



# B2B ENTREPRENEURSHIP+

A EUROPEAN SOLIDARITY CORPS TEAM VOLUNTEERING PROJECT

## A guide to Circular Economy



Programme: European Solidarity Corps

Type of Activity: Volunteering Teams

Title of the project: Bottles2Boats Entrepreneurship+

Project code: 2020-2-EL02-ESC11-006214

The ESC team volunteering project Bottles2Boats, Entrepreneurship + took place in April 2023 and lasted for 1 month. The aim of the activity was to create an international group of 16 volunteers who, in collaboration with the local volunteers' team, would explore the values and parameters of circular economy and social entrepreneurship, while at the same time being introduced to good waste management practices and the 3Rs (Reduce-Recycle-Reuse).

This project was a continuation and upgrade of two previous projects, Bottles to Boats and Dream, which successfully used the tool of handmade transformation of plastic bottles in sailing boats, as a means of motivating young people with fewer opportunities and raising awareness of the local community about the consequences of the reckless use of disposable plastic. Dream was the first attempt to build sailing boats of the optimist type from plastic bottles and introduced innovative machines such as the bicycle-shredder, the plastic knitting loom and of course the construction of boats.

Bottles to Boats built on this know-how and expanded its educational component, obtaining the approval of the Ministry of Education for its implementation in the Secondary Education. So here we have a good practice, how Erasmus + and the European Solidarity Corps projects can lead to long lasting results for local communities. At the moment, bottle 2 boats is a program that starts in the classroom, continues with the collection and slicing of plastic, then the construction of boats and finally the rewarding of students with sailing lessons. So, it combines environmental awareness, circular economy, social economy and improving the physical condition of young people.

The impact of these 2 projects and their contribution to the development of the local part of the program of K.A.N.E., "From Bottles to Boats" which is a continuous educational – environmental program was great and at the same time the characteristics of the generation Z, lead us to introduce a new innovation in the program. This is the concept of social entrepreneurship as the solution that combines employment and social impact, while offering solutions to young people with fewer opportunities. Thus, this project is fully relevant to the concepts of solidarity, social impact, the fight against youth unemployment and the provision of opportunities to the least favored, issues that are the core of the ESC program and the National Priorities.

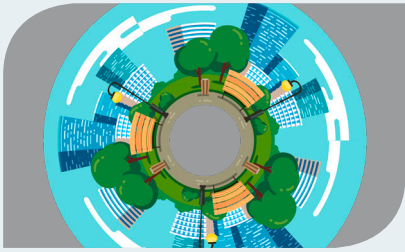
The volunteers had the opportunity to learn about the previous B2B projects and immerse in the values of circular economy and social entrepreneurship and to take part in activities such as:

- 3R workshops with the local community
- Meetings and brainstorming with actors in social entrepreneurship
- Environmental activities
- Informational activities
- Skills sharing
- Research for good practices

and came to their own conclusions about the importance of circular economy and social entrepreneurship.

**VOLUNTEERS: Alicja Nowak, Katarzyna Szymanski, Carolina Nunes, Joana Fidalgo, Maria Castillo, Diego Garcia, Miguel Romero, Elaine Lesauvage, Gauthier Legrand, Loic Martel, Sibylle Porcher, Eliise Tamm, Gianluca Vialli, Gordana Kartalovic, Gregor Hadjiivanov, Svetlana Hristova**

04



Circular economy

06



Circular economy -  
Good practices

07



Bottles2Boats  
Kalamata, Greece

09



SIPTEX  
Malmo, Sweden

10



TOO GOOD  
TO GO  
Kjellerup,  
Denmark

11



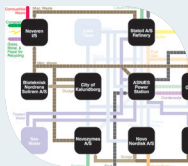
Loop by  
TerraCycle  
Trenton,  
NJ, USA

