

IBC Training Programme on Green Transitions: Circular Economy 27th October 2022

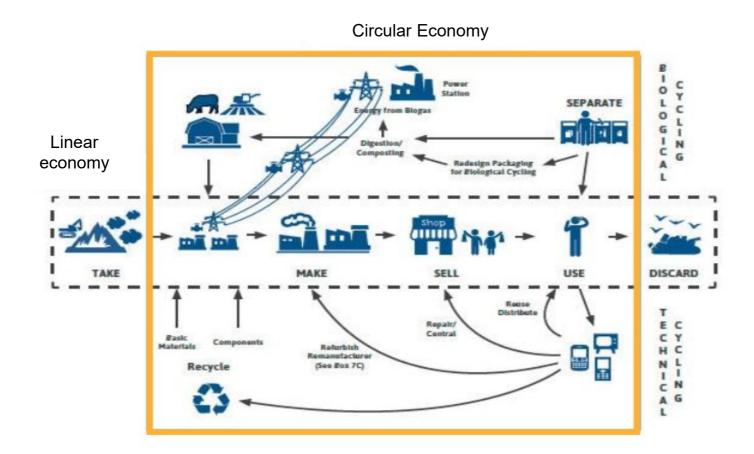
# Opportunities of a Circular Economy and its Status Quo

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#### From a linear towards a circular economy





#### **Definition Circular Economy**

"The transition to a more circular economy, where the value of products, materials and resources is maintained in the economy for as long as possible, and the generation of waste minimised (...)"

#### **Outline**



#### **Guiding question:**

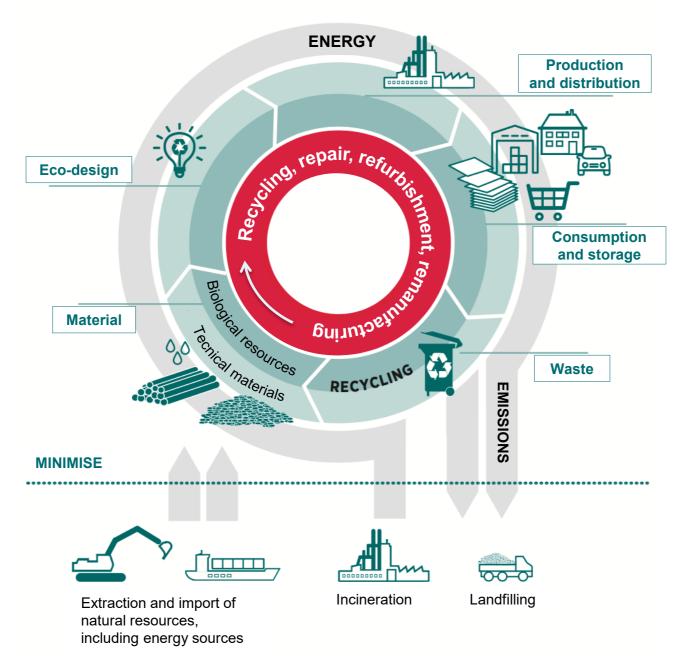
Why is it necessary to support the transformation towards a circular economy?

- 1. Definitions and concepts
- 2. Environmental and socio-economic benefits
- 3. Status quo of circularity



#### The concept of circular economy





### **Becoming circular: The 10 Rs framework**



lucreasing circularity	Smarter product use and manu-facture	R0 Refuse	Make product redundant by abandoning its function or by offering the same function with a radically different product
		R1 Rethink	Make product use more intensive (e.g. by sharing product)
		R2 Reduce	Increase efficiency in product manufacture or use by consuming fewer natural resources and materials
	Extend lifespan of product and its parts	R3 Reuse	Reuse by another consumer of discarded product which is still in good condition and fulfils its original function
		R4 Repair	Repair and maintenance of defective product so it can be used with its original function
		R5 Refurbish	Restore an old product and bring it up to date
		R6 Remanufacture	Use parts of discarded product in a new product with the same function
		R7 Repurpose	Use discarded product or its parts in a new product with a different function
	Useful application of materials	R8 Recycle	Process materials to obtain the same (high grade) or lower (low grade) quality
		R9 Recover	Incineration of material with energy recovery

### **Circularity: Waste reduction (SDG 12)**



#### and much more...



SDGS THAT STRONGLY BENEFIT FROM CE PRACTICES



SDGS THAT BENEFIT FROM CE PRACTICES INDIRECTLY



SDGS THAT FACILITATE THE UPTAKE OF CE PRACTICES.



