TECHNISCHE UNIVERSITÄT WIEN
Vienna University of Technology

Recy & DepoTech 2018

Das EU-Kreislaufwirtschaftspaket - Ein Geniestreich oder ein alter Hut?

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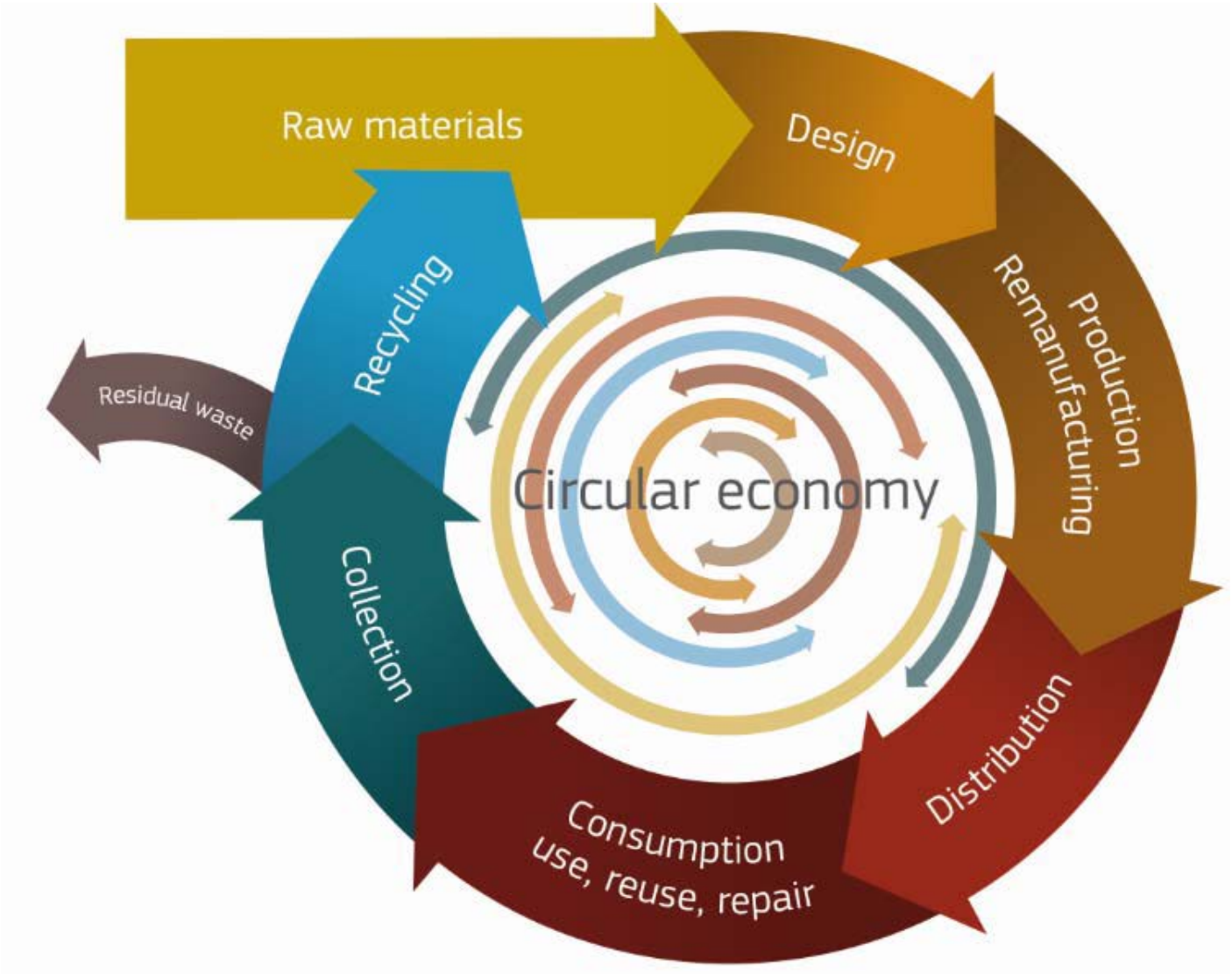
Circular Economy Package

- History
  - 2 July 2014: First proposal for a Circular Economy Package
    - Amendments of several directives
  - 16 December 2014: Withdrawal of proposal
    - New, more ambitious proposal announced
  - 2 December 2015: Second proposal for a Circular Economy Package
    - Lower recycling quotas for municipal solid waste
    - Lower recycling quotas for packaging waste
  - 30 May 2018: final acts signed
  - 5 July 2020: Member States are required to transpose the directives into national law