12



Fairphone  
Amsterdam,  
Netherlands

13



Kalundborg  
Symbiosis  
Kalundborg,  
Denmark

14



4 Essential  
Circular  
Economy  
Tips for  
Businesses

15



4 Circular  
Economy  
Tips for  
Consumers



# Key elements and characteristics of circular economy





# Circular economy Good Practices

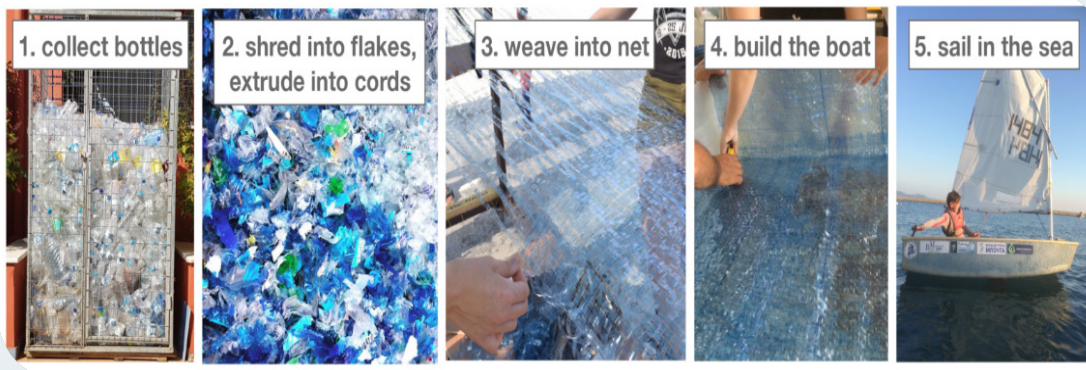
LET'S EXPLORE SOME GOOD EXAMPLES OF CIRCULAR ECONOMY

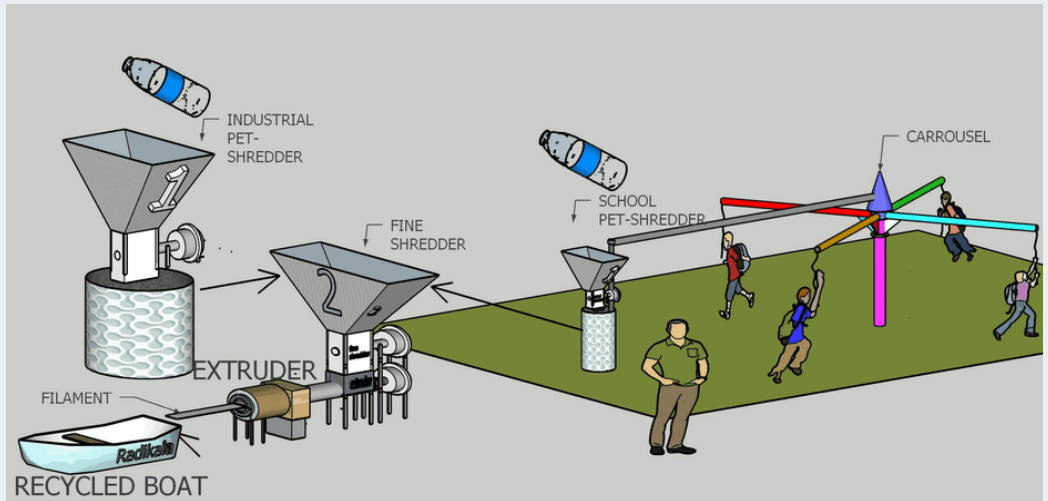
## BOTTLES2BOATS KALAMATA, GREECE

The Bottles to Boats educational programme that transforms plastic bottles into sailboats, is one of the initiatives that received the national recognition in Greece by the Energy Globe Award 2021. Carried out since 2018 in Kalamata (Greece), it represents an innovative practice of great interest, which can be replicated in different contexts. Bottles2boats is an Educational Circle of Recycling programme, corresponding to a five-steps boat-making process. It engages the students of secondary schools in the implementation of an environmental activity through a complete cycle of recycling, benefiting the local community of Kalamata (Greece) as a whole.

Bottles2boats is managed by two organizations based in Kalamata: KANE Social Youth Development, a non-profit organization which also involves European programs for educational activities with the aim to foster youth motivation in taking initiatives and become active citizens; and RADIKaLA Recycling Awareness Design Innovation Kalamata Association, who's core idea is to raise awareness about environment and health by involving citizens in waste recycling.

At international level Bottles2boats started with the support of the European Union with the implementation of international volunteering activities under the Erasmus+ programme and the European Solidarity Corps.





Bottles2boats began in June 2018 involving secondary schools in Kalamata and their students as well as the international volunteers. The first stage began with the environmental awareness training of students and the collection of plastic bottles for recycling. These activities were followed by the pilot stage consisting in the construction of the first dinghy sailboat from recycled plastic bottles. In July 2018, the sailboat was tested in the Mediterranean Sea and deemed sea-worthy, thus proving the success of the construction. The project continued with the collection and processing of plastic bottles by the schools of Kalamata and the second phase was done in October 2019, when more international volunteers arrived for the construction of other dinghy sailboats.

