

PRESCOUTER

Reusable Packaging Solutions

Time to make the switch!



Reusable packaging is the future of sustainable packaging - not recyclable or biodegradable packaging, as many may think.



As opposed to conventional or expendable packaging that is usually wasted after their intended single use, returnable or reusable packaging is made with robust materials that can withstand rough handling and be reused multiple times. Though return logistics and added transportation costs have negatively impacted the adoption across all industries, a 2018 Nielsen survey reported 73% of consumers globally are willing to change their consumption habits to embrace sustainable options.

Several factors like government regulations, increasing consumer concern for the environment, and automation for track-and-trace are driving the commercial packaging industry to move toward these 4 sustainable reusable options:



Refill at home



Return from home



Refill on the go



Return on the go

Reusable packaging can be adopted across all sectors



Automotive manufacturers are opting for returnable packaging for transporting heavy and high-volume auto parts frequently over short distances.



80-85% of the healthcare industry's waste is generated from packaging waste, which is currently under the radar. Hospitals are encouraging vendors to reduce or reuse packaging on medical products to minimize environmental waste.



The global food & beverage industry accounts for about 35% of plastic waste and is under tremendous pressure to eliminate plastic packaging. This sector was one of the first to start incorporating reusable packaging in the form of refillable packages.



Consumer goods are currently packaged using reusable or fully recyclable materials such as alloys, glass, and engineered plastics that will eliminate the need for single-use boxes.



For the aerospace industry, plastic corrugated and thermoformed packaging are durable reusable packaging options offering the safe transportation of equipment and parts.

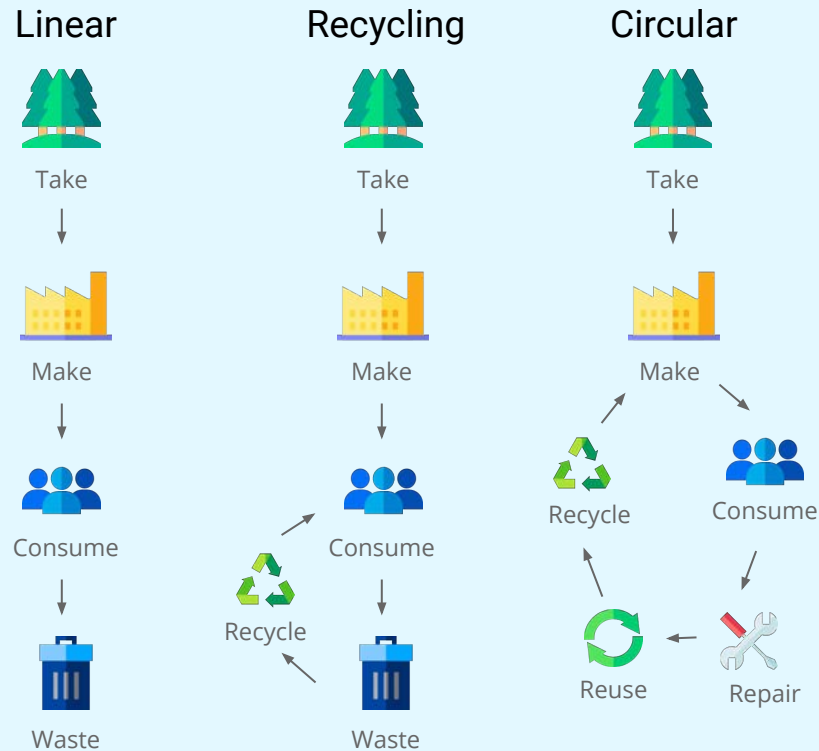


Any kind of commercial packaging that can be used more than once is reusable packaging. It is usually designed to be durable, easy to use, easy to clean, and cost effective.

Incorporating reusable packaging will help achieve a truly circular, closed-loop system.

Today, only 14% of plastic packaging is collected for recycling. Hence, the lifecycle of >80% of plastic packaging ends right after being disposed.

An estimated 95% of packaging material value is lost to the economy after a short first use. With packaging being used over and over again, the material value is preserved.



However, cost and return logistics remain the two major bottlenecks preventing implementation across industries.

