that is occurring. We now see packaging waste reduction as the leading overall initiative slightly edging out packaging recycling efforts. This is an important development as waste reduction is the most preferred approach to sustainability per the waste hierarchy. ¹ Almost all companies in the Top 25 had some level of public-facing goals around packaging waste reduction. Over two-thirds have set specific goals related to recycling of packaging — either in the ability to recycle their packaging or increasing the use of recycled content in the packaging.

The most revealing goals centered on a commitment to innovation to improve products and packaging from the design stage. Organizations are setting their sights on redesigning existing packaging (Inditex’s Zara brand is working to redesign all of its packaging by 2023 ²), assessing new delivery methods including bulk, or committing to test or launch a specific number of new packaging formats. The nine top packaging sustainability trends identified in 2019 remain the same — but the participation rates across the Top 25 have increased in six of the nine categories. Figure 1 highlights the nine trends identified in 2019. The top areas of increased commitment are reduction, recycling and innovative new approaches to packaging and product delivery.

Figure 1: Top Packaging Sustainability Trends Show Overall Increase in 2021
Sustainable Packaging Progress Is Being Driven by Reducing Packaging Waste

Waste reduction is a strategy to cut off the proliferation of potentially harmful packaging getting to the environment by either reducing it at its source of manufacture or eliminating it altogether. The Supply Chain Leaders’ Guide to Reducing Packaging Waste describes the concept of the waste hierarchy model and offers best practices to prevent waste. From our analysis of the 2021 Top 25, we now see waste reduction as the leading strategy. It’s easy for this approach to be overlooked as it reveals itself in corporate filings more than in on-pack or brand positioning, as recycling is more relatable to the average consumer. However, it’s important to highlight that one of the benefits of packaging waste reduction is that it is a clearly measurable, straightforward and impactful practice. Many of the other sustainable packaging strategies have trade-offs — such as an increase in carbon footprint when moving from plastic to glass. In addition, recycling of fully recyclable packaging is hindered by consumer behavior, confusion over how to recycle and a lack of municipal resources to process recyclable materials.

Packaging waste reduction is being defined in several ways, and it’s being executed in practice in many more ways. The commitment to reduce packaging waste overall is the most common approach. More targeted commitments include reductions in the amount of plastic, the amount of single-use plastic and the amount of virgin plastic used in packaging. Reducing and eliminating packaging deemed problematic is another focus area. Plastics such as PVC and EPS (styrofoam) are commonly being replaced with materials that are easier to recycle and cleaner to produce. Another focus area is the elimination or replacement of mixed materials such as multilayer plastics or packaging formats that combine different materials such as paper and plastic, as they cannot be separated and, therefore, are not recycled.

Targeting a total reduction in packaging by weight is a direct way to track and measure progress. This approach is best served through a lens of reducing unnecessary packaging or reducing the size of packaging. However, organizations must be careful not to simply take a weight reduction as a sign of progress. In years past, lightweight plastics, with low recycling rates, have replaced heavier but fully recyclable materials like fiber boxes, aluminum and glass packaging.
In the effort to eliminate all plastic in its packaging by 2025, Apple has replaced plastic trays, wraps, foam cushioning and protective plastic films with paper-based alternatives ³ that are highly recyclable. McDonald’s is taking a pragmatic approach to reduce the packaging it uses by lightweighting, downsizing and eliminating, where possible, through innovative design to eliminate common features such as drink lids. In the Netherlands, a conversion from boxes to paper wraps saved McDonald’s 250 metric tons of packaging. ⁴ Lenovo has had a strategy to minimize the consumption of packaging materials. Through a redesign of its X1 Carbon/Yoga retail packaging, Lenovo reduced 1.4 kg of packaging per box and doubled the number of units per pallet — eliminating 400 tons of packaging and resulting in a savings of over $2.6 million per year. ⁵ This Lenovo example shows that waste reduction efforts can have dual benefits.