The EU Circular Economy Package



EU Circular Economy Package

- New targets for Recycling

	Currently	2025	2030
Municipal Solid Waste		60	65
Packaging	55 - 80	65	75
Plastics	22,5	55	55
Wood	15	60	75
Ferrous metals	50	75	85
Aluminum		75	85
Glass	60	75	85
Paper & cardboard	60	75	85

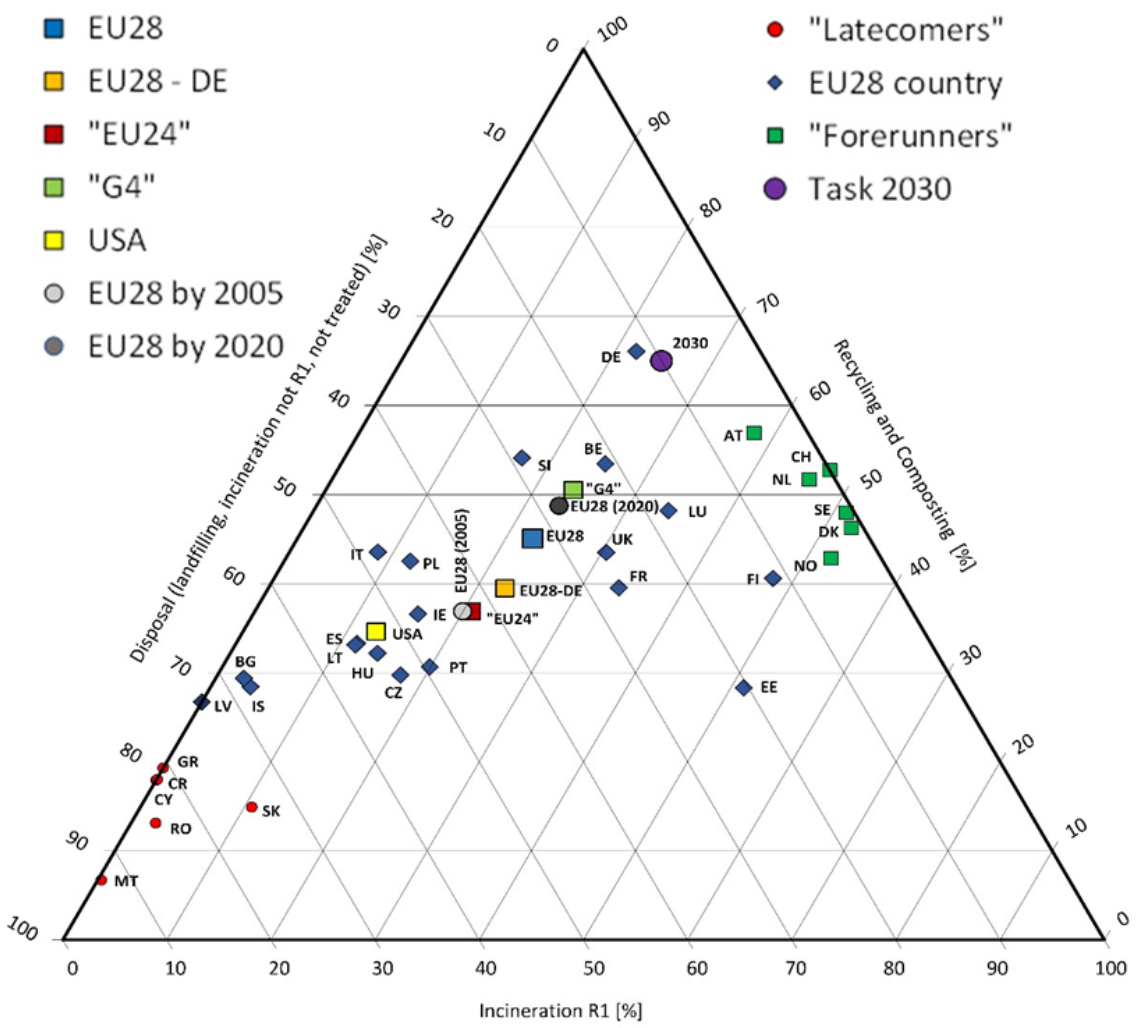
Source: EU Commission 2015

MSW 2014

- MSW Treatment
  - Where are we?
  - Where is our goal?

