

# LINEAR ECONOMY

EXISTING ECONOMIC MODEL



Relies on **large quantities** of **cheap, easily accessible materials** and **energy**



Creates a lot of **WASTE**

# CIRCULAR ECONOMY

NEW MODEL OF PRODUCTION AND CONSUMPTION



Life cycle of products is **extended**

Waste is reduced to a **minimum**



Materials are **kept within the economy** thus **creating added value**

## WHY IS CIRCULAR ECONOMY SO IMPORTANT?

Growing world population + linear model = **growing demand** for raw materials

Critical raw materials (CRM) supply = **Limited**

Many EU countries already **dependent** of CRM from abroad

Linearity **increases** annual **greenhouse emissions**

## BENEFITS OF "GOING CIRCULAR"

**Stimulates innovation**

**Increases competitiveness**

**Improves the security of supply** of raw materials

**Reduces pressure** on the **environment**



## Economic growth boost potential

+0.5% of GDP, creating **700,000 jobs** in the EU alone by 2030

# 7R CIRCULAR economy

### RECOVER

Usage waste as an input material to create valuable new products as new outputs. The aim is to **reduce the amount of waste** generated, therefore reducing the need for landfill space and also **extracting maximum value from waste**.

### REUSE

Product that has **lost value to one owner**, has good probability of being in a **good enough state to enable a new use** by someone else.

### RECYCLE

**Reintroducing waste** from already consumed products to be **used again** as a raw material for the manufacturing of new products.

### REFURBISH

Not everything is better "new". Refurbishing includes **renovating and improving** old or used products, buildings etc., in order to give them a **brand new product life** in the same or very similar purpose.

### REDUCE

For the consumers: **reducing the number of products** that we buy and waste that we generate. **At industrial level: decreasing the use of raw material** needed for a product (packaging, avoiding plastic bags, etc.)

### REPAIR

Taking what is broken and putting it again into service. Includes **design and production** quality measures to ensure **repairability** of products. **Opposite of planned obsolescence**.

### RETHINK

Making ecology and environmental concerns **part of the design process** = **manufacturing more sustainable products**. Not only about functionalities, but also about the raw material, the packaging, etc.

## ECONOMIC MODELS



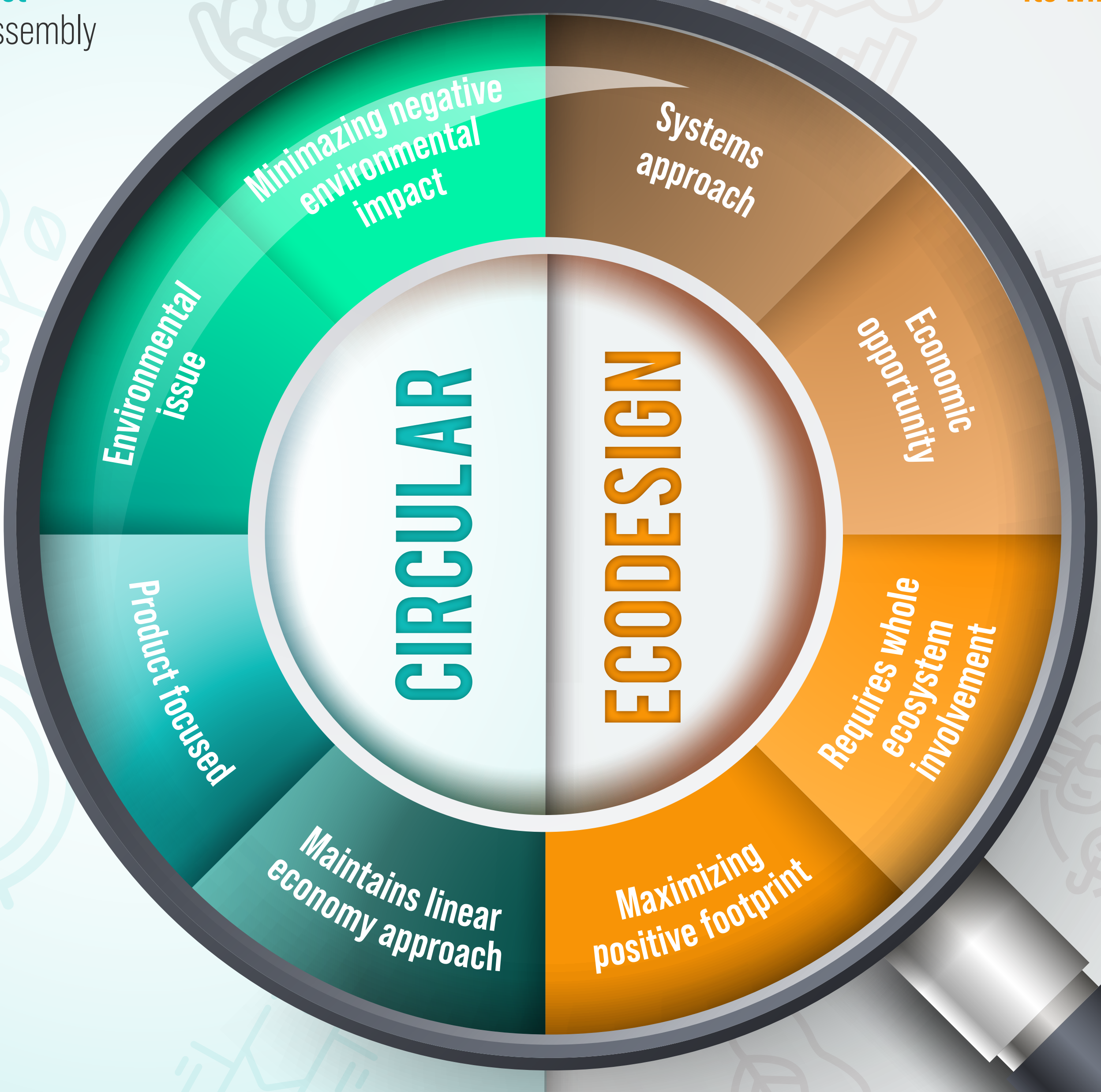
## DESIGN MODELS

### CIRCULAR based on:

- **Optimised** material choice
- **More modularisation** / standardisation
- Production **process efficiencies**
- Design **to last**
- **Easier** disassembly

### ECODESIGN

Integration of environmental aspects with the aim of **improving the environmental performance** of the product **throughout its whole life cycle**



### MODULAR

Creates things out of independent parts with standard interfaces making them **customizable, upgradeable, repairable** and **reusable**