SDGS THAT PROVIDE OPPOSTUNITIES TO **ENABLE CE PRACTICES** 































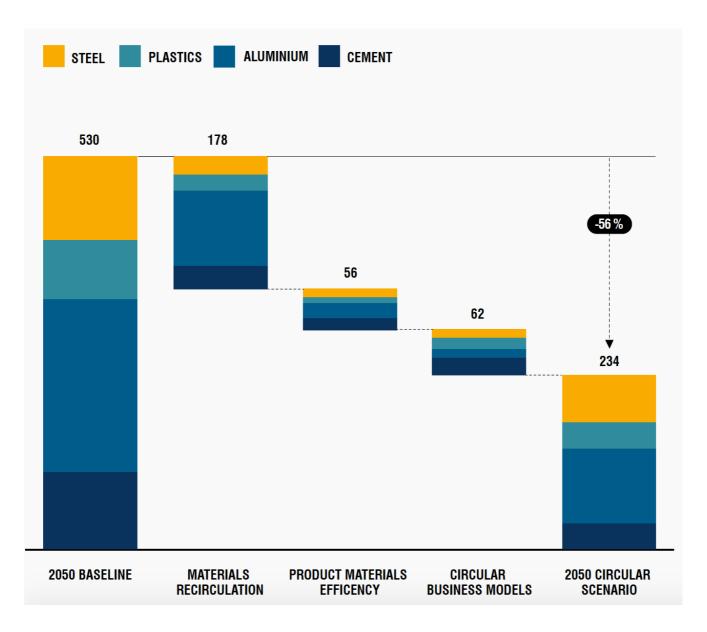






#### Circular economy and climate proteccion

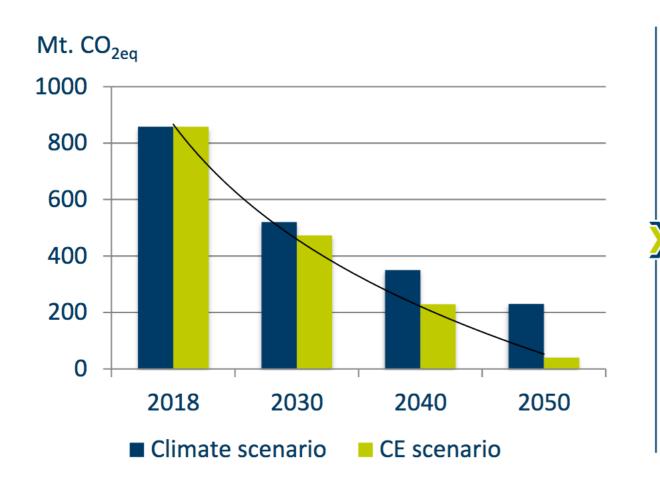




Source: Circular Economy 2018. Material Economics, Lund.