Organizations Ramp Up Approaches to Improve Recycling

Consumers, NGOs, governments and brand owners are acknowledging the multiple challenges limiting the success of recycling. Global recycling rates remain low, and plastics are one of the least likely materials to be recycled. A 2018 study estimated that 91% of plastics produced are not recycled, ⁶ and rates have not increased since. In many areas of the world, recycling rates have decreased during the pandemic. Given this fact, we see a concerted effort across the Top 25 to increase recycled content in packaging, make packaging recyclable and increase the use of recycled and renewable packaging.

Nearly half of the Top 25 organizations have committed to making plastic packaging reusable, recyclable or compostable. Many are committing to making 100% of their packaging fit this criterion by 2025 or 2030. The details of the commitments and the signatories of one of the most popular foundations can be found via the Ellen Macarthur Foundation and its work fostering a vision for a New Plastics Economy. ⁷ Almost two-thirds of the Top 25 have joined one or more foundations, consortiums or alliances. A representative list of these organizations is found in Note 2.

Adding or increasing the proportion of recycled content in plastic packaging is one of the leading recycling initiatives. Taking this further is to commit to specific levels of postconsumer recycled content (PCR). This poses difficulties of supply (recycling rates are still low and the aftermarket for PCR is still developing), and the practice of commingling plastics in municipal recycling leads to high processing costs and the risk of contamination of materials. Commitments to the use of PCR and recycled content in plastic packaging range from 5% to 100% with the average in the range of 20% to 25%.
Diageo has committed to achieve an average of 40% recycled content in all plastic bottles by 2025 and a target of 100% by 2030. Johnson & Johnson (J&J) has set a target of 15% (by weight) recycled content across all their Consumer Health plastic packaging. This illustrates the importance of assessing what is technically viable with current plastic materials and what is allowed from a consumer safety and regulatory perspective. Technical advancements have enabled PET plastic bottles to be made from 100% recycled content. Nestlé Waters and Danone partnered with startup Origin Materials to form the NaturALL Bottle Alliance to make plastic bottles from 100% sustainable and renewable resources. We also currently see 100% recycled PET bottles being introduced by Unilever and Coca-Cola in the food and beverage category.

Organizations Commit to Innovation to Drive Lasting Impact

One of the most positive revelations from our analysis of the sustainable packaging commitments of the Top 25 is the willingness of organizations to challenge conventional practices and to look upstream, utilizing innovation to drive measurable impacts. Much of our current efforts do need to be focused on improving packaging and processes that we use today — gradually increasing recycled content in existing formats as an example. But lasting change or movement away from plastics or single-use packaging will require upstream innovation.

One of the biggest trends of the past year has been the introduction of paper-based packaging to replace glass or plastic, even for beverages. Diageo partnered with a venture management company to launch a packaging technology company, Pulpex, driving the creation of a 100% plastic-free paper-based bottle, which will be piloted on its Johnnie Walker brand. Aligned to the paper-based packaging innovation trend, Colgate-Palmolive has released some of its Tom’s of Maine deodorant in fiber-based packaging.

Reuse solutions are another emerging trend to combat single-use packaging. L’Oréal has announced plans to introduce 74 products in reusable packaging by 2022. The reusable packaging will span different formats including bottles, jars and dye kits. In a continuing effort to reduce the impact of packaging on the environment, Nike will expand the use of its SIOC (ships in own container) shoe box that was introduced with its Space Hippie shoe line introduced in 2020.
Additional cross-industry innovations range from converting single units to bulk shipments all the way to connecting packaging in a digital environment. Lenovo has reduced the amount of packaging needed to transport its laptops by developing bulk packaging to replace traditional single-unit packaging, enabling the company to ship 20 to 50 laptops in a single carton. In an effort to address the challenges of recycling hot beverage cups, Starbucks is developing 100% compostable and recyclable beverage cups with a planned introduction in 2022. Inditex's Zara brand is working to redesign all of its packaging to make it more sustainable. Areas that will be addressed include reducing the number of raw materials and making the materials used easier to reuse and recycle. P&G has led a coalition of companies to address the challenges of sorting packaging in recycling facilities. Often this is done manually or with basic mechanical equipment. The HolyGrail 2.0 consortium is testing a special bar code known as digital watermark technology to turn packaging into intelligent objects.

