Optimize Packaging to Deliver Improved E-Commerce Customer Experiences

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Initiatives: Supply Chain Customer Fulfillment and Collaboration

E-commerce has increased the importance of packaging to meet the challenges of assuring safe, economical and sustainable fulfillment. Supply chain leaders responsible for customer fulfillment can use this research to understand how packaging is leveraged to ensure positive customer experiences.

Overview

Key Challenges

- E-commerce has elevated the requirements for packaging to protect products and the role of packaging in ensuring positive customer and consumer experiences.

- The rigor of small parcel and last-mile delivery has led to an increase in the amount of packaging used, leading to consumer concerns regarding e-commerce's impact on sustainability and the environment.

- While packaging has a direct impact on customer experience, safe transport and shipping costs, the selection and signoff for packaging often sits outside the responsibility of supply chain leaders.

Recommendations

Supply chain leaders of customer fulfillment responsible for supporting e-commerce fulfillment initiatives should:

- Elevate the customer experience by delivering on customer expectations through robust yet efficient distribution packaging designs.

- Address consumer, corporate and customer sustainability concerns by focusing on packaging improvements that reduce materials and improve performance.

- Drive increases in sales and optimization of costs by focusing on intelligent packaging designs.

Introduction
Packaging is often the primary responsibility of partners in R&D, marketing and procurement. Yet it has a significant impact on customer experience (CX). It can drive likelihood to repurchase, prevent damages, meet sustainability targets and optimize costs.

In this context, packaging encompasses:

- The package for the product itself (primary packaging)
- Any cartons or bags for shelf presence or unitizing (secondary packaging)
- The shipment container the consumer receives (outer packaging)
- The shipping case that manufacturers use to ship their products in bulk to retailers or distribution centers (tertiary packaging)
- Protective packaging such as dividers and cushioning
- Labels containing customer and product information, branding and bar codes

Without direct purview over packaging, supply chain leaders can be left out of critical decisions that affect their own goals. Yet packaging has myriad cost implications for fulfillment, is likely to be the first tangible experience consumers have with products sold via e-commerce and speaks volumes about the brand to customers. In a recent survey, 39% of respondents indicated that packaging damage would discourage them from buying the product from the seller ¹ (see Figure 1). Partnering with internal R&D and packaging engineering resources, as well as with marketing, procurement and logistics teams, will ensure supply chain leaders can influence packaging decisions so they are robust and meet consumer needs.

**Figure 1: Packaging and Product Damages in E-Commerce Have a Negative Impact on Brand Reputation**
In 2019, U.S. e-commerce grew 14.9% to 16% of total retail sales, which means that the demand for efficient packaging will only continue to increase. ² On Prime Day 2019, Amazon sold more than 100 million products in the U.S. alone, and more than 175 million products globally. ³ Consumers bought more than 1 million toys, 200,000 televisions and 100,000 lunchboxes on that day. In short, a tipping point has been reached wherein packaging has a far greater impact on margins than ever before. The coronavirus pandemic in 2020 has increased consumers’ frequency and use of e-commerce, accelerating the previous growth as consumers have changed their behaviors as they navigate a social distancing economy. ⁴

This research describes best practices that supply chain leaders responsible for customer fulfillment can use to own or influence packaging decisions that have a direct impact on e-commerce outcomes, both B2B and B2C.

Analysis

Drive Repeat Purchases and Delight Customers Through Thoughtful Shipping
Container Designs

Gartner, Inc. | 723288
Retaining customers begins with their first experience with the brand; disappointing a customer on their first delivery severely limits your ability to earn a repurchase. Packaging has a direct impact here. After all, it’s often the first tactile interaction a consumer has with your brand. Good packaging should ensure products arrive intact while great packaging can bolster confidence in the product, as well as provide an aesthetically pleasing experience consistent with consumers’ expectations of the brand. Both direct and indirect sellers must understand how those expectations translate to the unboxing experience — whether that’s frustration-free packaging for a new toy or a gift — like unwrapping for a luxury product. B2B considerations include having the correct information on labels, minimizing damages and reducing the amount of packaging waste, which can be a powerful driver in repeat sales from eco-conscious customers.