#### Circular economy and climate proteccion





## Circular Economy levers:

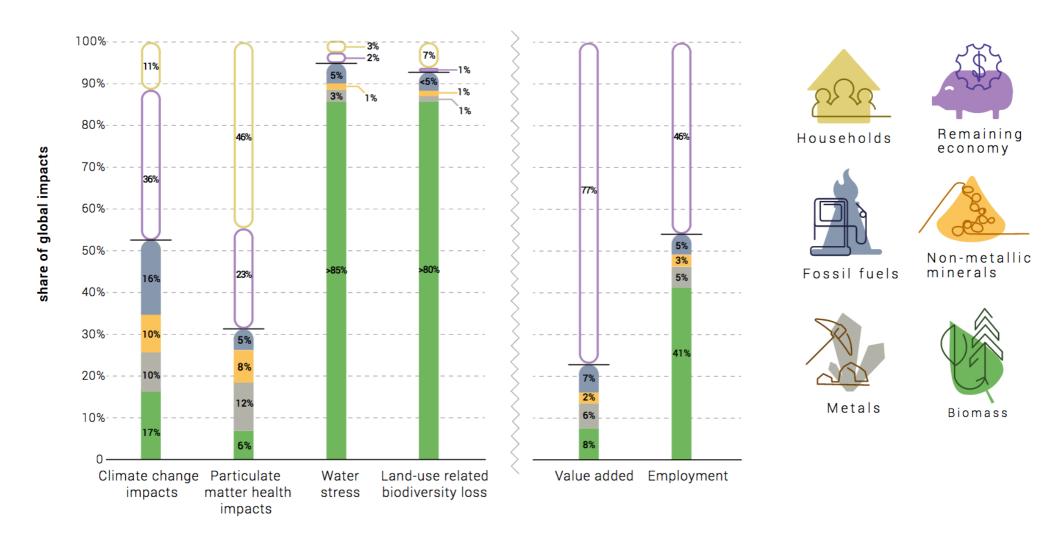
- Life cycle extension
- Product use intensification
- Increased recycling (incl. increased energy efficiency)

Source: CEID 2021

## Overconsumption of natural resources causes 50% of GHG emissions and 95% of biodiversity losses



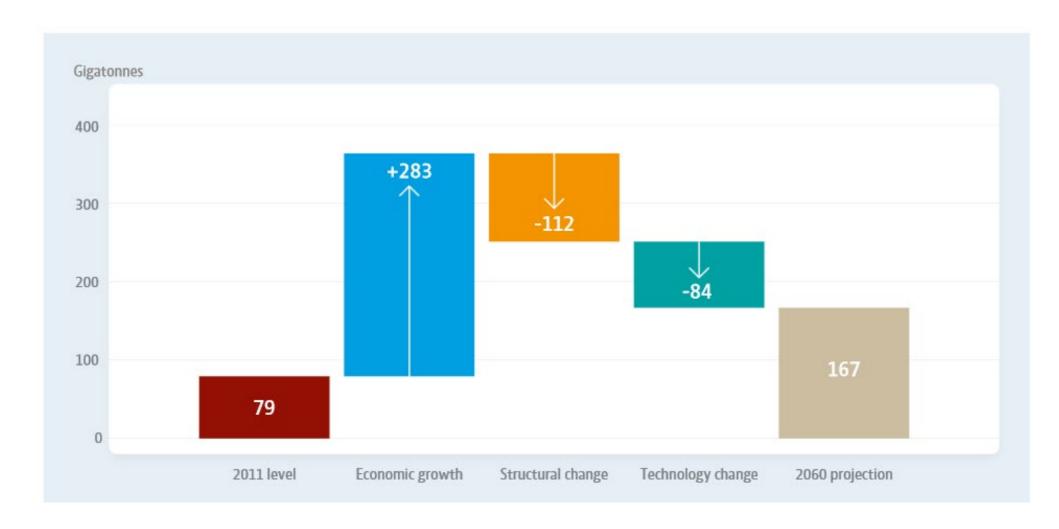
| Figure 4. Global impacts of extraction and processing by resource type, remaining economy and households



Source: IRP 2019

#### Global materials use is projected to double





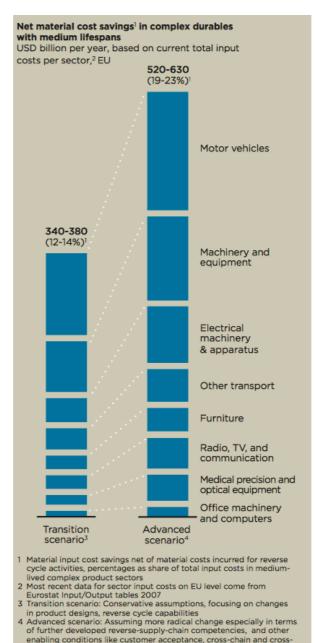
Source: OECD (2018): Global Material Resources Outlook to 2060, OECD Publishing ,Paris.

