

The economics of reuse systems

A study into what makes a financially viable reusable packaging system

Executive summary
June 2023



Acknowledgements

This report is the product of a knowledge partnership between Zero Waste Europe and Searious Business.

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For the execution of this report, we have worked on providing a high-quality and independent outcome. We welcome constructive dialogue on our results, new insights or other relevant data;

Executive Summary

The urgency to act on plastic pollution is now widely understood, as is the fact that we cannot continue along the linear path of resource exploitation.

Adopting circular economy principles could not only benefit Europe environmentally and socially but could also generate a net economic benefit of €1.8 trillion by 2030.¹ Recycling alone will never be able to mitigate uncurbed plastic production, which is on track to triple by 2050. Solutions must be focused upstream to the source of the problem, production.

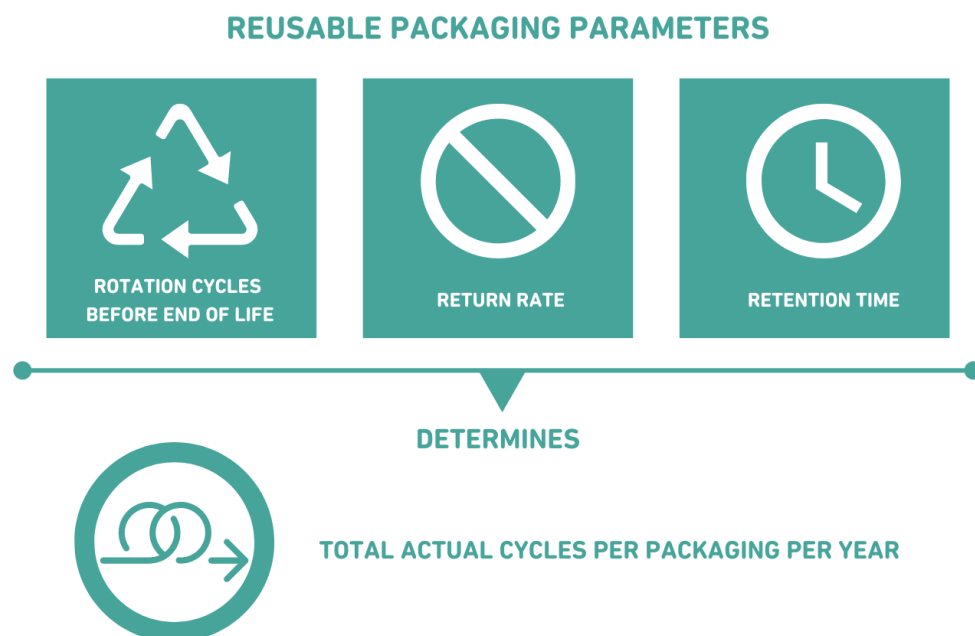
After elimination, the widespread uptake of reusable packaging has the highest potential to reduce plastic production. This view is sustained by a recent shift in legislative focus in the European Union's Packaging and Packaging Waste Regulation (PPWR) and the United Nation's Global Plastic Treaty to end plastic pollution. The popularity of reusable packaging is also growing within businesses under pressure both from upcoming regulations and a customer base increasingly concerned with the over-use of plastic.

However, several brands and industry associations have been hesitant to wholeheartedly embrace reusable packaging, citing doubts over environmental credibility, customer acceptance, needed behavioural change, and the fear of heavy investments and operational costs. While several independent LCAs prove the environmental benefits of multi-use over single-use plastic packaging, and as many surveys indicate customer readiness, there is a gap in analysing the costs vs benefits of a scaled and optimised reuse system.

¹ Source:

www.mckinsey.com/-/media/McKinsey/Business%20Functions/Sustainability/Our%20Insights/Europes%20circular%20economy%20opportunity/Europes%20circulareconomy%20opportunity.ashx

This study identifies the following parameters to decide on the performance of a financially healthy reuse system:



Considering the relative infancy of reusable packaging, it would be hard to compare it with a fully optimised single-use system. For this reason, the profitability of a 100% reuse system has been compared against a 100% single-use system and determines what thresholds would need to be met to ensure the profitability for all stakeholders.

The study examines 3 packaging categories in an open loop system (so not within one location), in Spain as an archetype country: 1) food containers for takeaway food, 2) secondary transport packaging and 3) beverage bottles. The economic viability has been analysed based on return on investment for a reuse systems provider and the accumulated costs of single-use plastic packaging vs reusable plastic packaging for the system user.

1. For the first packaging category, takeaway food containers, the study finds that reusable containers are more profitable for users, and return on investment can be reached by system providers between years 3 and 4.
2. In secondary transport packaging, the study compares reusable and single-use plastic big bags. Based on our model, results show that the return on investment for a systems provider is achieved between years 2 and 3 and the costs for the user are similar.
3. Lastly, the third case, beverage containers, found that reusable beverage containers are economically advantageous for the users, compared to single-use beverage containers. The return on investment for system providers can be reached between years 5 and 6.

Based on current regulatory developments in Europe, reusable packaging will likely become even more economically viable, with faster return on investments, as single-use packaging will go up in price. In providing more clarity on costs and benefits, this study intends to inform both decision-makers in business and policymakers in future decision-making to confidently support reuse.

We conclude that, even in isolation, the break-even point for all three packaging formats is of only a few years. This represents both a sizable business and political opportunity to reconcile environmental concerns with economics in the foreseeable future, to the benefit of societies as a whole.

REUSE ADDS UP



Searious Business is an impact-driven company based in the Netherlands, working towards the goal of zero plastics entering our ocean. They help businesses in the plastic value chain to keep plastics in the economy and out of the environment. Searious Business regularly performs in-depth Cost Benefit Analyses for individual companies or case-by-case examples. For this study, Searious Business has made a high-level overview of the costs and benefits of three plastic packaging cases, comparing reusable plastics with single-use plastics options. www.seariousbusiness.com



Zero Waste Europe is a European network of communities, local leaders, experts, and change agents working towards the elimination of waste in our society. Advocating for sustainable systems and the redesign of mankind's relationship with resources, they accelerate a just transition towards zero waste for the benefit of people and the planet. www.zerowasteurope.eu



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