Bottles2boats was designed to overcome in an innovative way problems encountered in Greece and which are very common to many other contexts. Greece is facing an increasing plastic pollution: excessive use of single-use plastic bottles, making up a large percentage of waste found in the sea, beaches, bays, together with recycling activities still insufficient to solve the problem both in the Kalamata community and nationally. Combining education, theory and practice, Bottles2boats is allowing young people to make a concrete contribution to solve the great problems of modern societies.

The Educational Circle of Recycling was approved and sponsored by the Greek Ministry of Education, to be carried out in its experimental phase in the schools of Kalamata. Secondary schools play a key role in guiding young people towards future professional activities and towards new visions for a more sustainable world. Bottles2boats it is an example of a new educational approach to promote environmental awareness, which motivates young people to be creative and take active part in the challenge of concretely building the new solutions needed.

The success of the project in Greece gained recognition by the Ministry of Environment and the Ministry of Development, thus contributing for further national development of circular economy activities. In the local community of Kalamata, citizens became more active on environmental issues and promoters of plastic recycling thanks to its mobilized and educated students to be a key player in local society. The national Sustainability Observatory of Greece presents the Bottles2boats project as a best practice framed in the 17 Sustainable Development Goals of the United Nations 2030 Agenda.

Link: <https://observatory.sustainable-greece.com/en/practice/bottles2boats-b2b.2002.html>





# SIPTEX

## MALMO, SWEDEN



Image source: <https://circulareconomy.europa.eu/platform/sites/default/files/styles/large/public/material.jpg?itok=liiFUwN0>

SIPTEX is an innovative project in Sweden that aims to utilize automated sorting technologies for used textiles. This initiative was developed to increase the efficiency and effectiveness of textile recycling, which is a significant challenge in the circular economy.

The SIPTEX project uses Near Infrared (NIR) technology to sort textiles based on their material composition. By being able to differentiate between materials like cotton, polyester, wool, and others, recyclers can more effectively process and repurpose the textiles, ensuring that they're either reused, recycled, or properly disposed of.

SIPTEX, and projects like it, represent an important step in tackling the waste problem in the textile industry, which is one of the world's largest polluters. By developing and scaling up automated sorting technologies, it becomes feasible to divert more textiles from landfills and incineration, moving closer to a circular model for textile consumption and production.

The SIPTEX project is included in the list of Good Practices in the European Circular Economy Stakeholder Platform of the European Commission.

Find here the page for the project on the platform:

<https://circulareconomy.europa.eu/platform/en/good-practices/siptex-pioneering-textile-sorting-technology-increased-circularity>

Website of the SIPTEX project: [https://www.sysav.se/en/siptex?utm\\_source=smartcitysweden.com&utm\\_medium=link&utm\\_campaign=promotion](https://www.sysav.se/en/siptex?utm_source=smartcitysweden.com&utm_medium=link&utm_campaign=promotion)

# TOO GOOD TO GO

## KJELLERUP, DENMARK

Too Good To Go is an app, developed by Danish company, which now has “branches” in many countries in and outside Europe.

It offers a unique solution to food waste. Users can easily scout for unsold food items from local eateries and stores. These items are conveniently packed into what the app dubs as ‘magic bags’, each weighing around 1kg on average. Not only does this allow consumers to buy food at significantly reduced prices, but it also combats the pressing issue of food waste (Too Good To Go, 2021).

The Too Good to Go project is included in the list of Good Practices in the European Circular Economy Stakeholder Platform of the European Commission.

Find here the page for the project on the platform:

<https://circulareconomy.europa.eu/platform/en/good-practices/too-good-go-global-food-reduction-app>

Website of the project: <https://www.toogoodtogo.com/>



Image source: <https://api.ndla.no/image-api/raw/Px06kREY.jpg>

# LOOP BY TERRACYCLE

## TRENTON, NJ, USA



Image source: <https://www.greenbiz.com/sites/default/files/images/articles/featured/loop-group-shot.jpg>

Loop is an initiative started by TerraCycle, aiming to reduce single-use packaging waste. It's designed as a modern-day milkman system: products are delivered in durable, reusable containers, and once consumers have used the products, the packaging is returned, cleaned, refilled, and reused.