**Directing Sustainable Packaging Development Is Being Done Via Internal Training and Brand-Specific Playbooks**

An emerging practice observed by a small handful of the Top 25 is the development of customized training and guidelines to assure consistent delivery and compliance with sustainable packaging. This customized approach will likely be a best practice among leading companies. Broad commitments such as the most common one — 100% of plastic packaging to be recyclable, reusable or compostable — come with challenges associated with the specifics of the packaging format, product protection requirements and ability to recycle materials in practice.

A more refined approach is to take the time to develop sustainable packaging goals specific to your packaging and products and then to create internal processes to communicate these requirements cross-functionally. Schneider Electric has developed a Sustainable Packaging Guideline that lists mandatory and legal requirements to achieve its sustainable packaging goals. Capturing best practices and sharing internal knowledge on circular materials for products and packaging are achieved through its Circular Materials Playbook.
In order to assure meeting its goals to reduce plastic packaging and packaging waste, 3M requires every new product entering its new product commercialization process to demonstrate how it aligns to its corporate goals through a Sustainability Value Commitment.  

Bristol Myers Squibb (BMS) has incorporated life cycle analysis (LCA), a detailed assessment of the environmental impact of a material, to support informed product packaging decisions. By using LCA software, BMS intends to drive continuous improvement by giving a detailed analysis of the impact of proposed changes to packaging.  

Evidence

The data for this research is derived from a compilation of publicly stated information regarding packaging sustainability commitments, company websites and activities of the companies ranked in Gartner’s 2021 Supply Chain Top 25.


2. Zara, Impakter Index.


4. Feeding and Fostering Communities, McDonald’s.

5. Smarter Technology With a Purpose, Lenovo.

6. A Whopping 91% of Plastic Isn't Recycled, National Geographic.


8. Our 2030 Targets, Diageo.


10. Hellmann's Switches to 100% Recycled Plastic Bottles for UK Range, Unilever.

11. Endlessly Refreshing: Coca-Cola North America Rolls Out Bottles Made From 100% Recycled PET Plastic, Coca-Cola.

Note 1: Origin of the Waste Hierarchy

The waste hierarchy’s origins can be traced to Ad Lansink, a politician in the Dutch Parliament. In 1979, Lansink proposed the waste hierarchy as a series of preferential steps to reduce environmental impacts from waste disposal. Within the model, which has been widely accepted by environmental management practitioners and incorporated into government legislation, are five to six steps of waste management. The hierarchy illustrates ways to maximize the use of materials and minimize the impact on the environment. Slight variations in the model are found, depending on definitions of avoidance and recovery, but all conform to the original notion developed by Lansink in the 1970s.

The most preferred environmental option for packaging is waste prevention followed by reuse. After these two options, the next option is recycling followed by energy recovery and disposal, which are the least favorable options in terms of environmental impacts.
Note 2: Representative Sustainable Packaging Foundations, Organizations and Consortiums

Table 1: Representative Sustainable Packaging Foundations, Organizations and Consortiums

(Enlarged table in Appendix)

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<td>The Fashion Pact</td>
<td>The Fashion Pact is a global coalition of companies in the fashion and textile industry (ready-to-wear, sport, lifestyle and luxury), including their suppliers and distributors. All of them are committed to a common core of key environmental goals in three areas: stopping global warming, restoring biodiversity and protecting the oceans. One of the goals is to eliminate plastic bags.</td>
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Source: Gartner (September 2021)

Recommended by the Author

Some documents may not be available as part of your current Gartner subscription.

- 3 Steps to Develop a Packaging Sustainability Strategy
- Consumer Goods Trends: Environmental Sustainability
- Ignition Guide to Assessing Materiality to Formulate a Sustainability Strategy
- Executive Leadership: Sustainability Primer for 2021
Gartner Answers Supply Chain’s Most Common Concerns From Earth Day 2021

Video: Sustainable Snacking Through Sustainable Packaging at Mondelez

Video: How Dell Is Working to Change Our 2030 Packaging Future Through a Strategy of Sustainable Innovation

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