

UPS Packaging Design And Testing Enables Launch Of First-Of-Its-Kind Reusable Consumer Packaging Solution

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UPS (NYSE: UPS) has joined the coalition of the world's largest consumer product companies and international recycling leader TerraCycle to unveil an innovative new reusable and returnable system for managing consumer product packaging. The system, entitled Loop®, will be tested in Paris and New York as a first step toward full implementation in consumer markets.

The ground-breaking Loop system eliminates the reliance on single-use packaging for consumer goods. Consumers will be offered a variety of products in customized, brand-specific, durable packaging that is delivered directly to customers, then collected, cleaned, refilled and redelivered.

"Loop will not just eliminate the idea of packaging waste, but greatly improve the product experience and shopping convenience," said TerraCycle CEO Tom Szaky.

Loop products will be delivered and picked up via a system designed by TerraCycle and UPS, representing the latest advances in TerraCycle's long-standing partnership with UPS, a logistics leader and packaging expert.

"Innovation is key to everything we do at UPS, and we are thrilled to support TerraCycle with packaging design for the

Loop tote, as well as pickup and delivery services for Loop customers," said UPS Chief Sales and Solutions Officer, Kate Gutmann. "As a leader in environmental sustainability, and a champion and catalyst for a circular economy, UPS looks forward to helping to bring Loop to life."

Loop customers will receive durable, reusable or fully recyclable packaging made from materials such as alloys, glass and engineered plastics. Even the outer shipping container is part of the design innovation; a state-of-the art shipping tote will eliminate the need for single-use boxes and offer consumers an elegant solution that reduces waste.

Purpose-Built and Designed by the UPS
Package Design and Test Lab

UPS and TerraCycle collaborated to design outer packaging that can handle liquids, dry goods and personal care products, with

protective dividers inside, using materials that offer easy cleaning for reuse. The UPS Package Design and Test Lab helped to custom design and test packaging to be appealing to consumers, yet durable enough to be used time and again. The UPS Lab is certified by the International Safe Transit Association (ISTA) to conduct ISTA package integrity testing procedures.

During the design and testing, UPS identified solutions to mitigate the following:

Materials breakdowns

Product leaks

Exterior packaging design that showed signs of fatigue after limited use

Scratches on metal containers caused by metal closures.

Recommendations provided by the UPS Lab to TerraCycle included multi-threaded closures for product containers, a modified capping approach to reduce the risk of leaking products, and custom dividers within the Loop tote to better hold products in place during transit, among others.

Additionally, the UPS Package Design and Test Lab implemented rigorous real-world shipment tests to gather insights into how the durable and reusable Loop tote could withstand high-volume shipping through UPS's network of highly automated, global distribution facilities. "UPS helped TerraCycle to design the exterior and interior of the Loop tote container in ways we could never

have done ourselves. Expert UPS testing also helped us to provide feedback to Loop consumer packaged goods partners regarding the primary packaging of products within the tote," said TerraCycle Chief Design Junkie, Tiffany Threadgould.

The pilot tests planned for Paris and New York in 2019 will help refine the process, with additional feedback from consumer experience data.

Decades of Packaging Design Expertise

The UPS Package Design and Test Lab in Addison, Illinois helps UPS customers in a wide variety of industries optimize and protect their goods, and reduce waste, by implementing better packaging solutions. The UPS Lab team holds five packaging design patents and has established test practices and viable solutions to address a wide array of needs, including cold-chain packaging for food and pharmaceutical companies.

The UPS Package Design and Test Lab's highly specialized equipment mimics the "shake, rattle and roll" effect of high-speed conveyors found in transportation hubs and on commercial delivery vehicles. In addition to durability, the Lab Engineers evaluate packaging materials to identify stable, efficient, environmentally-conscious solutions.

Source: UPS