Loop has partnered with a variety of brands ranging from food and personal care to household goods. These brands offer their products in specially designed reusable containers that are both functional and aesthetically pleasing.

### How it Works:

**Order:** Consumers order products from the Loop store or from partner retailers.

**Delivery:** Products are delivered in the Loop Tote, a specially designed shipping tote that eliminates the need for single-use shipping materials.

**Use:** Consumers use the products as they normally would.

**Return:** Empty containers are placed back in the Loop Tote. There's no need to clean them; Loop takes care of that.

**Pickup:** The Loop Tote is collected from the consumer's home.

**Clean & Refill:** Containers are professionally cleaned, refilled, and then the cycle begins again.

Loop began its pilot phase in the Northeast U.S. and Paris, France, but has since expanded its service to other regions and is continuously building partnerships with more brands.

By introducing a system of reuse, Loop directly reduces the reliance on single-use packaging, which, in turn, reduces the need for virgin raw materials and the energy used in packaging production. This system also diminishes the environmental impact associated with waste disposal.

Read more on the initiative's website: <https://exploreloop.com/>

# FAIRPHONE

## AMSTERDAM, NETHERLANDS

Founded in 2013 in the Netherlands, Fairphone started as a campaign to raise awareness about conflict minerals in electronics and transformed into a social enterprise. Its primary mission is to develop smartphones that are ethically sourced, produced, and designed with longevity and reparability in mind.

A significant concern in the electronics industry is the use of minerals sourced from conflict zones. These minerals often fund armed groups, leading to prolonged conflicts and severe human rights abuses. Fairphone endeavors to use conflict-free minerals in its devices, like tin, tantalum, tungsten, and gold.

Fairphone's approach goes beyond just conflict minerals. The company also aims to source materials in environmentally and socially responsible manners, ensuring that the extraction process is sustainable and that workers in the supply chain are paid fair wages under safe conditions.

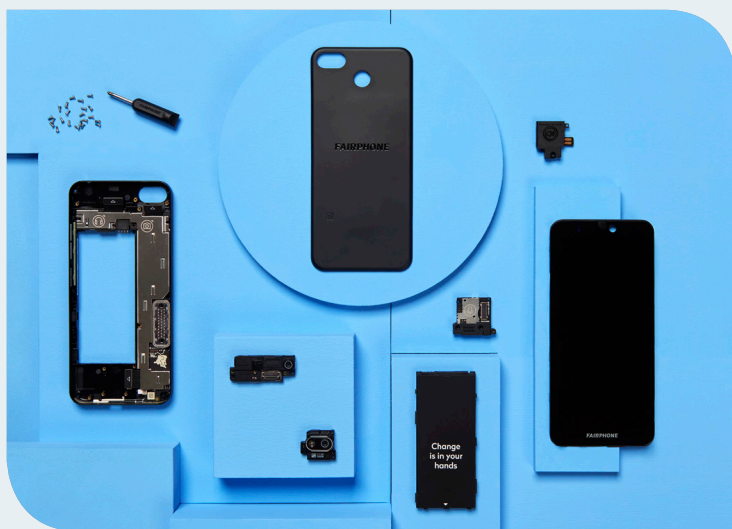


Image source: [https://upload.wikimedia.org/wikipedia/commons/b/b6/FAIRPHONE3781\\_flatlay\\_3%2B\\_frontscreen\\_flat\\_%2850273819673%29.jpg](https://upload.wikimedia.org/wikipedia/commons/b/b6/FAIRPHONE3781_flatlay_3%2B_frontscreen_flat_%2850273819673%29.jpg)

Fairphone's smartphones have a modular design, which means individual components (like the camera, battery, or screen) can be easily replaced. This modularity not only extends the lifespan of the device but also makes it more sustainable by reducing electronic waste. If a specific part of the phone breaks or becomes outdated, it can be replaced without needing to discard the entire device.

Finally, Fairphone promotes recycling programs and takes back old phones for recycling, regardless of the brand. The company aims to reduce e-waste and promote a more circular economy in the smartphone sector.

Fairphone is also included in the list of Good Practices in the European Circular Economy Stakeholder Platform of the European Commission.

