



FACT SHEET

INFORMATION ON CIRCULAR ECONOMY

THE CONCEPT OF CIRCULAR ECONOMY

Waste is a human invention. In nature, all waste from an organism becomes food for another. Everything is recycled. Our current modes of consumption and production are linear. Resources are extracted and processed into products, and when a product is no longer needed, it is discarded and typically ends up in an incinerator or landfill. Thus, valuable resources are lost.

In contrast to the traditional, linear, throwaway economy, in the circular economy, we design and create products that are easy to share, lease, reuse, repair, refurbish and recycle, while using regenerative resources and renewable energy. The goal is to minimise waste and to keep products and resources in the economy for as long as possible. Ideally, this win-win approach benefits both the economy and the environment.

"[W]e haven't yet learned how to stop our plastic from ending up in the ocean, where it will pollute the water column for decades to come.

This litter is one part of a far larger global problem. Our planet is warming, species are disappearing, and the resources on which we depend are becoming scarcer. If we continue down the path of "make, use, dispose", unwanted side effects are inevitable. [...]

A circular economy would benefit our environment, but it's also smart economics. The idea is to keep a given resource circulating for as long as possible. That means designing products, processes and services to optimize the use of resources, so that when something reaches the end of its useful life, we re-use, repair, or remanufacture it for another use. Or we recycle the materials it contains and re-inject them into the economy elsewhere."

Quote by **Karmenu Vella, European Commissioner for Environment, Maritime Affairs and Fisheries**¹

¹ www.unep.org/ourplanet/may-2016/articles/go-circular



One of the most important ambassadors and promoters for Circular Economy and circular thinking is the **Ellen MacArthur Foundation**:

"A circular economy [...] is restorative and regenerative by design[,] and aims to keep products, components, and materials at their highest utility and value at all times[.]"²

PRINCIPLE 1

PRESERVE

- + Conserve resources, products and materials
- + Prioritise renewable energy and material resources
- + Eliminate toxic substances and use waste as a resource

PRINCIPLE 2

INNOVATE

Rethink business models by collaboration along the entire supply chain and stimulate new consumption patterns through intelligent product design and innovation:

- + Service as a product
- + Digitalisation
- + Leasing instead of owning
- + Sharing economy

PRINCIPLE 3

CLOSE THE LOOP

- + Design out waste
- + Circulate products, components and materials
- + Improve the reuse, remanufacturing, sharing, repair and recycling of products

For more information visit:

