



## SECTOR CASE STUDY

# REDUCING ENVIRONMENTAL FOOTPRINT THROUGH PACKAGING AND SHIPMENT OPTIMIZATION

A global life sciences leader in biological therapies replaced all packaging consumables at their global distribution hub in Sweden with sustainable solutions.

**DHL Supply Chain – Excellence. Simply delivered.**



A leader in developing, manufacturing and delivering next-generation therapies, our customer provides technologies and services that support the development of innovative biopharmaceuticals and cell and gene therapies.

Collaboration and strong partnerships with customers and suppliers in their ecosystem are foundational elements to empower our customer's ambitious sustainability roadmap. Together with Scope 1, 2 and 3 carbon footprint reductions, their environmental sustainability ambitions include an overhaul in packaging solutions and an evolution in plastics usage. With a relationship spanning over 8 years, we took on the challenge by identifying opportunities to minimize waste and improve the sustainability of packaging materials in warehousing operations.

## CUSTOMER CHALLENGE

One of our customer's environmental sustainability objectives includes the smarter use of resources, with specific targets around plastics and their overall approach to packaging. These targets focus on the recyclability of packaging and single-use products, responsible sourcing and the elimination of polystyrene used in temperature-controlled shipments. As part of our world-class logistics program, which addresses the sustainability of their logistics operations as well as process optimization and innovation, we assessed all packaging solutions and how they contribute to those 2025 sustainable packaging and plastic reduction targets.

An important consideration was ensuring global alignment and coordination across all their operations. While each location operates independently, it was required for any process improvement solution deployed in the Swedish hub to be easily replicated across other EMEA and APAC locations.

### CUSTOMER CHALLENGE:

- Improve recyclability of packaging and single-use products in logistics operations
- Ensure replicability of process improvements across all customer operations

### DHL SUPPLY CHAIN SOLUTION:

- Replacement of seven warehouse packaging consumables with sustainable, commercially viable alternatives
- Robust materials management approach to plan, source and purchase materials
- Dimensional scanners to assess materials requirements of existing inventory
- OptiCarton analysis to evaluate shipment optimization opportunities
- Reusable, temperature-controlled packaging solution and an exoskeleton technology

### CUSTOMER BENEFITS:

- Materials management approach ensures consistent efficiency and sustainability across all our customer's logistics operations
- 7000kg plastics reduced contributed to +50% CO<sub>2</sub> saving
- 25% cost savings achieved by switching to alternative void fill
- 5% parcel volume reduction estimated by OptiCarton software analysis.

## DHL SUPPLY CHAIN SOLUTION

We set up a global platform and governance structure to manage the process improvement initiatives of the world-class logistics program along all three streams. This approach facilitates continuous collaboration and communication to fulfill the objectives of the program's roadmap.

We implemented two new dimensional scanners, allowing us to analyze the customer's inventory profile and understand packaging material-specific requirements. We also assessed all existing warehouse consumables and identified opportunities to reduce or eliminate plastic, introducing seven alternative packaging consumables with commercially viable and sustainable alternatives. Some of these included pallet wrap with over 30 percent recycled content, paper mailing bags for shipping notes and small component packaging, paper-based void fill, and box taper machines using paper-based sealing strips cut to the exact measurements of the box. We manage the complete materials management process, including category and demand

planning, materials sourcing and centralized procurement for our locations in EMEA and APAC.

The dimensional scanning of the customer's inventory set in motion an additional initiative to improve the environmental footprint of their logistics operations. Supported by our proprietary right-size packaging software OptiCarton, we performed a shipping optimization analysis showing significant carbon emission reduction opportunities through load consolidation and more efficient materials usage.

We're also supporting an opportunity for reusable temperature-controlled shippers to replace existing single-use ones. Implementing these shippers is already in the process improvement pipeline of our world-class logistics program.

## CUSTOMER BENEFITS

Implementing these sustainable warehouse consumables allowed us to successfully reduce our use of plastics by 7000kg, resulting in a over 50 percent reduction in our CO<sub>2</sub>

emissions. Additionally, by switching to an alternative void fill solution, we achieved a remarkable 25 percent cost savings while maintaining our commitment to sustainability. A robust materials management approach with centralized procurement ensures the right materials at the right time, maintaining cost-efficiency and reducing waste from our packaging solutions. This approach also ensures consistency across all our customer's logistics operations.

The OptiCarton analysis provided concrete packaging-on-demand initiatives to optimize our shipping process and reduce transportation needs. Initial validation tests show a 5% reduction in volume which will represent significant efficiencies in transport, materials purchasing and labor costs. We're currently developing a business case to implement box-on-demand machinery that will enable these efficiencies. The upcoming implementation of our reusable temperature-controlled packaging solutions will also deliver additional environmental sustainability improvements.

We are continually exploring new ways to improve our sustainability practices, through additional packaging automation. One example further down the implementation pipeline includes an exoskeleton which will improve ergonomic conditions and increase efficiency in the manual lifting process. By automating our packaging processes, we aim to further reduce our environmental impact while improving efficiency and reducing costs.



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