**Delight customers and grow lifetime value by maximizing the role of fulfillment packaging.**

According to WestRock’s 2018 Packaging Matters Study, 63% of consumers have made a repeat purchase because of the appearance or aesthetics of the packaging. 5 Packaging should help protect against damage in transit. But beyond broken merchandise, consumers will praise packaging that meets or exceeds expectations and call out packaging that is poorly designed, hard to access or wasteful.

Engage your marketing teams, promote great customer experiences and avoid embarrassing negative feedback by recognizing that packaging design contributes to unboxing shareability. The trend of unboxing videos among influencers and consumers alike means that their first impression of a product and its packaging might be shared across social networks. In 2018, Tetra Pak found that 49% of CPG companies said their e-commerce customers include photos and commentary — both good and bad — about packaging on social media. 6 Creative and interactive packaging is often used in influencer mailings to create a dramatic reveal for social media audiences. That, of course, comes alongside concerns about excessive, unsustainable packaging.

Although concerns about waste have drawn negative attention to excessive packaging, the trend of unboxing videos continues. YouTube channel Ryan’s World, featuring an 8-year-old unboxing toys, made $26 million in 2019. 7 Brands targeting civilians and grown-ups are taking advantage of the trend as well. Sneaker reseller StockX — recently valued at $1 billion — offers free shipping on a future order to consumers who tag the brand in an unboxing experience from their personal accounts. This helps ensure that advocates are also repeat customers. Balance customer experience and a responsible use of packaging by constantly monitoring feedback.

**Address Consumer, Corporate and Partner Sustainability Concerns Through Packaging Improvements**
The European Parliament’s declaration of a climate emergency in November 2019 is just one of many recent headlines emphasizing the need to take immediate action to reduce global warming. Now, attention is pivoting from daily actions consumers can take to the role large corporations should play in fighting climate change. It’s likely that your company already has a sustainability-oriented corporate social responsibility (CSR) strategy in place. If so, packaging has a clear impact on the company’s ability to meet sustainability targets (see “Supply Chain Collaboration Is Necessary to Achieve Lasting Sustainable Packaging Initiatives”).

If not, supply chain leaders are in a strong position to advocate for change internally, given their relationships with marketing and product partners. Beyond the drive to do good, both retail partner initiatives and consumer demand should drive cross-functional leaders to adopt sustainable packaging practices.

Amazon’s Sustainability Efforts

Due to its scale, Amazon is widely criticized for the environmental impact of its packaging and shipping. In a 2019 Gartner survey, 48% percent of Amazon shoppers said they believe that people who shop on Amazon are partially responsible for the impact of Amazon’s business practices, including environmental and labor practices. 8 A year after that survey was taken, Amazon co-founded the Climate Pledge and launched a corresponding sustainability site to track its commitment to meet the demands of the Paris Agreement 10 years early. Part of that plan includes working with manufacturers on packaging redesigns, as well as working to improve packaging to reduce damage in-transit.

Some of the ways Amazon is encouraging its partners to participate are:

■ Shipment Zero — Amazon’s vision is to make all Amazon shipments net zero carbon, with 50% of all shipments net zero by 2030. “The fulfillment operations we undertake to deliver a customer shipment are net zero carbon — from the fulfillment center where an item is picked off the shelf, to the materials used to package the item, and the vehicles that transport the package to the customer’s door.” 9

■ Frustration-Free Packaging — This initiative reimagines packaging design for online fulfillment that reduces packaging waste while ensuring products arrive to customers undamaged. 10 Amazon has published multiple case studies on the topic to spur ideas from manufacturers.

Supply chain leaders must ensure that teams clearly understand Amazon’s packaging requirements and are designing robust solutions to meet or exceed the targets.