G4: DE, FR, UK, IT

EU24: EU28-G4



Source: Eurostat 2017

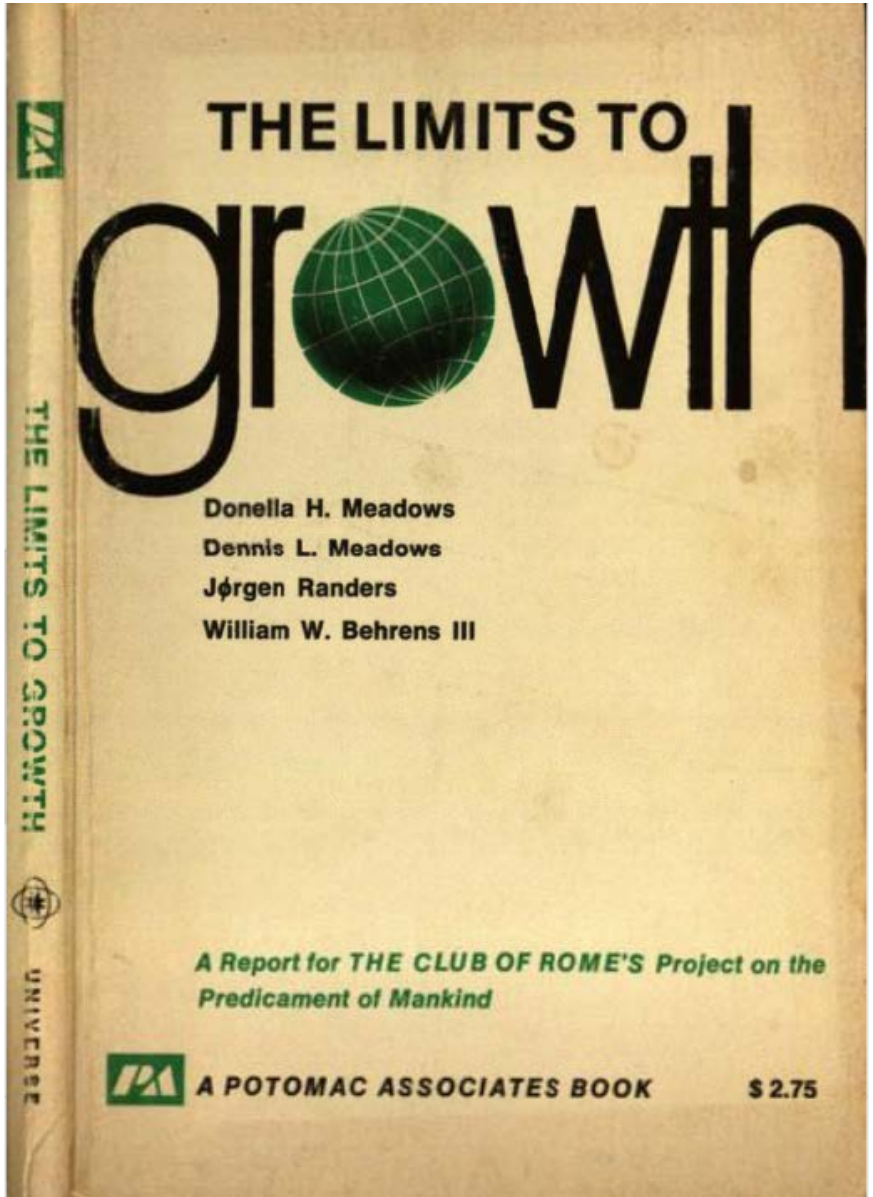
EU Circular Economy Package

- CEP keywords
  - Review of ecodesign legislation
  - Relevant product policy legislation
  - Gradually include mandatory resource efficiency requirements
  - Measures promoting the development of markets for secondary raw materials
  - Compulsory green public procurement
  - Mobilization of EU funds for resource efficiency
  - Education and training […] take into account the 'green skills‘
  - Better design can make products more durable or easier to repair

Source: EU Commission 2016

Shortage of Resources

Meadows, Donella H; Meadows, Dennis L; Randers, Jørgen; Behrens III, William W (1972). The Limits to Growth; A Report for the Club of Rome's Project on the Predicament of Mankind (PDF). New York: Universe Books. ISBN 0876631650.



Correct Citation?