Cost Barrier:

To make the packaging last for multiple rounds of product deliveries, the packaging should be durable and made of materials that are more expensive than cheap plastic. This is definitely a concern across industries and stands as a major impediment to adopting other alternatives that can be reused.



Most benefits come from avoided production, so the rate at which a package is replaced is a key element. Savings are not seen immediately, but in the long run.

Return Logistics:

The industry has to bear the cost of shipping and handling during the return cycle. The logistics behind this needs to be efficiently worked out in order to support reusable packaging options.



Despite the intent to participate in sustainable packaging, different sectors are still trying to figure out the most efficient way to handle reverse logistics, which will enable them to engage in returnable packaging options.

The commercial sector, which relies greatly on plastic packaging, is seeing the greatest adoption.

Single-use plastic bans have been the greatest stimulator of innovation within the B2C sectors.

Innovative delivery models such as refillable bottles, where only the active ingredient is sold and shipped, as well as evolving use patterns are unlocking a reuse opportunity for at least 20% of plastic packaging (by weight), worth at least \$9 billion.

Shipping only active ingredients would result in



85%-95%
transport cost savings



80%-85%
reduction in greenhouse
gas emissions versus
today's traditional
single-use bottles.



If all bottles in home cleaning and beauty & personal care adopted the concept of shipping only active ingredients, this would amount to about 3M tonnes, or at least \$8B, in packaging cost savings.

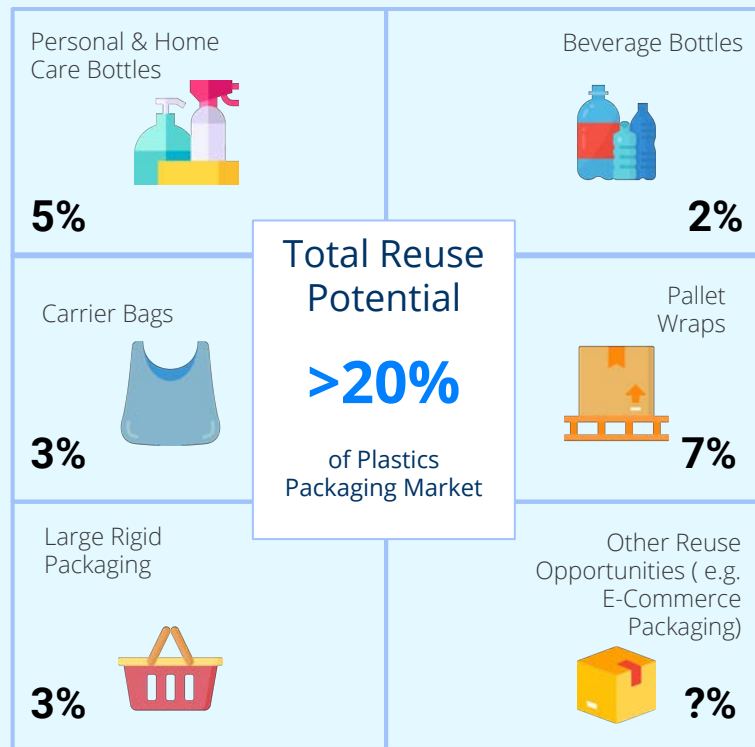
Current efforts are focusing on extending the number of uses a package can be reused for.

It typically takes 5-8 uses for an aluminum reusable package for a cosmetic goods product to break even with single-use plastic packaging.

CPG companies are now making packaging that is intended for up to 20 uses.



Carrierpac is a reusable packaging alternative to cardboard boxes used for transit packaging of kitchen worktops. After 10 uses, the Carrierpac breaks even cost-wise with cardboard boxes



Source: WEF

What Options Do Companies Have For Implementing A B2C Reusable Packaging Solution?

Each reusable packaging model offers a number of potential benefits. Companies will need to choose the model that aligns best with their long-term goals, whether it be at home models or on the go solutions.