Find here the page for the project on the platform:  
<https://circulareconomy.europa.eu/platform/en/good-practices/fairphone-created-worlds-first-ethical-modular-smartphone>

Website of the project: <https://www.fairphone.com/en>

# KALUNDBORG SYMBIOSIS

## KALUNDBORG, DENMARK

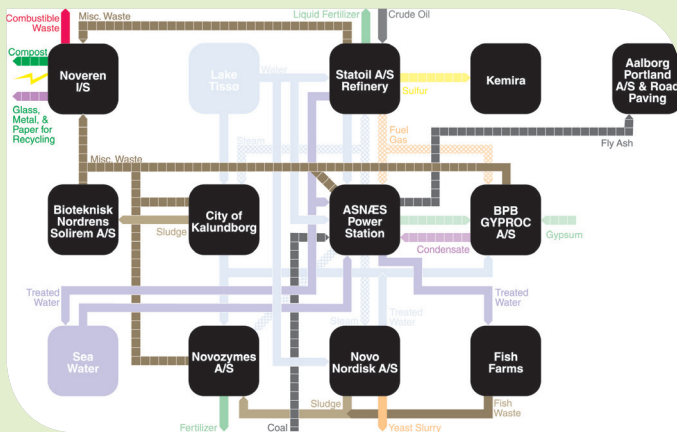


Image source: [https://upload.wikimedia.org/wikipedia/commons/8/8d/Kalundborg\\_industrial\\_symbiosis\\_diagram.jpg](https://upload.wikimedia.org/wikipedia/commons/8/8d/Kalundborg_industrial_symbiosis_diagram.jpg)

Situated in Kalundborg, Denmark, the symbiosis began informally in the 1970s when several companies started exchanging waste products and energy by-products. Over the years, this practice evolved into a formalized, collaborative network of resource sharing and innovation.

The network involves sixteen public and private companies in Kalundborg, including:

Asnæs Power Station (a large coal-fired power station)  
 Novo Nordisk (a biotech company producing insulin and enzymes)

Gyproc (a plasterboard manufacturer)

The city of Kalundborg (for district heating and other facilities)

And other businesses and facilities in the region.

The essence of the Kalundborg Symbiosis is the exchange of material and energy streams between companies. Waste and byproducts of one company become the resource of another, resulting in a highly efficient and environmentally friendly loop of industrial production.

### Benefits:

**Environmental:** The network significantly reduces waste outputs, freshwater intake, and CO<sub>2</sub> emissions by reusing materials and energy, thereby minimizing environmental impacts.

**Economic:** Companies benefit from cost savings due to reduced raw material and energy inputs, and from revenues by selling by-products.

**Social:** Local communities benefit from job creation, a cleaner environment, and increased energy security.

Kalundborg Symbiosis is also included in the list of Good Practices in the European Circular Economy Stakeholder Platform of the European Commission.

Find here the page for the project on the platform: <https://circulareconomy.europa.eu/platform/en/good-practices/kalundborg-symbiosis-six-decades-circular-approach-production>

Website of the project: <https://www.symbiosis.dk/en/>

Find more good practices on the European Circular Economy Stakeholder Platform: <https://circulareconomy.europa.eu/platform/en/good-practices>

# 4 ESSENTIAL CIRCULAR ECONOMY TIPS FOR BUSINESSES

Here are four actionable tips for businesses aiming to incorporate the principles of the circular economy:



## **Design for Longevity and Reparability:**

Invest in high-quality materials and design techniques that extend product life. Ensure that products can be easily repaired, upgraded, or refurbished. This not only reduces waste but also strengthens customer loyalty as they benefit from longer-lasting goods.

01



## **Adopt a Product-as-a-Service Model**

Instead of selling products outright, consider leasing or renting them to consumers. Once the product reaches the end of its usability for one consumer, it can be refurbished and leased again, reducing the need for new product production and ensuring materials remain in circulation for longer.

02



## **Embrace Sustainable Supply Chains**

Partner with suppliers who are also committed to circular economy practices. Ensure that raw materials are sustainably sourced, and prioritize suppliers who adopt regenerative and restorative practices.

03



## **Implement Take-Back and Recycling Programs**

Offer customers incentives to return products at the end of their life or when they upgrade to newer models. Establish or partner with facilities that can effectively dismantle, refurbish, and recycle components, ensuring materials are reintroduced into the production chain rather than ending up in landfills.

