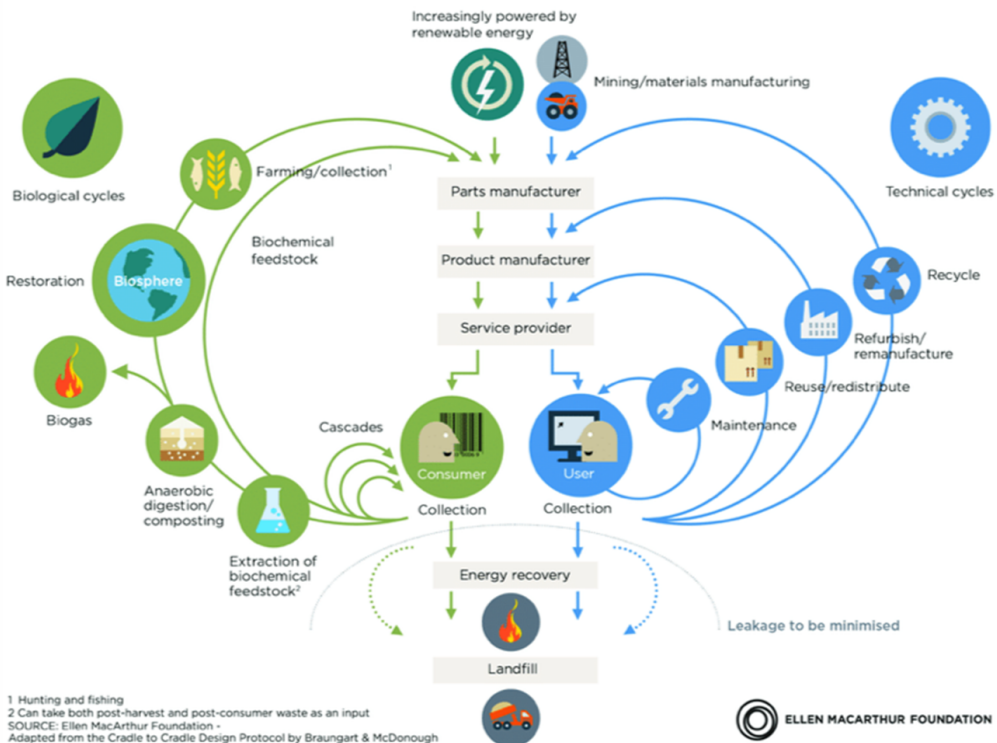




WASTE MANAGEMENT

Circular Economy



1 Hunting and fishing

2 Can take both post-harvest and post-consumer waste as an input

SOURCE: Ellen MacArthur Foundation -

Adapted from the Cradle to Cradle Design Protocol by Braungart & McDonough





CIRCULAR ECONOMY

- The growth of industrial production, the generation of electric energy and heat, extraction of mineral raw materials, agricultural activities related to the growth of the number of inhabitants and caused by increased requirements for living, transport, consumption, infrastructure results in increasing requirements the quality of the environment.



CIRCULAR ECONOMY

- There is influence increasingly showing itself on the global scale.
- Since the industrial revolution in the 19th-century environmental pollution has extended to a global cross-border problem.



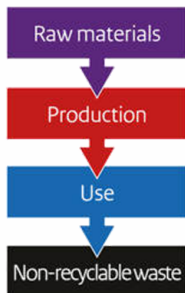
CIRCULAR ECONOMY

- The use of fossil fuels increased 12-times during the 20th century.
- From 1990 to 2010 the emissions from the combustion of fossil fuels increased by 50%. It is estimated that almost 50% of European waste generated is being landfilled.

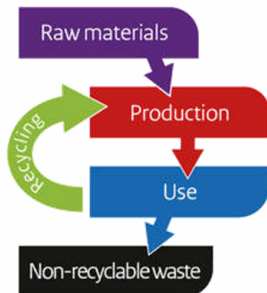


FROM LINEAR TO CIRCULAR ECONOMY

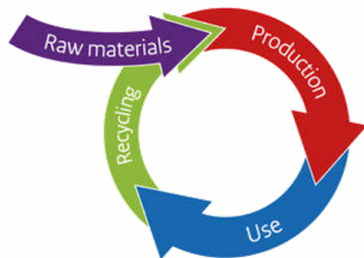
Linear economy



Reuse economy



Circular economy





CIRCULAR ECONOMY

- A current linear model of economic growth does not correspond to the needs of today's society.
- To ensure sustainable growth it is necessary to use resources more intelligently and sustainably.



CIRCULAR ECONOMY

- The aim of a sustainable model of the economic - circular economy is to maintain the value of products and materials as long as possible. It means that waste and new resource utilization are minimized.
- If the product reaches the end of its life cycle, resources are not eliminated from the economy, but they are reused for creating a new value.



CIRCULAR ECONOMY

- In comparison with the linear model, the circular economy separates economic growth from the need to extract new and rare materials.
- The materials are saved, reuse, there is a change in the eco-design of products, and by developing new products and services with decreased material requirements or reuse in the circular cycle.



CIRCULAR ECONOMY

- Production and consumption:
 - self-sufficiency for raw materials
 - avoiding the generation of waste and reducing, change the consumer behavior
 - reducing food waste



CIRCULAR ECONOMY

- Waste management:
 - increasing recycling rate
 - the recycling rate of specific waste streams



CIRCULAR ECONOMY

- Secondary raw materials:
 - contribution of recycled materials to raw materials demand
 - trade in recyclable raw materials



CIRCULAR ECONOMY

- Competitiveness and innovation
 - green jobs and investments
 - patents related to recycling