



SUPPLY CHAIN INSIGHTS

THE IMPACT OF THE PANDEMIC ON THE PRESENT AND FUTURE OF SUPPLY CHAIN PACKAGING

To meet existing and new consumer demands, packaging operations must be agile, reliable and sustainable.

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Packaging has become an increasingly strategic component of supply chain operations in recent years. From enabling late-stage customization to reducing transportation costs to supporting speed, scale and flexibility in e-commerce, packaging can be a critical solution in opening new markets and ensuring brands can efficiently respond to changing customer and market requirements.

That made the impact of the global pandemic on packaging operations particularly stressful for some brands. The pandemic exposed vulnerabilities in this vital operation within some organizations while highlighting the importance of flexibility, scalability and technology in maintaining continuity and responding to shifting market demands.

For packaging operations these capabilities will be crucial to meet increasingly changing post-pandemic consumer demand. One McKinsey report expects consumers to continue to be price sensitive, oriented toward price and value brands; to maintain, even accelerate, engagement with online shopping; and to focus even more on health and hygiene.¹

Keys to a Successful Response

While most people associate the pandemic with “shutdowns,” those in the supply chain industry think of it in terms of new challenges. Operations didn’t have the luxury of shutting down packaging lines to implement social distancing or reinforce established cleaning protocols. Those critical changes had to be made while maintaining continuity of operations.

But, for many brands, continuity wasn’t enough. They needed to simultaneously respond to the operational changes required to protect workers while scaling to meet increased demand. At DHL Supply Chain, we saw a surge in demand for packaging services among

70% of our customers. While primarily market driven, some of this surge resulted from the need to absorb packaging operations that had different processes or market-based requirements and consumer-buying behaviors due to the pandemic.

Handling the surge from a labor perspective required a combination of scalability and flexibility. While the majority of our customers experienced an increased demand for packaging services, others, particularly those whose operations were focused on in-store display production, experienced a reduction. That created the opportunity to re-allocate resources across campuses to alleviate the impact of the initial spike as consumers shifted from in-store to online shopping.

To continue to scale as the pandemic progressed, we leveraged established relationships with national staffing firms and our own digital onboarding tools to add people where required. Integration between our packaging technology platform and ERP and WMS platforms also streamlined material flows and demand forecasting to ensure the required products and materials were available when needed. As a result, packaging remained a strategic asset for our customers throughout the pandemic by allowing them to rapidly adapt to changing consumer behaviors.

Accelerating Industry Trends

As in other industries, the pandemic is driving permanent as well as temporary change. As we continue to operate within the societal restrictions imposed by the pandemic and eventually return to some semblance of normal, we expect the following packaging trends to accelerate:

1. <https://www.mckinsey.com/industries/paper-forest-products-and-packaging/our-in>

Increased automation

Packaging is a seasonal driven and a labor-intensive operation and that can create challenges during periods of low unemployment and during spikes in demand as occurred during the pandemic. While we were able to protect our customers from labor shortages by re-allocating resources and smart recruiting, we are seeing more organizations looking to protect themselves from future labor shortages by re-evaluating the business case associated with packaging automation. Today's technology allows goods to be automatically directed on conveyors, scanned, wrapped in a made-to-measure box, labelled and sent for shipping – with little or no human involvement. Although fully automated packing lines required significant investment, there are elements of automation which others can access at an entry level.

Packaging automation systems that work collaborative with operators can drive the increased efficiency that can help organizations better deal with spikes in demand. Artificial intelligence (AI) enabled technologies can also deliver these efficiencies as well as end-to-end visibility and real-time tracking. According to Mark Patterson, Vice President of Global Packaging at DHL Supply Chain, “collaborative robots are currently being used in packaging operations, along with quick setup palletizers, box erectors, void reduction technologies and box on demand equipment. However, to maximize the benefits more innovation will be required to ensure packaging designs themselves are optimized to be handled by automation.”²

Those innovative packaging designs will also play a critical role now and in the years to come. Some innovations in packaging design include “connected packages” that use RFID and NFC tags, sustainable material usage and close-loop packaging.

Faster e-commerce growth

E-commerce has had a steady growth over the past years, but the Covid-19 pandemic's unprecedented impact accelerated

the shift from physical to digital shopping by 5 years,³ according to some reports. Global retail e-commerce sales surpassed 4.2 billion US dollars in 2020, an remarkable 25.7% growth.⁴

The expectation that e-commerce sales will continue their upward trajectory brings new opportunities for packaging operations. Automation, as mentioned previously, will enable packaging operations to absorb some of this growth, but it's also become clear that many organizations will need to advance the maturity of their operations to keep pace. Strategies such as the implementation of state-of-the-art packaging technology platforms, integration between packaging systems and ERP and WMS platforms, and the use of specialized solutions such as box on demand technology, will be key for organizations to continue to scale with demand.

Due to the nature of e-commerce supply chains, product packaging needs to meet additional requirements to ensure successful delivery to end consumers. Optimal packaging design, enhanced customer experience, ultimate product protection and environmentally friendly packaging materials continue to play a crucial role for e-commerce operations.

More stable and agile packaging partners

The pandemic exacerbated the ongoing pressure for packaging operations to manage and reduce packaging operation costs. Companies are tackling these challenges by evaluating alternative packaging materials and designs, for example, shelf-ready designs and improved filling efficiency and volume density. Co-packaging partners with procurement expertise and purchasing power can play a significant role in managing costs without sacrificing the customer experience.

These partners can also bring significant benefits to the agility and responsiveness of packaging operations. They can help companies protect their brand by staying on top of

changing expectations, ethical standards and regulations. These operations can also provide flexible operations to manage peaks in production and customization requirements.

A broader sustainability scope

Consumer demand and regulatory pressure have accelerated the shift to sustainable materials and circularity in packaging design. For retailers and consumer goods companies, increased pressure to replace plastic is driving usage of packaging design focused on reusability, compostability and biodegradability.⁵

The Covid-19 pandemic expanded the scope of sustainability beyond the packaging materials used for products and into the realm of how these packages ensure health and hygiene. Particularly in the case of foods and beverages, packaging designs and operations need to ensure minimum contamination on the packaging surface, develop new delivery mechanisms and ensure tamper-proof packaging.

The pandemic served to highlight the importance of supply chain packaging in adapting quickly and efficiently to changing customer and market requirements. Organizations that were able to maintain continuity and service through this challenging time, such as those working with DHL Supply Chain, were able to capitalize on opportunities and enhance their competitive positioning for continued growth during the recovery. A packaging partner with robust operations will remain a crucial element to deliver the agile, reliable and sustainable packaging solutions now and into the future.

2. Adapting to a new age – Logistics Manager, February 2021

3. <https://techcrunch.com/2020/08/24/covid-19-pandemic-accelerated-shift-to-e-commerce-by-5-years-new-report-says/?guc-counter=1>

4. <https://www.statista.com/topics/871/online-shopping/#dossier-chapter1>

5. <https://www.dhl.com/global-en/home/insights-and-innovation/thought-leadership/trend-reports/rethinking-packaging.html>