# The circular economy: The potential benefits

### "... better future prospects for the European economy (...)", "Prospects for a

- sustainable growth that lasts (...)" (EC 2020)
- Significant impact on innovation, capital productivity and reduced dependence on raw material
- > Estimated annual net material cost savings potential of up to 640 billion euros (EMF)





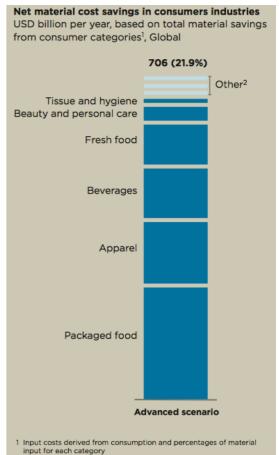
sector collaboration and legal frameworks

Adoption of circular setups in relevant medium-lived complex product sectors

Source: EMF 2013

Adoption of circular setup in relevant fast-moving consumer goods sectors

Source: EMF 2013



2 Other includes consumer health, pet care, home care, and tobacco

#### **Cost saving potentials for households**

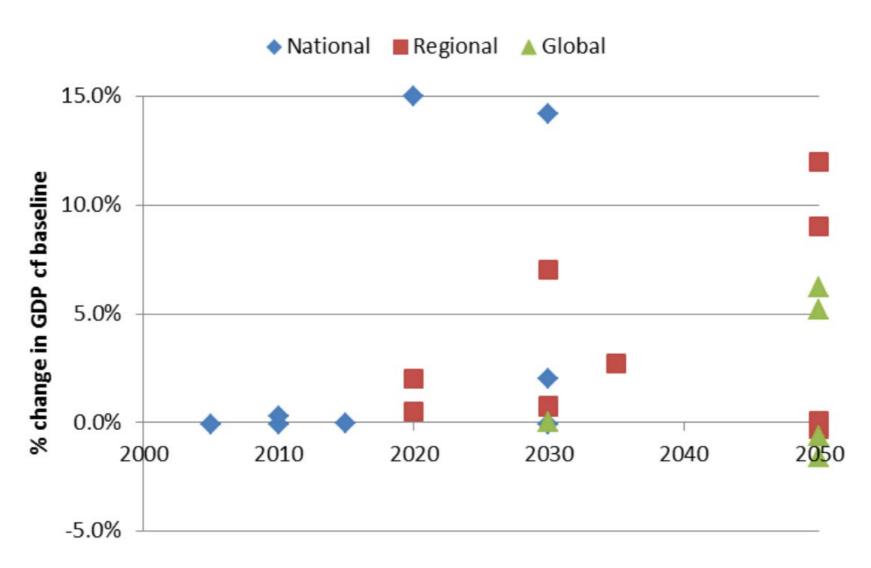


Total annual cash-out costs per household; EU average 2012, €, improvement potential for 2050¹



