

FROM THROWAWAY SOCIETY TO CIRCULAR ECONOMY

THROWAWAY SOCIETY – A LINEAR ECONOMIC SYSTEM

Today's throwaway society is the result of a linear economic system. Many raw materials are extracted and products are made, used and disposed. This leads to a raw material shortage, large volumes of waste and the resultant environmental problems.



The linear economic system

CIRCULARITY INSTEAD OF A LINEAR ECONOMIC SYSTEM

The circular economy aims to solve the problems of the throwaway society. Instead of products being thrown away after use (graphic above), cycles are created by sharing, reusing, repairing, remanufacturing, refurbishing and recycling (green arrows in the right-hand graphic). In a circular economy, products, materials and resources are used or reused for as long as possible and their value is retained. Fewer primary raw materials are consumed and less waste is generated than in the linear economic system.

The circular economy is an integrated approach which considers the cycle as a whole from raw material extraction, through design, production, distribution and a use phase which is as long as possible, through to recycling. So that products and materials remain in the cycle, all the stakeholders must view it as a whole and act accordingly.

PRODUCT CYCLES

Share: Several users benefit from a product and intensity of use is increased.

Reuse: A product in working order is passed on to other users.

Repair: Longevity is extended.

Remanufacture, refurbish: Defective or obsolete products are reconditioned and made to function again.

Using products for as long as possible is environmentally beneficial in almost all cases, because energy, water and chemicals are also needed for recycling. A product is only sent for recycling if it cannot be shared, reused, repaired, remanufactured or refurbished.

MATERIAL CYCLES

Recycling: Dismantle and separate products and remove pollutants so that the secondary raw materials are of high quality and can be marketed.

RENEWABLE AND NON-RENEWABLE RESOURCES

Renewable resources from agriculture, forestry or fisheries are used in ways which conserve the natural cycles and ecosystems.

Non-renewable resources are used in line with the vision of a circular economy, so that they are not dispersed in the environment. They then retain their quality and are used again and again in product and material cycles.

USE OF RENEWABLE ENERGY

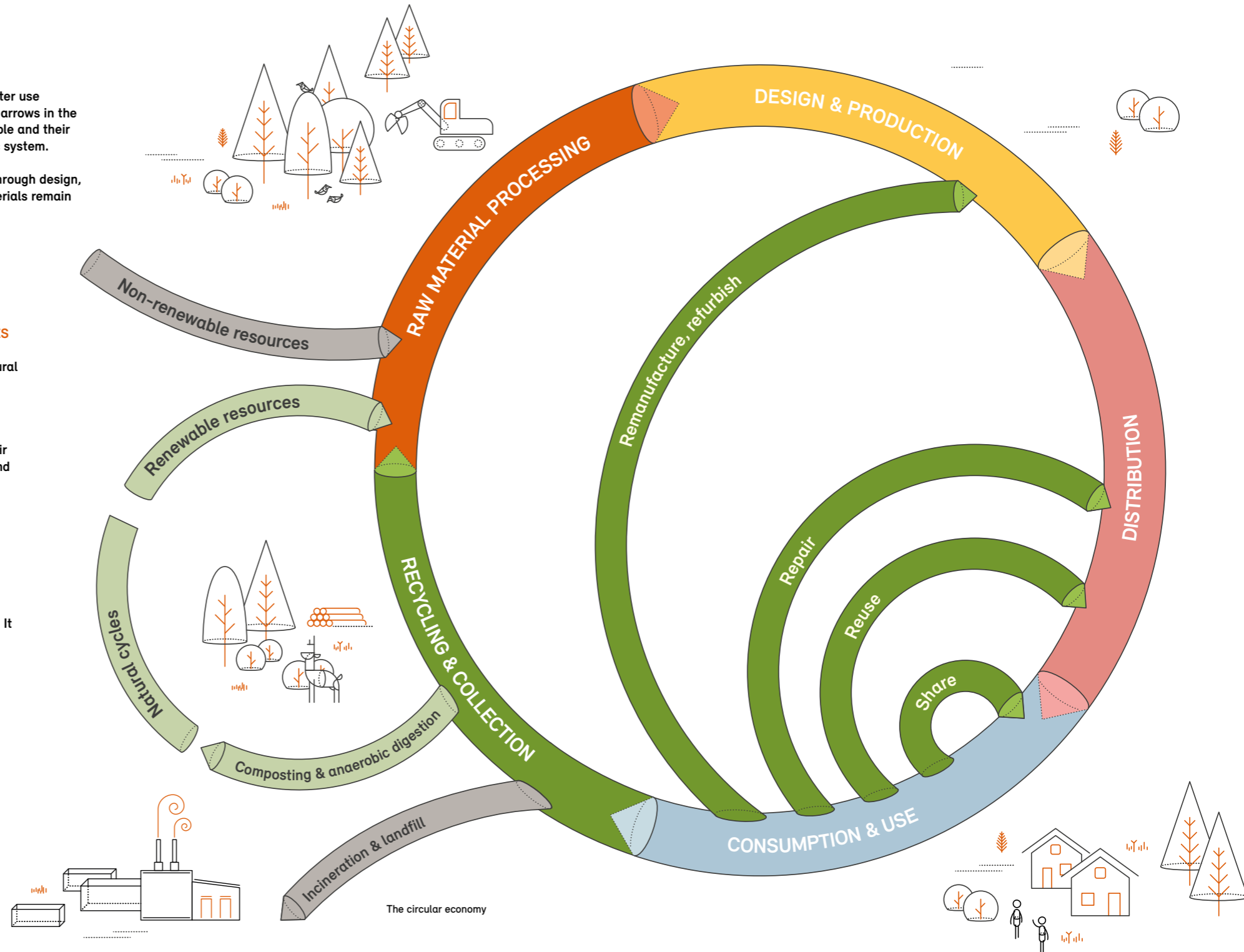
The circular economy only uses renewable energy. It should be used as efficiently and economically as possible, because raw materials and natural resources are also required for the supply of renewable energy.

BENEFICIAL FOR THE ENVIRONMENT? PERFORM A LIFE-CYCLE ASSESSMENT

A life-cycle assessment is the only way to ensure that projects or measures in the circular economy actually help to reduce the environmental impact. A life-cycle assessment includes all the relevant environmental effects over the full life-cycle of products.

CHARACTERISTICS OF CYCLABLE PRODUCTION – ECODESIGN

- Durable, repairable, modular design and products which can be dismantled
- No chemicals hazardous to the environment and health
- Separable, safe, recyclable materials



The circular economy

Key:

Transport
Renewable energy

Avoid where possible