AT HOME SOLUTIONS



#1: Refill at home

- ✓ Reduced business operating costs
- ✓ Enhanced individualization
- ✓ Improved brand loyalty



#2: Return from home

- ✓ Enhanced customer experience
- ✓ Improved brand loyalty
- ✓ Optimized business operations

ON THE GO SOLUTIONS



#3: Refill on the go

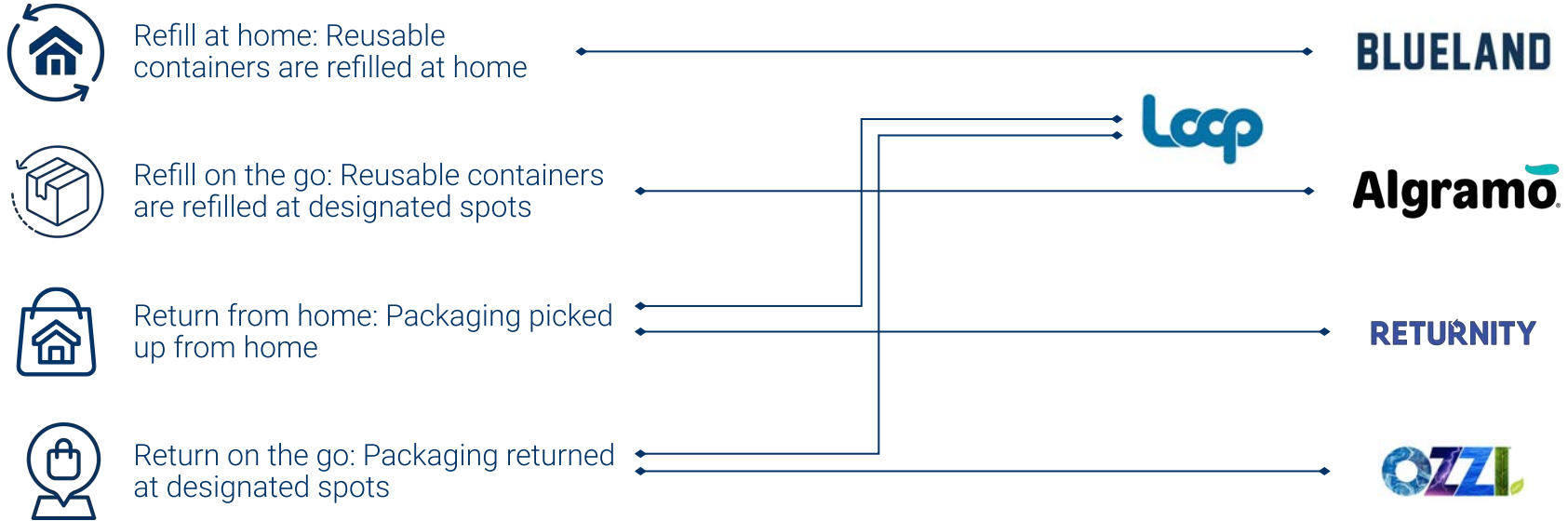
- ✓ Reduced business operating costs
- ✓ Enhanced individualization
- ✓ Information about individual preferences





#4: Return on the go

- ✓ Improved brand loyalty
- ✓ Optimized business operations
- ✓ Information about individual preferences

Here are some successful reusable packaging models:



Loop - A pioneer in reusable packaging

At a glance	Company size	250 employees		
	Headquarters	New York, USA		
	Packaged product category	Recycling platform for waste		
			Return from home	Return on the go

Loop is an initiative by the parent company Terracycle. Terracycle works with consumer product companies and retailers and operates in 20 countries with the mission to eliminate the idea of waste. Terracycle has developed proprietary recycling methodologies and programs for hard-to-recycle waste. Loop's vision, however, is to stop linear single-use wasteful packaging and create a circular economy by reusing containers and other receptacles, where consumers receive their trusted brands in durable and reusable packaging. With the first pilot starting in May 2019, Loop has grown rapidly through partnerships with leading brands across the globe like Kroger and Walgreens in the US; Tesco in the UK, Carrefour in France, Aeon in Japan, Woolworths in Australia, and Loblaws in Canada, among others.

