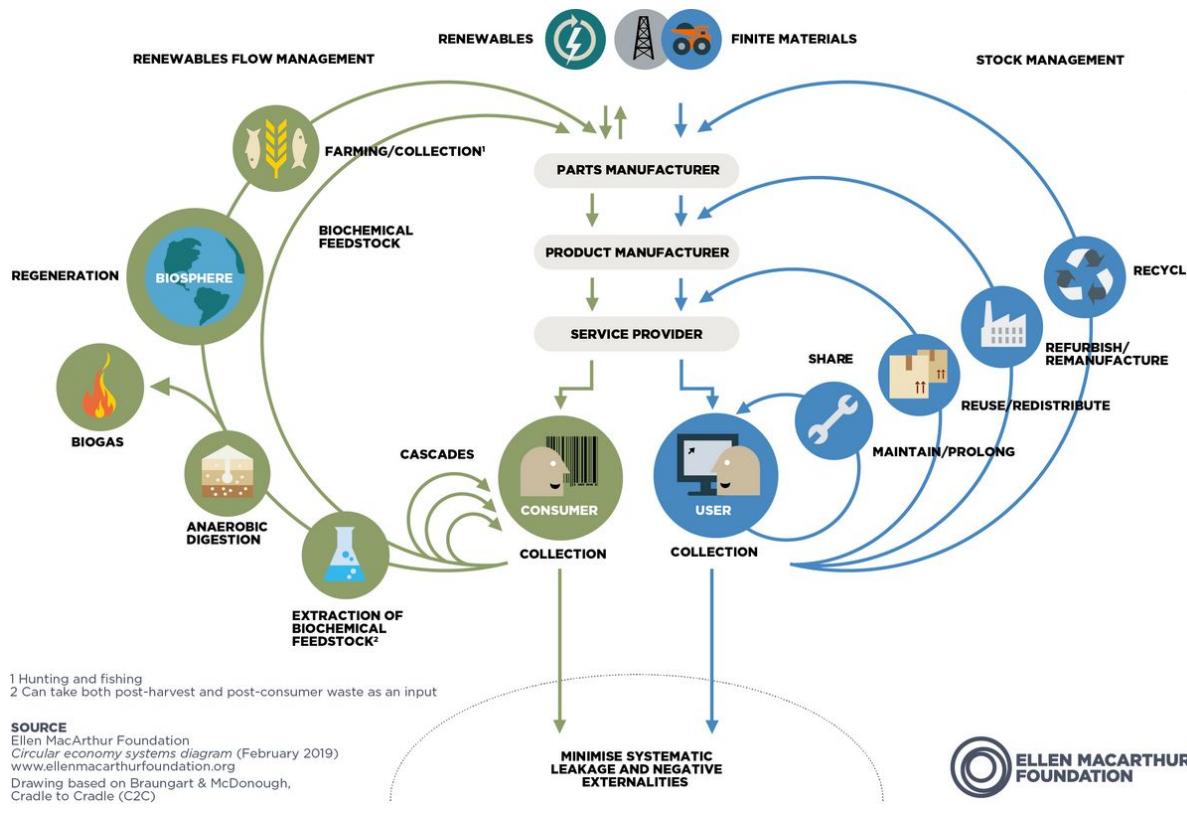




Circular Economy - challenges and problems, the Case of Greece

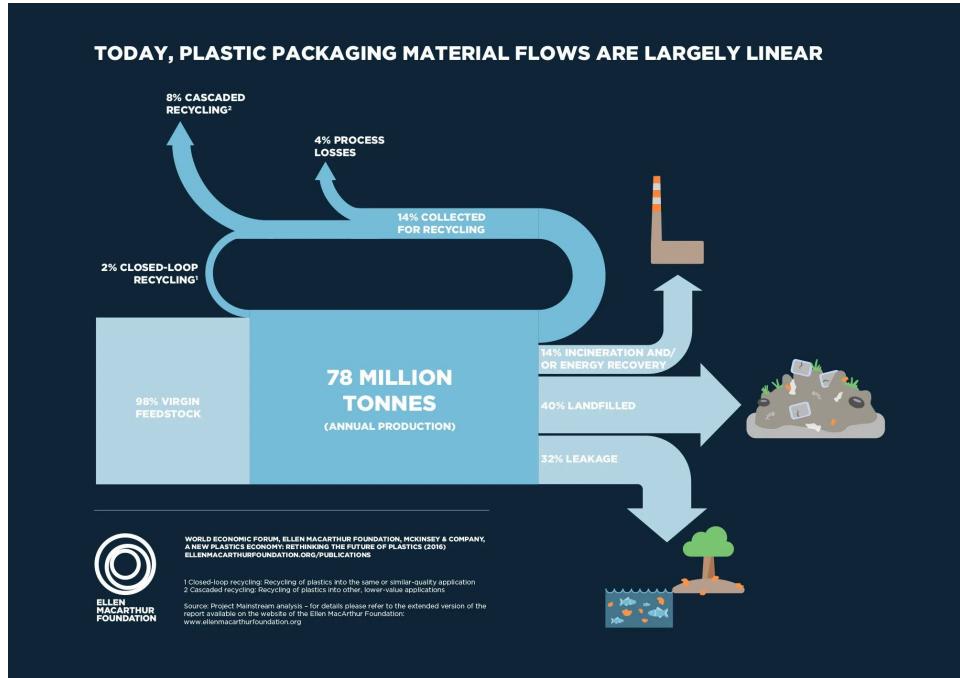


Sotiris MILONAS, Civil Engineering MBA, Sustainability advisor



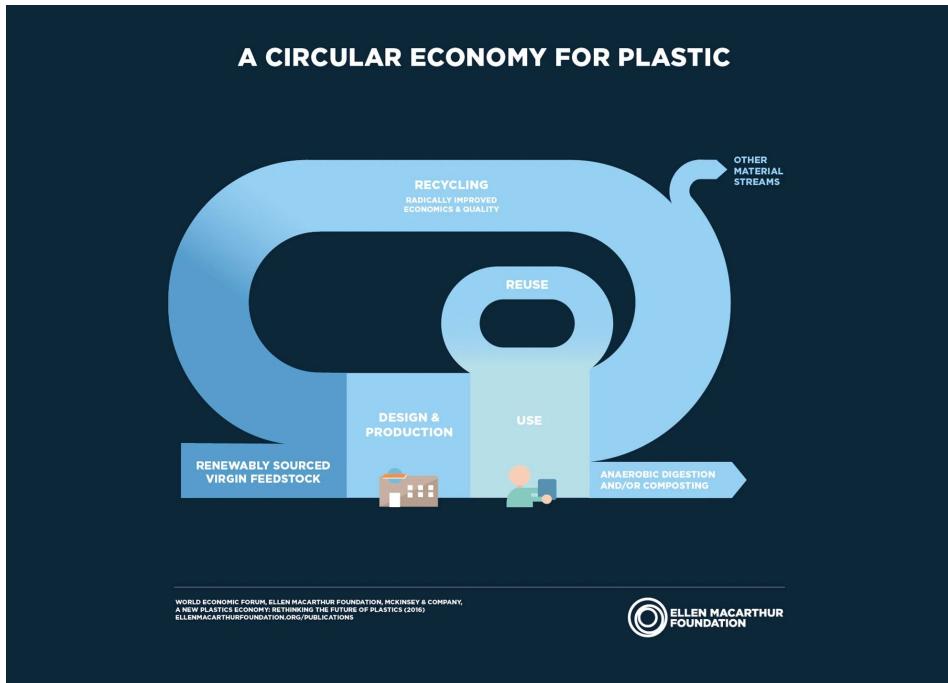
The circular economy is a system where materials never become waste and nature is regenerated. In a circular economy, products and materials are kept in circulation through processes like maintenance, reuse, refurbishment, remanufacture, recycling, and composting. The circular economy tackles climate change and other global challenges, like biodiversity loss, waste, and pollution, by decoupling economic activity from the consumption of finite resources.

100.6 bn tonnes of materials 22.4 lost to the environment 11.2 landfill and 8.6 recycled





A Circular Economy for Plastics





REUSE



The four reuse models

Business-to-consumer reuse models differ in terms of packaging 'ownership' and the requirement for the user to leave home to refill/return the packaging.

