



THE CIRCULAR ECONOMY

CONCEPTS, PROGRESS AND FUTURE IMPACT

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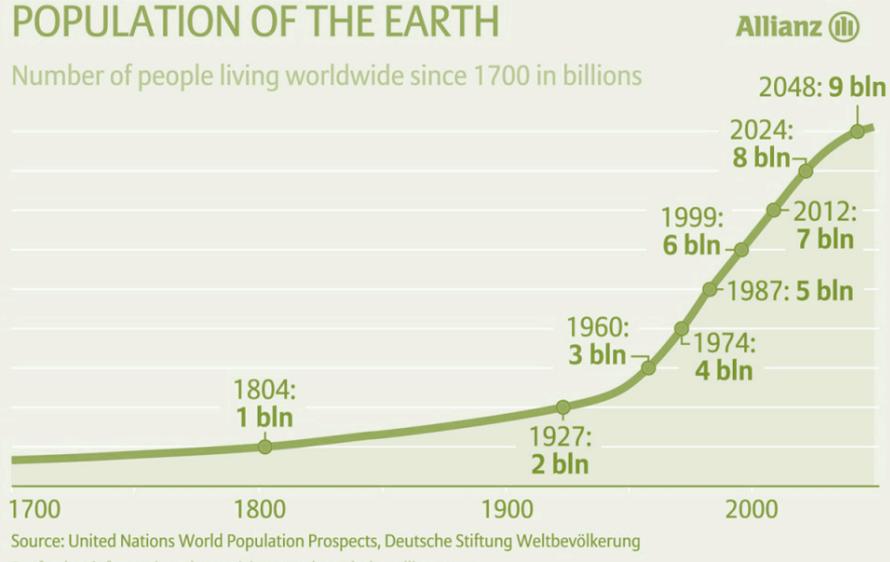
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Context & Background

POPULATION OF THE EARTH

Number of people living worldwide since 1700 in billions



Continued human population expansion
&
wasteful production and consumption practices

= the need for a **new economic model** in order to sustain thriving economies and healthy populations.

Linear Model of Consumption



Industrial process of the past 150 years, characterised by the 'take, make and dispose' linear model of consumption.

Linear model deeply rooted in European consumption.



From a Linear to a Circular Economy

Circular economy principles

Linear model no longer sustainable (82 billion tonnes of raw material to enter global economic system by 2020).

- 01 *Preservation & enhancement of natural capital*
- 02 *Optimisation of resource yields*
- 03 *Fostering of system effectiveness*

Creates a resource efficient economy which removes waste and allows material to re-enter the biosphere.

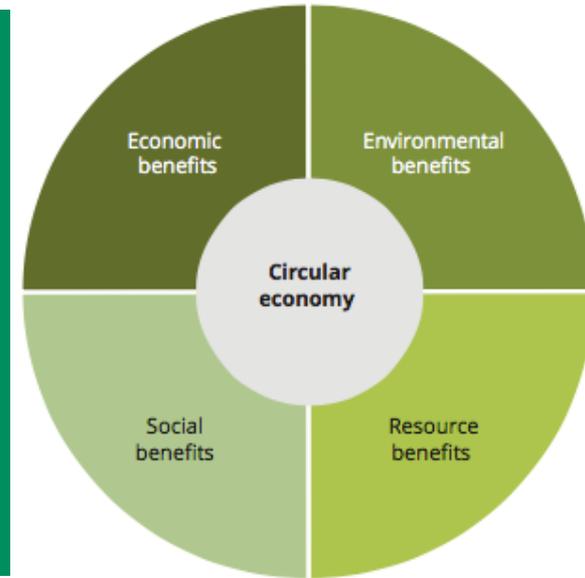


Circular Economy: The Benefits

Inspiring collaboration and innovation across industrial sectors

the CE is predicted to drive future productivity and competitiveness, including:

- Material savings
- Mitigation of volatility and supply risks
- Job creation & innovation
- Soil health and improved land productivity



European DATA

- 1 Europe as a continent created **highest** amount of **e-waste** globally per capita.
- 2 In an EU single calendar year, only **40%** of rubbish is recycled or reused as materials.
- 3 Only 5% of recycled produce retains its full material value.

Europe: Policies & Proposals

- Proposals made to establish a **Circular Economy Support Platform** with the **European Investment Bank (EIB)** to increase awareness, funding and interest in the circular economy.
- Targeted **outreach activities**, including €150 billion from the EU for innovation and initiatives contributing to the circular economy.
- Through **Horizon 2020**, funding projects supporting the transition to a circular economy including €8.8 million to the RESYNTEX initiative developing circular principles within the chemical and textile industry.
- Introduction of a **monitoring framework in 2017** to ensure the effective transition in Member States to circular economy principles.



Europe: Predictions



- Annual European resource spending by 2030 to be reduced by up to **32%** (€0.6 trillion).
- The European Commission's impact assessment on waste and recycling targets is predicted to result in the creation of up to **178,000 new direct jobs by 2030 in this field alone.**
- Predicted to **create jobs covering all skill and educational levels,** ranging from the construction, automotive and manufacturing, to the financial, logistics and research sectors.
- **CO2 emissions** to drop as much as 48% by 2030 compared to 2012 levels.
- **Higher land productivity** through reduced food waste and the return of nutrients to the soil.
- Ambitious targets for recycling packaging waste alongside the decreasing of landfill could reduce **greenhouse gas emissions** of 424-617 million tonnes of carbon dioxide by 2035 (EEA, 2016).

Startup Best Practices USA

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Thread

The Pittsburgh-based company helps supply chains - transforming plastic bottles from the streets and canals of Haiti and Honduras into recycled polyester yarn and fabric.



LanzaTech

A waste-gas-to-fuel and chemicals startup that applies circular economy principles to carbon.

They convert carbon-rich wastes and residues into valuable fuel and chemical products through a process of gas fermentation.



Startup Best Practices South America

Sinctronics

The Brasil based company helps to foster a closed loop supply chain - by developing technology converting raw materials and electronic waste into new products.



Wise Waste

Enhancing the productivity of public waste collection by 30% - the company uses digital mobile apps and geo-location to prevent illegal waste dumping.



Startup Best Practices Europe

Green City Solutions

A German biotech and IoT startup reducing air pollution. Their CityTree utilises moss culture to naturally absorb pollutants. Each installation is the equivalent of 275 urban trees.



RESQ Club

The Finnish Startup reduces food waste by offering surplus food portions and restaurant meals going to waste at a discounted price.

RESQ
CLUB

THANK YOU

Main sources of data and statistics:

- European Environment Agency.(2016). Circular economy in Europe, Developing the knowledge base. EEA Report, No 2, 2016. Luxembourg: Publications Office of the European Union, 2016.
- McKinsey. (2015). Growth Within: A Circular Economy Vision for a Competitive Europe. Ellen MacArthur Foundation and McKinsey Centre for Business and Environment.

Full list of references available on request.



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