How it works



Select companies that work with Loop



Blueland - Reusables for cleaning

At a glance

Company size	<50 employees
Headquarters	New York, USA
Packaged product category	Cleaning products




Blueland, a privately held New York-based startup, was co-founded by a new mom who set out to eliminate single-use disposable plastic. Her mission was to create a clean home while keeping the planet clean. They focused on home cleaning products that are usually associated with low brand loyalty, and thus was easier for consumers to adopt. Moreover, cleaning liquids are 95% water, hence it was a clever idea to sell replaceable non-toxic cleaning tablets that reduced the size and hence the shipping costs considerably. This allowed them to sell their products at a lower price point, which could be replenished into the long-lasting 100% BPA-free “Forever Bottles” by dissolving in water. A recent report evaluated their products as innovative, sustainable, effective, and affordable. In 2019, the company raised \$3 million from Global Founders Capital and won a decent deal from Shark Tank.

How it works



Algramo - Low economy reusables via kiosk-based refill stations

At a glance	Company size	<50 employees	 Refill on the go
	Headquarters	Santiago, Chile	
	Packaged product category	Recycling platform for waste	

Started in the Chilean capital, the mission of Algramo is to promote the concepts of reuse, refill, and optimize reverse logistics. Algramo, which means “by the gram,” was developed for the poorer economy in Latin America. The idea was to enable consumers to buy only as much as they needed as opposed to buying in bulk, in refillable containers, with no difference in the price per gram. Since its launch, the Algramo 1.0 model has expanded to 2,000 stores in Santiago, reaching 350,000 customers. In some stores there are vending machines dispensing products, and in others, Algramo stocks products and collects empty containers that are then cleaned and reused. The Algramo 2.0 model relies on brand partnerships and is currently working with Unilever to sell co-branded laundry detergent and dish soap via a dispensing machine mounted on an electric tricycle that delivers at your doorstep into your refillable container.

How it works



Download the app and create an account



Charge your account



Bring your smart reusable packaging to an Algramo dispenser



Choose how much you want to fill

Algramo 1.0 - Introduced vending machine refill stations in family-owned neighborhood stores (FONS) in Santiago

Algramo 2.0 - Incorporated the IoT and RFID technology, along with electric tricycles, to transform “packaging into a wallet” and bring refill stations to the consumer’s doorstep.



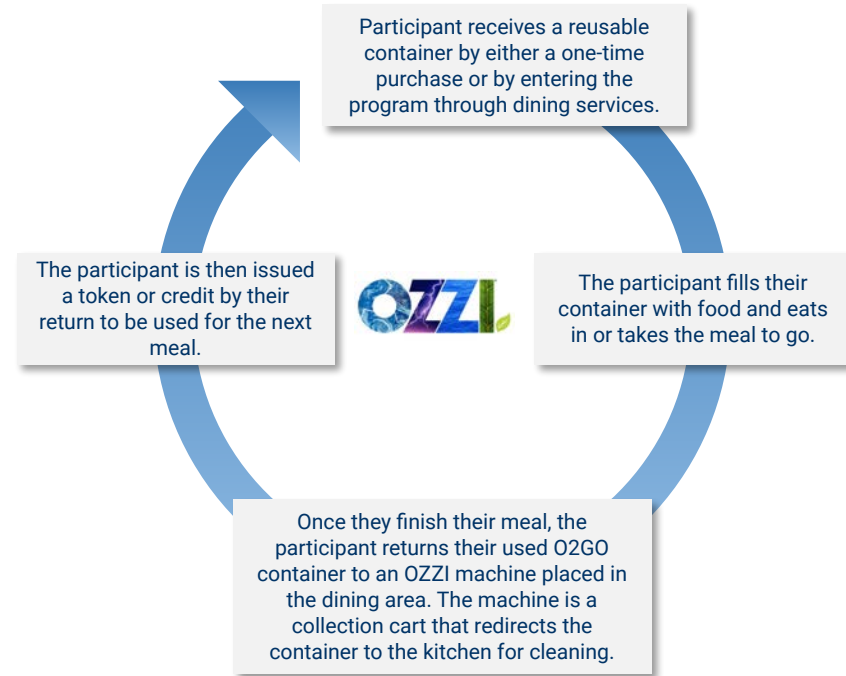
Algramo is all set to launch a kiosk system in New York and is currently pilot testing its product at three locations in the city. The model will allow US consumers to purchase products through an app on their phone to refill their containers at the kiosk.