Refill at home
users refill their reusable container at home (e.g. with refills delivered through a subscription service)

Return from home
packaging picked up from home by a pick-up service (e.g. by a logistics company)

Refill on the go
users refill their reusable container away from home (e.g. at an in-store dispensing system)

Return on the go
users return the packaging at a store or deposit point (e.g. in a deposit return machine or mailbox)

Note: B2B packaging and 'naked' packaging-free products are not included in this framework.

Reuse can...

Cut costs

Packaging and transportation costs can be reduced by supplying refills for reusable containers in compact form, such as in concentrates or solids e.g. as tablets.



Adapt to individual needs

Individual needs can be accommodated by reuse models that let users mix and match flavours, personalise packaging or choose desired quantities.



Optimise operations

Economies of scale for distribution and logistics can be achieved through sharing reusable packaging across brands, sectors or wider networks.



Build brand loyalty

Brand loyalty and customer retention can be achieved through deposit and reward schemes for reusable packaging.

Improve user experience

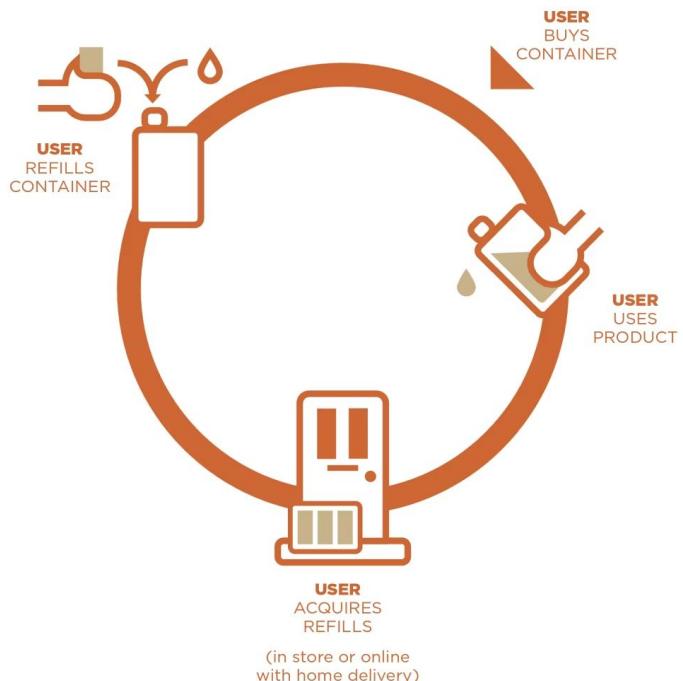
User experience can be improved by enhancing the look, feel or functionality of reusable packaging (which can be more high-end as its initial production cost is divided over many uses).

Gather intelligence

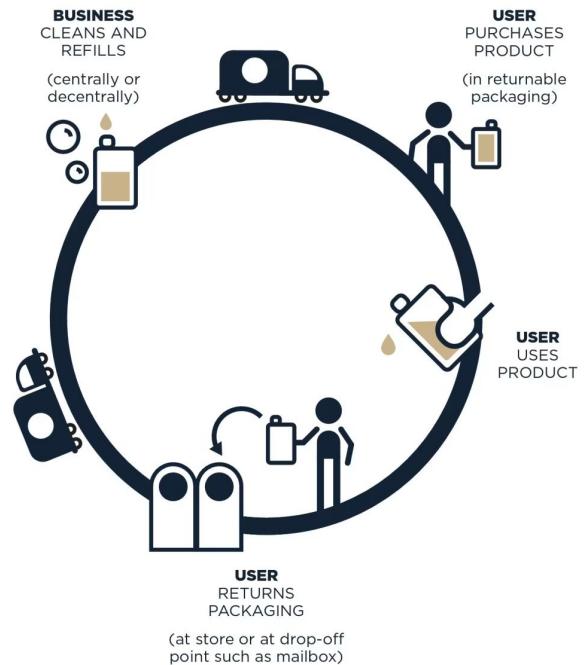
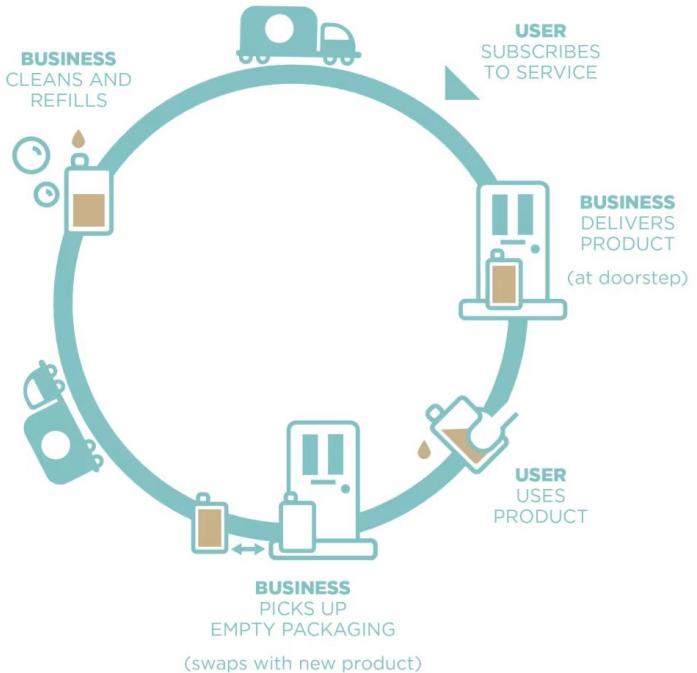
Information on user preferences and system performance can be gathered by incorporating digital technologies such as RFID tags, sensors, and GPS tracking into the reusable packaging system.