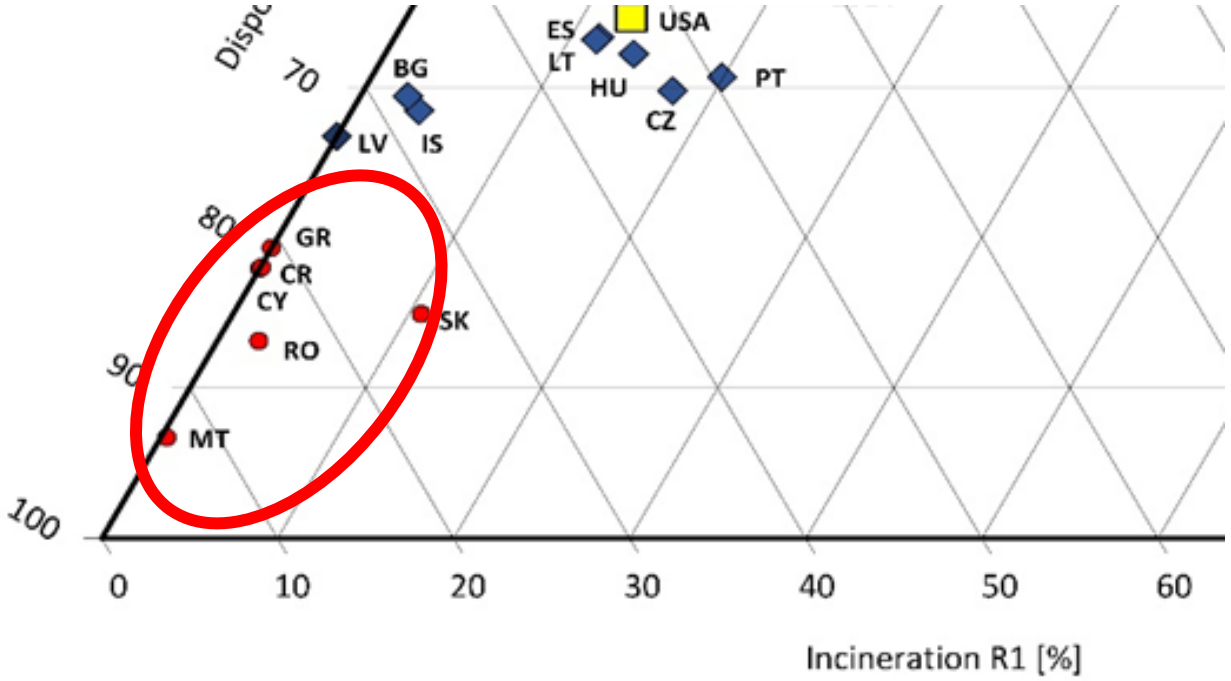
New methods of waste collection, to decrease pollution and make discarded material available for recycling	The way we collect and manage our waste can lead either to high rates of recycling and to valuable materials finding their way back into the economy, or to an inefficient system where most recyclable waste ends in landfills or is incinerated, with potentially harmful environmental impacts and significant economic losses

Correct Citation

Meadows et al., 1972	COM(2015) 614 final
New methods of waste collection, to decrease pollution and make discarded material available for recycling	The way we collect and manage our waste can lead either to high rates of recycling and to valuable materials finding their way back into the economy, or to an inefficient system where most recyclable waste ends in landfills or is incinerated, with potentially harmful environmental impacts and significant economic losses

What is new?

- Importance of waste collection and recycling has been realized in 1972
- Still many EU countries depend on landfill
- Separate waste collection still needs to be improved



Source: Eurostat 2017

What is new?

- 8 EU countries with highest disposal rates

EU Country	Disposal [%]
Malta	93,0
Rumänien	84,4
Griechenland	83,9
Zypern	82,1
Kroatien	82,0
Slowakei	74,4
Lettland	71,3
Portugal	70,2

Source: Eurostat 2018

Correct Citation?

More efficient techniques of recycling, to reduce rates of resource depletion	In a circular economy, materials that can be recycled are injected back into the economy as new raw materials thus increasing the security of supply.

Correct Citation

Meadows et al., 1972	COM(2015) 614 final
More efficient techniques of recycling, to reduce rates of resource depletion	In a circular economy, materials that can be recycled are injected back into the economy as new raw materials thus increasing the security of supply.

What is new?

- Recycling has been identified as key element to reduce the demand for primary resources
- Meadows et al. (1972):
  - The environment in the forefront
  - Main advantage: depletion of limited resources is reduced
- Circular Economy Package
  - Emphasis on the economy
  - Security of supply is increased

Correct Citation?

Better product design to increase product lifetime and promote easy repair, so that the capital depreciation rate would be minimized	Better design can make products more durable or easier to repair Once a product has been purchased, its lifetime can be extended through reuse and repair, hence avoiding wastage Improve the recyclability of electronic devices through product design

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What is new?

- Useful lifespan constantly decreasing
  - Apparel changed from need to throw away product
    e.g. Lifespan of apparel in UK: 3,3 (2012) → 2,2 years (2016)
- Repair is too expensive
  - High labor costs in EU
  - Expensive spare parts

Comparison

- Meadows et. al:
  - Technological advance would be both necessary and welcome in the equilibrium state
  - Society in a steady state of economic and ecological equilibrium
- EU circular economy package
  - New jobs will be created in innovative design and business models, research, recycling, re-manufacturing and product development
  - It is also about creating economic opportunities and competitive advantages
- Steady state or economic growth?

Shortage of Resources

- Exponential Growth
  - Reduplication time

Growth rate (% per year)	*Doubling time (years)*
0.1	700
0.5	140
1.0	70
2.0	35
4.0	18
5.0	14
7.0	10
10.0	7

Source: Meadows 1972

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