Consumers’ Shifting Sustainability Mindsets

Consumers’ attention to environmental issues has sharply increased over the last two years, with 31% of consumers saying climate change affects them personally. 11 Thirty-one percent of green-minded shoppers say they check for eco-friendly packaging (see Figure 2). Consumer attention to climate concerns has centered on individual actions, like recycling shipping boxes and replacing
single-use plastics with reusable containers. But consumers are now turning that attention toward corporations, whose actions have a significantly larger impact and influence over climate concerns. Half of consumers believe that corporations are the most effective entities to combat climate change.  

Supply chain leaders have an immense opportunity to use their brand’s sustainability story to optimize the packaging materials and formats used for e-commerce and last-mile delivery occasions. There is often pushback to making changes in packaging because it can require design agency, supplier and certified testing resources, all of which come at a cost. But the gains can be manyfold through sustainability, cost optimization, damage reduction and improvements in transportation efficiency (see “Leading Companies Focus on Packaging to Meet Consumer Demands, Address CSR and Optimize Costs”).

**Figure 2: Green-Driven Consumer Behaviors**

<table>
<thead>
<tr>
<th>Percentage of Consumers Who Say They Have Participated in the Following Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purchased from companies that are committed to positive social or environmental impact</strong></td>
</tr>
<tr>
<td><strong>Checked packaging labels to ensure the product or service has positive social or environmental impact</strong></td>
</tr>
<tr>
<td><strong>Green-Driven Consumers</strong></td>
</tr>
<tr>
<td>34%</td>
</tr>
<tr>
<td>31%</td>
</tr>
</tbody>
</table>

**Sustainable Packaging Innovations**

Whether spurred by shifting consumer behavior, public shaming like the brand audits of plastic waste in the Philippines or corporate investment in mitigating the effects of climate change, leading brands are allocating R&D dollars to solving the problem of too much plastic. Movement to
sustainably sourced and recyclable packaging is spreading quickly, with brands increasing adoption of product packages that also function as shipping containers, easy-open boxes and resealable bags, while reducing usage of packaging fillers and paper receipts.  

Opportunities to adopt environmentally friendly packaging and improve the bottom line abound across categories. For example, Hill’s Premium Dog Food redesigned its e-commerce packaging, resulting in reduced damages, shipping costs and the amount of packaging used. Hill’s achieved this packaging improvement by basing its redesign on Amazon’s Frustration-Free Packaging Guidelines. The redesigned package also qualifies as a ship in own container (SiOC) format, which prevents the need for additional packaging or preparation by Amazon.

Footwear brands Allbirds and Rothy’s ship shoes in resealable boxes that feature messages communicating the brands’ environmental ethos. Allbirds has developed packaging that uses 90% postconsumer recycled cardboard. The boxes serve as both the shoebox and mailer, while the resealable feature allows for easier returns.

Drive Both the Top and Bottom Lines by Focusing on Intelligent Packaging Designs

According to The Packaging School (a licensed postsecondary institution that is the exclusive licensee of a professional packaging curriculum at Clemson University), four inputs are necessary to create a more optimized shipment:

- Product sizing — dimensions of your product
- Shipment container or carton design — tray or carton used to ship the product
- Pallet configuration — pallet patterns to help with shipping costs and optimal structure
- Container or truck optimization — optimizing the way to palletize homogeneous products and planning floor spacing on trucks to help minimize cost

Supply chain leaders of customer fulfillment can drive the implementation of intelligent packaging design to deliver incremental savings and improve customer experience by working more closely with their customers. They must clearly understand their customers’ needs and then translate those needs to internal functional teams.

The impact of product and shipping case sizing on logistics and transportation efficiency is often overlooked by design and marketing teams. Oversized shipping cases result in “shipping air,” which has a large impact on rates paid for shipments due to dimensional weight pricing. This is a practice carriers use to charge for the greater of actual weight or the calculated dimensional weight, which is based on the size of the shipping container.