ReUse Model



ReUse Model





The Circular Economy in Greece is governed by several strategic documents and legal frameworks aimed at promoting sustainability and competitiveness

- **National Action Plan for Circular Economy (NAPCE) (2021-2025):**

The NAPCE is a four-year roadmap that encompasses 5 axes 71 actions aimed at transitioning Greece towards a sustainable and competitive economy.

The new plan includes actions that are divided into 5 main Axes: 1. sustainable production and industrial policy, e.g. ecological design, ecological certification, industrial symbiosis, tax exemptions 2. sustainable consumption, e.g. promotion of green public procurement, repair services, reuse 3. less waste with more value, e.g. financial programs for prevention, institutional framework for prevention 4. horizontal actions, e.g. national observatory, voluntary agreements, coordinating body, indicators, and specific categories of products that must be addressed as a matter of priority, e.g. plastic products, batteries and vehicles

- **National Waste Management Plan**

Based on the EU Waste Framework Directive, Greece adopted a National Waste Management Plan This plan is currently being updated with initial measures already being implemented.

- **Circular Transition Business Plan of Greece**

The Greek government has prioritized the implementation of circular economy objectives through this business plan, marking it as a key cross-sectoral priority. A. The issuance of Law 4736/2020 for the harmonization of Directive 904/2019 regarding the reduction of the effects of certain single-use plastic products. B. The approval of the Green Public Procurement Action Plan by the Ministry of Development and Investment and the Ministry of Environment and Energy in February 2021 C. The awarding of the Ecolabel for products from various categories (extended to include financial services).D. Issuing specifications for the inclusion of projects that promote the circular economy in various NSRF financing programs, etc.



Circularity Economy Challenges in Greece

- **Economic and Financial Challenges:** The Greek economic crisis and subsequent austerity measures had severe implications for the country's ability to invest in sustainable initiatives. Financial limitations make it challenging to develop the necessary infrastructure and innovation required for a circular economy.
- **Regulatory and Institutional Challenges:** Greece's regulatory framework may not be entirely conducive to the adoption of circular economy practices. Inconsistencies, lack of enforcement, and the absence of incentives can hinder the move towards a circular economy.
- **Cultural and Behavioral Challenges:** There is a need to change consumer behavior and consumption patterns, which requires cultural shifts. Public awareness and education on the benefits of a circular economy can be lacking.
- **Infrastructure and Technological Challenges:** Greece requires investments in waste management, recycling facilities, and other infrastructure to support a circular economy. There might be a gap in technology and skills required to manage waste and upcycle products.
- **Market Challenges:** There is a need for markets that can consume recycled and upcycled products. Creating demand for such products and ensuring their economic viability can be challenging.