www.interreg-danube.eu/moveco

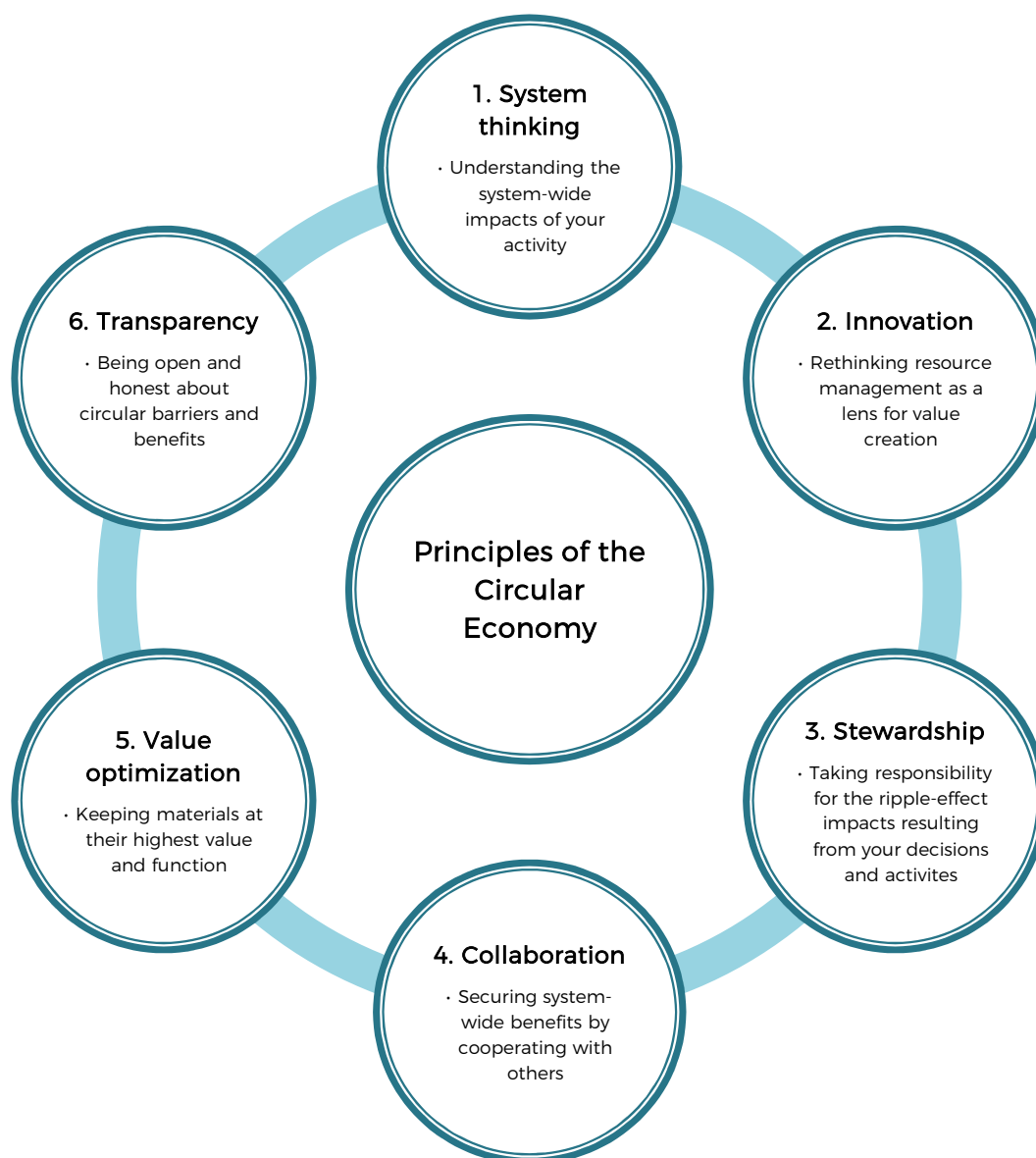
www.ellenmacarthurfoundation.org

² www.ellenmacarthurfoundation.org/assets/downloads/publications/TCE_Ellen-MacArthur-Foundation_26-Nov-2015.pdf



SIX PRINCIPLES OF CIRCULAR ECONOMY

These following six principles of the Circular Economy have been defined by BSI – the British Standards Institution.



More information on these principles can be found in "BSI Group, Executive Briefing: BS 8001 – a Guide"³

³ Graph and included text are based on www.bsigroup.com/Sustainability/BS8001_Executive_Briefing.pdf



SCHOOLS OF THOUGHT

The following **seven schools of thought** of the **Ellen MacArthur Foundation** can be seen as the basis for the concept of Circular Economy.

CRADLE TO CRADLE (C2C)

- ✓ Designing products “for continuous recovery and reutilisation as biological and technical nutrients”⁴

PERFORMANCE ECONOMY

- ✓ “[S]elling services rather than products” (“functional service economy” / “performance economy”)⁵

BIOMIMICRY

- ✓ Studying “nature’s best ideas and then imitate [...] these designs and processes to solve human problems” (“innovation inspired by nature”)⁶

INDUSTRIAL ECOLOGY

- ✓ “[C]reating closed-loop processes in which waste serves as an input, thus eliminating the notion of an undesirable by-product”⁷

NATURAL CAPITALISM

- ✓ “[R]ecognising the interdependencies that exist between the production and use of human-made capital and flows of natural capital”⁸

BLUE ECONOMY

- ✓ “[U]sing the resources available in cascading systems, [...] the waste of one product becomes the input to create a new cash flow”⁹

⁴ <https://www.ellenmacarthurfoundation.org/circular-economy/schools-of-thought/cradle2cradle>

⁵ <https://www.ellenmacarthurfoundation.org/circular-economy/schools-of-thought/performance-economy>

⁶ <https://www.ellenmacarthurfoundation.org/circular-economy/schools-of-thought/biomimicry>

⁷ <https://www.ellenmacarthurfoundation.org/circular-economy/schools-of-thought/industrial-ecology>

⁸ <https://www.ellenmacarthurfoundation.org/circular-economy/schools-of-thought/natural-capitalism>

⁹ <https://www.ellenmacarthurfoundation.org/circular-economy/schools-of-thought/blue-economy>



REGENERATIVE DESIGN

- ✓ Supporting “systems which are capable of being restored, renewed, revitalized [...] through the integration of natural processes, community action and human behavior”¹⁰

For more information visit:

www.ellenmacarthurfoundation.org

¹⁰ <https://env.cpp.edu/rs/about-regeneration>