#### Macro-economic effects of circular economy strategies

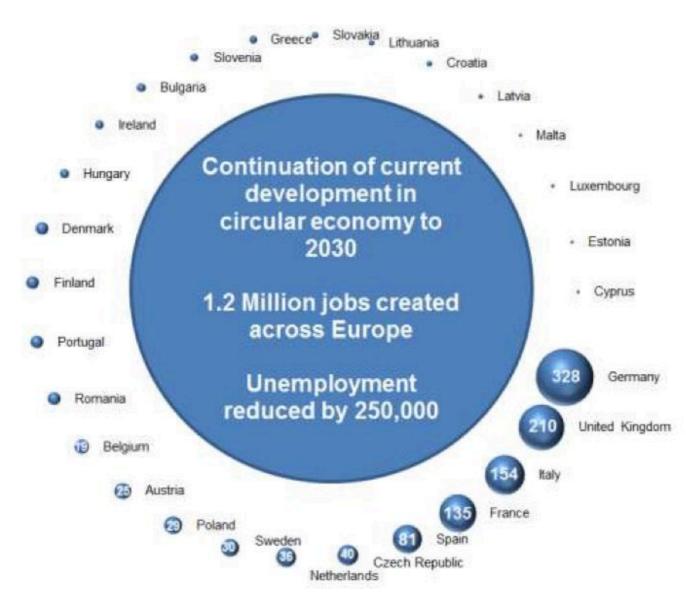




Source: OECD 2020

#### **Circular job opportunities**



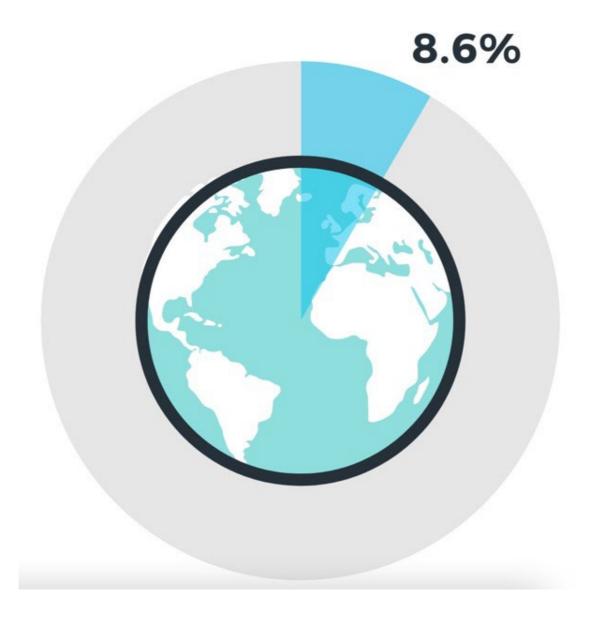


Source: WRAP 2017

#### **Impressive opportunities:**

#### But how circular are we actually?

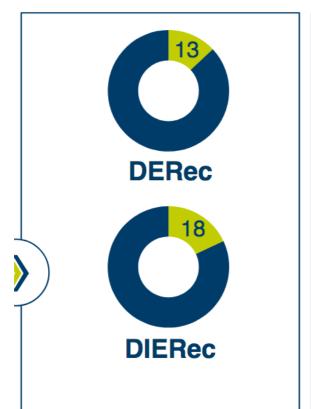




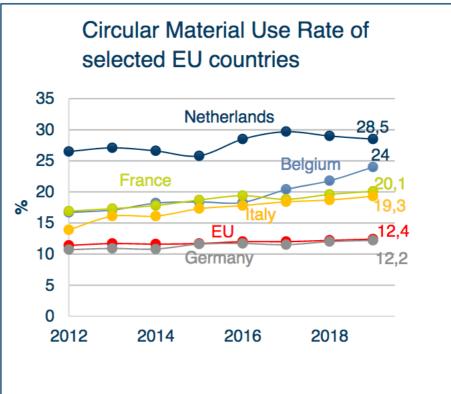
Source: Circularity Gap Report 2022

# Where do we stand on the way to a circular economy?





Resource savings through the use of secondary raw materials are around 13% (DERec) and 18% (DIERec, including global upstream chains).



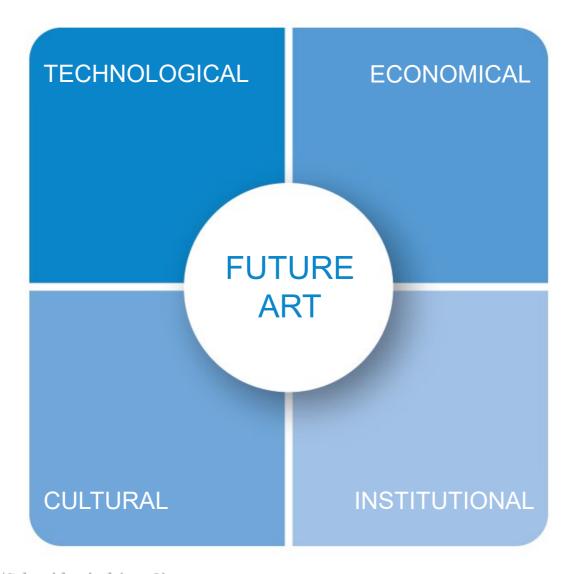
In an EU comparison, Germany is still below the average value of all EU countries despite a moderate increase in the circular material use rate.

Source: CEID 2021

#### **Circularity**

### as a multidimensional challenge





Source: Wuppertal Institut/Schneidewind (2018), p. 12



# Thank you for your attention!

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