Many functions outside of logistics are not aware of the impact their packaging selection has on downstream costs. Not only do oversized boxes incur dimensional weight pricing, but the product
design and primary packaging also have an exponential impact on pallet utilization and container optimization. In addition to the continued growth in e-commerce, these factors should be considered in any new product developments or revisions to existing packaging.

E-commerce sales have produced a concurrent rise in the volume of shipping. UPS delivers a staggering 20.7 million packages and documents per day globally, with 3.2 million of those packages delivered in the U.S. via air. Rate increases and the practice of dimensional weight pricing put an even tighter squeeze on manufacturers looking to expand, or even just maintain, their operating margins year over year. For direct and indirect sellers alike, the acceleration of digital commerce, therefore, is forcing supply chain leaders to examine how these rate increases are potentially diluting their individual brand financials and to consider what action can be taken.

Direct sellers will feel the increase through price hikes in their shipping and fulfillment partnerships. Indirect sellers (such as those who sell their products to retailers for online resale) will realize the impact through requests for incremental margin points from their retail partners.

E-commerce product returns also underscore the rise in costs and the pressure on bottom-line profitability. Returns need to be considered when selecting packaging for e-commerce fulfillment. The packaging must be able to stand up to a potential return journey as well as the initial delivery. The return process needs to be cost-effective for retailers and brand owners, and convenient for customers. The UPS Pulse of the Online Shopper Report reveals that 73% of online shoppers consider the returns experience in their decision to frequent a retailer again.

Supply chain leaders must drive the implementation of an intelligent packaging design strategy by partnering with marketing and packaging engineering resources. One aspect of intelligent packaging design is "smart packaging," which connects inanimate objects to the internet. This includes using packaging that has QR codes, sensors, microchips or other technology enabling the sharing of data. This data not only helps logistics in the location of products and customers with return processes, but also provides marketing leaders with data to help improve advertising effectiveness and targeting of their campaigns (see "Elevate Your Track-and-Trace and Serialization Organizational and Regulatory Excellence").

E-commerce trends and customer expectations have increased the challenges for fulfillment leaders and the role of packaging to deliver against organizational and customer needs. To meet these needs, you must recognize that, with packaging, cost optimization, sustainability and customer experience are not mutually exclusive, and thoughtful packaging choices can enable meeting these needs.

**Evidence**


5 “2018 Packaging Matters,” WestRock.

6 “The Tetra Pak Index,” Tetra Pak.


8 Gartner 2019 Consumer Behaviors and Attitudes Survey. This research was conducted via an online survey of 3,005 U.S. consumers ages 15 and older from August through September 2019. Respondents for this survey were selected from those who have volunteered or registered to participate in online surveys.

9 “Delivering Shipment Zero,” Amazon.

10 “Sustainability > Packaging,” Amazon.


12 Gartner Consumer Values and Lifestyle Survey (October 2018). This research was conducted via an online survey of 3,237 U.S. consumers ages 15 and older, from July through August 2018. Respondents for this survey were selected from among those who have volunteered or registered to participate in online surveys.

13 Gartner Digital Performance Benchmarks, n = 26 top retailers and brands across sectors.

14 “Better Packaging, Happy Pets and a Win for the Environment,” Amazon.

15 “UPS Fact Sheet,” UPS.

16 “UPS Pulse of the Online Shopper Report,” UPS.

17 “Smart Packaging: Printable Electronics & Smart Sensors Changing the Packaging World,” Industrial Packaging.

Recommended by the Authors

Special Pack Requests Require Balancing of Commercial Benefits and Impacts on Supply Chain Efficiency

Market Guide for Packaging and Product Specification Content Management

3 Steps to Develop a Packaging Sustainability Strategy

Supply Chain Brief: Amazon Incentivizes Its Vendors to Develop E-Commerce-Friendly Packaging
Three Essential Supply Chain Capabilities Consumer Products Supply Chains Need to Succeed With E-Commerce Retail

Market Guide for Multicarrier Parcel Management Solutions
Leverage Customer Fulfillment Segmentation to Deliver Differentiated Customer Experiences

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