Circularity Economy Challenges in Greece

- **Industry Preparedness:** Greek industrial leaders have initiated the transition towards a Circular Economy (CE). However, they feel vulnerable when shifting to CE models and practices, with recycling and waste management being the most common processes adopted so far.
- **Governmental Initiatives:** In 2018, Greece's Government Economic Policy Council endorsed a National Action Plan on Circular Economy to set the country on a pathway towards adopting CE principles. This plan aligns with Greece's broader economic strategy to create jobs, especially for women and youth, and to promote long-term equitable and inclusive growth based on resource efficiency. The plan was updated on 2021.
- **Environmental and Economic Benefits:** Transitioning to a circular economy is deemed crucial for Greece to ensure environmental protection, boost green growth, and create new opportunities. The transition to a low-carbon and resource-efficient economy is seen as of paramount importance.
- **Income Distribution Impact of Decarbonization:** Greece has committed to decarbonizing its energy sector by 2028 as part of the European Green Deal. However, concerns arise over the distributional consequences on Greek households, as the transition to clean technology is associated with higher costs, which are expected to primarily burden households.



Opportunities for Start-ups in the Circular Economy in Greece:

- **Waste Management and Recycling:** Start-ups can innovate in the areas of waste collection, segregation, and recycling. They can develop solutions that make recycling more efficient and profitable.
- **Upcycling and Repurposing:** There's a growing global trend for upcycled products, ranging from furniture to fashion. Start-ups can tap into this trend by creating products from materials that would otherwise go to waste.
- **Eco-friendly Products and Services:** As consumers become more environmentally conscious, there's a market for products and services that reduce waste or are made from sustainable materials.
- **Education and Awareness:** Start-ups can focus on educational platforms or campaigns to raise awareness about the circular economy and its benefits.
- **Technological Solutions:** Innovative technological solutions can help in tracking waste, optimizing resource use, and making circular processes more efficient.
- **Collaborative Consumption:** Start-ups can develop platforms for sharing, renting, or leasing products, reducing the need for ownership and thus the production of new items.
- **Innovative Financing Models:** To overcome financial challenges, start-ups can introduce new business and financing models, like crowdfunding or green bonds, to support circular economy initiatives.



RECUP

What It Is

Shared coffee cup scheme with user platform

Scale

2,500+ participating stores • Germany

How It works

RECUP offers a reuse scheme to cafés and coffee chains in Germany. Coffee drinkers pay a deposit when opting for the reusable cup and can return the empty cup to any RECUP partner in exchange for their original deposit. RECUP partners pay a membership service fee to enable the operation of the scheme and no additional fees to consumers. Partners pay a 1 EUR deposit per cup and can choose as many cups as desired. By transferring the deposit to coffee drinkers, businesses save money through replacing disposable cups with RECUPs. All RECUP partners are required to clean and reuse the cups returned to them.

RECUP is currently expanding the system by testing it with partners, such as McDonalds and Deutsche Bahn.

Benefits



Universal, no-branded cup design enables the pooling of cleaning logistics and optimises distribution among cafés, restaurants, and coffee chains.



User drop-off made easy with app showing all possible drop-off locations to retrieve 1 EUR deposit. The scheme is low risk for retail partners as cups remain the property of RECUP and deposits are paid back to retail partners when cups are returned at end-of-life.



The durable cups are designed to be used up to 1,000 times.



by Humankind

What It Is

Personal care products that reduce the need for single-use packaging

Scale

Start-up | US

How It works

by Humankind provides personal care products, which have been reinvented to reduce the need for single-use packaging. One of the products is a tablet mouthwash which the user puts into a glass of water to dissolve and use as regular mouthwash.

For the first purchases on the by Humankind webshop, products are delivered in refillable luxurious packaging designed to be kept for a lifetime. Refills e.g. for deodorant or mouthwash tablets are delivered in compostable packaging at the subscribers preferred frequency.

Benefits



Mouthwash is supplied as a compact tablet format and shampoo in solid bars to reduce packaging and transportation costs.



All personal care containers are designed in durable plastic with increased aesthetics to stay with the user for a lifetime.



Users subscribing to by Humankind deodorant, shampoo and mouthwash refills save, on average, 5 lbs of single-use plastic within the first year of use.





Q/A and Time for Action

THANK YOU