04

# 4 CIRCULAR ECONOMY TIPS FOR CONSUMERS

Consumers play a critical role in driving the circular economy. Here are four actionable tips for individuals wanting to support and participate in circular practices:



## Buy Less, Choose Wisely

Before making a purchase, consider whether the item is truly needed. When you do buy, choose products from companies that are known for their durability, reparability, and ethical production methods. Opt for items that have been designed with longevity in mind.



## Support Product-as-a-Service and Sharing Platforms

Before making a purchase, consider whether the item is truly needed. When you do buy, choose products from companies that are known for their durability, reparability, and ethical production methods. Opt for items that have been designed with longevity in mind.



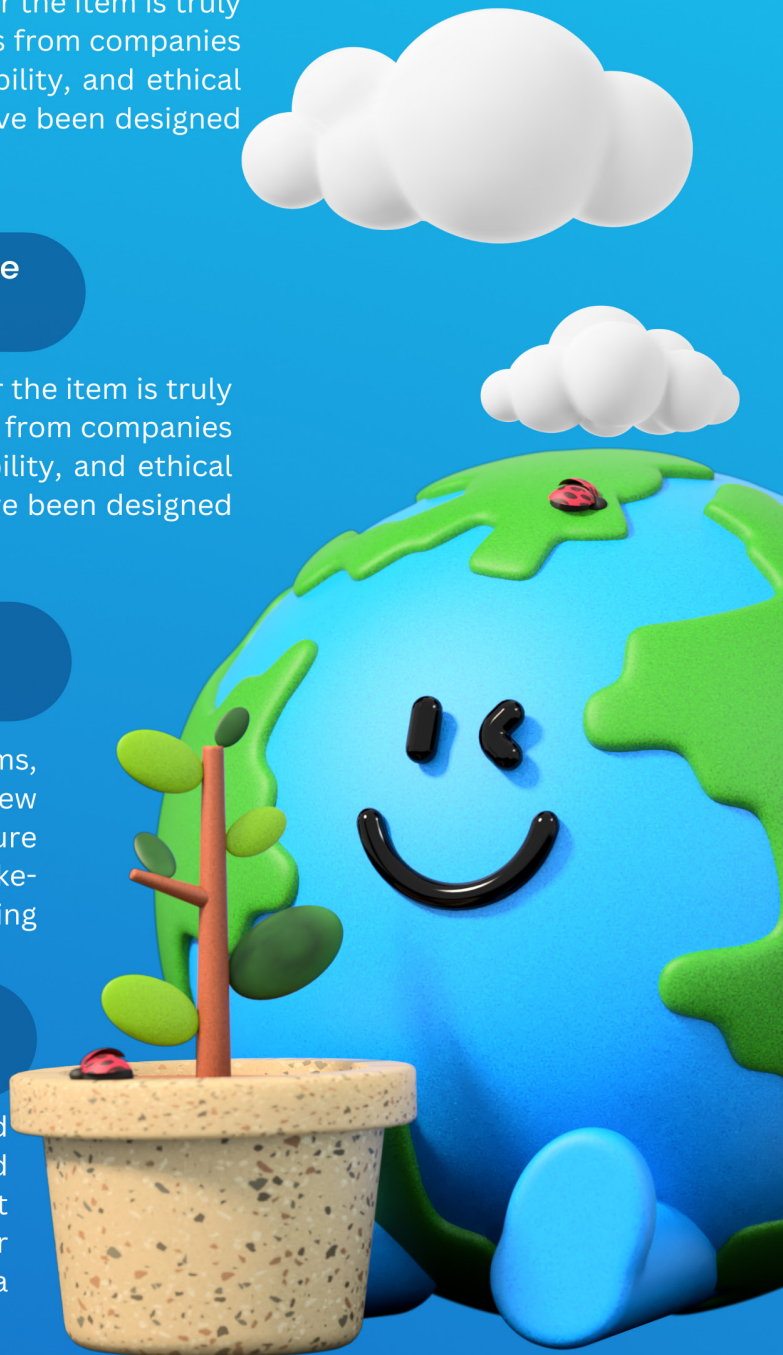
## Repair, Upcycle, and Recycle

Before discarding damaged or outdated items, explore if they can be repaired or given a new purpose. If items are beyond repair, ensure they are recycled properly. Participate in take-back programs or use community recycling facilities.



## Educate and Advocate:

Educate yourself about the principles and benefits of the circular economy. Support and advocate for businesses and policies that prioritize circular practices. Share your knowledge with friends and family, fostering a community that values sustainability.





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