Ozzi - Eliminating disposable containers -drop-off stations

At a glance	Company size	<50 employees	 Return on the go
	Headquarters	Rhode Island, USA	
	Packaged product category	Reusable food containers	

The Ozzi group is revolutionizing the way we consume our to-go food. Utilizing technology and driven by a sustainable mindset, Ozzi is set to eliminate the disposable containers used for “to-go” food in all segments and has partnered with a larger number of colleges and universities as well as healthcare centers, supermarket food courts, restaurants, the military, and outdoor events. Wherever food is served in paper, foam, or plastic containers, Ozzi is replacing the disposable containers with reusable containers. The system uses an **OZZI smart drop-off station** and reusable food containers that can be used as part of a meal plan or by buying a token. Food is served in a clean reusable Ozzi container at the counter and is placed in the Ozzi machine to be cleaned after use. The machine then returns the token to be used for the next meal. The company has already prevented 5 million disposable food containers from ending up in the trash.

How it works



Returnity - Reusable packaging solutions for every sector

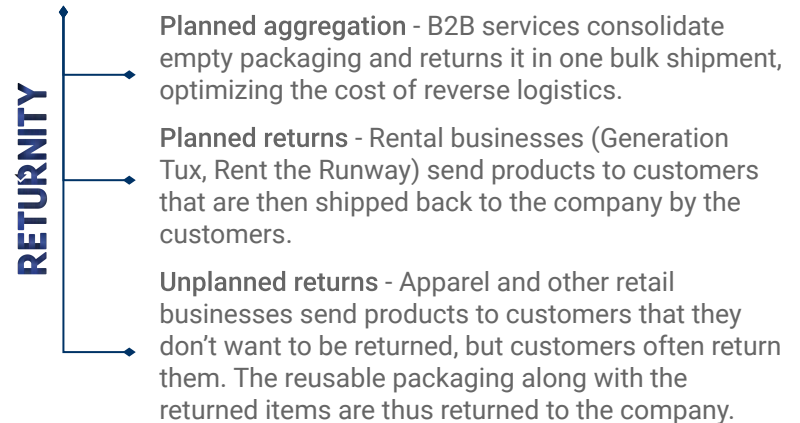
At a glance	Company size	<50 employees	 Return from home
	Headquarters	California, USA	
	Packaged product category	Custom-designed reusable containers	

This startup is set to revolutionize shipping and packaging by offering custom-designed bags and packages that can be returned and reused multiple times. Returnity claims that their packages are water-resistant, more durable than cardboard, and cost efficient. From tote bags to duffle bags to makeup bags, they can provide customized solutions for the fabric type, pattern, and imprinting. Recently, the company partnered with antimicrobial solution developer Polygiene to provide custom packaging coated with antimicrobial ViralOff solution to address the current COVID-19 concerns. Returnity claimed that it will replace the use of over 6 million cardboard boxes and poly mailer bags with reusable packaging by 2020. Returnity was recently named a winner in the Circular Economy Track of the Ocean Plastic Innovation Challenge. Returnity's customers include thredUP, Generation Tux, BOXED, REBAG, and many others. They're currently working with several prominent brands in apparel, furniture, and even wine.

How it works

Returnity delivers fresh food, bulk office supplies, and clothing to the consumer's doorstep.

The company segregates reusable packaging needs into three categories:



About the Authors



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Technical Director

Marija has been a Project Architect with PreScouter since January 2015. She finished her Master's degree in Chemical Engineering from Belgrade University and completed her PhD in Organometallic Chemistry and Catalysis at the Swiss Federal Institute of Technology (ETH Zurich). Marija's academic research was focused on understanding reaction mechanisms in order to rationally design catalysts for polymerization and metathesis reactions. Prior to her PhD, Marija worked in chemical industry on the synthesis of new textile dyes.



Paromita Raha

Researcher

A scientist by training, Paromita is passionate about science communication. She earned her PhD in Biotechnology from the University of Calcutta followed by postdoctoral research at the University of California, San Francisco. She has worked as a scientist in the pharmaceutical and food technology industries overseeing multiple projects in the oncology drug discovery space and product development in fermented food. She loves researching current technological innovations, including market trends, in the life and food sciences sector along with presenting complex information in a simplified way to a global audience.

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