

EXERCISE 3 - DESIGNING SUSTAINABLE PRODUCTS (60 MINUTES)



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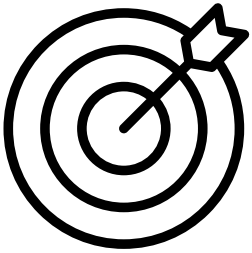


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Goal of the exercise

The goal of this exercise is to create a prototype of a product that minimizes the use of natural resources at every stage of its life cycle, incorporating principles of the circular economy. Participants will design products with a longer life cycle that are easy to recycle and reuse. This exercise aims to increase awareness of sustainable development and its economic and environmental benefits.



The trainer explains the concept of life-cycle design to the participants. They emphasize that sustainable products must minimize resource use at every stage—from selecting raw materials, through production and usage, to disposal or recycling. The trainer introduces terms related to the circular economy, highlighting the need to design products that can be easily reused, repaired, or recycled. To help participants understand the topic and shift their mindset, they may start with an opening question: “Which everyday products, in your opinion, are designed according to sustainable principles?”

Trainer’s Tasks:

- Divide participants into groups (3–5 people). Each group’s task is to design a product that minimizes resource use at every stage of its life cycle. You can suggest a few product categories, such as packaging, furniture, clothing, or electronics, but encourage creativity and open thinking.
- Participants should consider the choice of materials, production processes, methods of use, and possibilities for recycling. They may also consider introducing innovative technologies or materials.
- Each group develops a brief description of the product and a presentation (e.g., a sketch on a flipchart or a model) showing how their product supports sustainability.
- Monitor group work and support them in generating ideas by asking guiding questions, such as, “What materials could be used to minimize the carbon footprint of this product?” or “Can your product be repaired or reused?”
- Ask each group to assess the environmental and economic benefits of their designed product, taking into account aspects like:
 - reduction in raw material and energy consumption,
 - potential economic savings resulting from product longevity,
 - opportunities for recycling or reuse,
 - benefits related to reducing the carbon footprint.
- Pose questions that help participants reflect on the impact of their project: “What changes in the life cycle of your product could bring the greatest environmental benefits?”
- Request each group to present their prototype, describing how it addresses sustainable development challenges, and discuss its environmental and economic benefits.

- Encourage other participants to ask questions and share their ideas. After each presentation, you may ask questions such as:
 - “What innovative materials or technologies could support the development of this product?”
 - “Are there additional stages in the life cycle that could be improved to make the product even more sustainable?”
- Introduce elements of discussion by asking participants if they see the potential for similar products to be implemented on a large scale in their industry or daily life.
- Summarize the key takeaways from the presentations and discussion, emphasizing the importance of life-cycle design and implementing circular economy principles.
- Encourage participants to reflect on how their projects might impact the environment and how a similar approach could be applied in companies and everyday life.
- You might ask a concluding question: “Which products designed today have, in your opinion, the most potential to reduce the carbon footprint and increase sustainability?”

To enrich the exercise, you can provide examples of existing products designed with sustainability principles in mind, such as recycled clothing, modular furniture, or biodegradable packaging.

You can also suggest that groups identify the biggest barriers they might face in promoting such products and consider ways to overcome them, such as through educational or marketing efforts.

Examples of existing sustainable products:



Recycled Shoes – Adidas x Parley

Adidas collaborates with Parley for the Oceans to produce shoes and sportswear made from plastic collected from the oceans. A notable example is the Adidas UltraBOOST shoes, made from recycled plastic waste collected from beaches. The company promotes ocean conservation and recycling, minimizing the use of new raw materials and helping to combat marine pollution.



Biodegradable Toothbrushes – The Humble Co.

The Humble Co. produces toothbrushes made from biodegradable bamboo, which are more environmentally friendly than traditional plastic toothbrushes. The company also emphasizes ethical production and supports oral health projects in less-developed countries. By using natural materials, the product fully aligns with sustainable development principles.



Reusable Cups – KeepCup

KeepCup is a company that produces reusable cups designed to reduce the use of single-use plastic cups. KeepCups are made from materials like glass and plastics that can be fully recycled at the end of their use. The company promotes eco-friendly habits, reducing waste from disposable products.

