

# From Using Waste as a Resource Towards a Circular Economy

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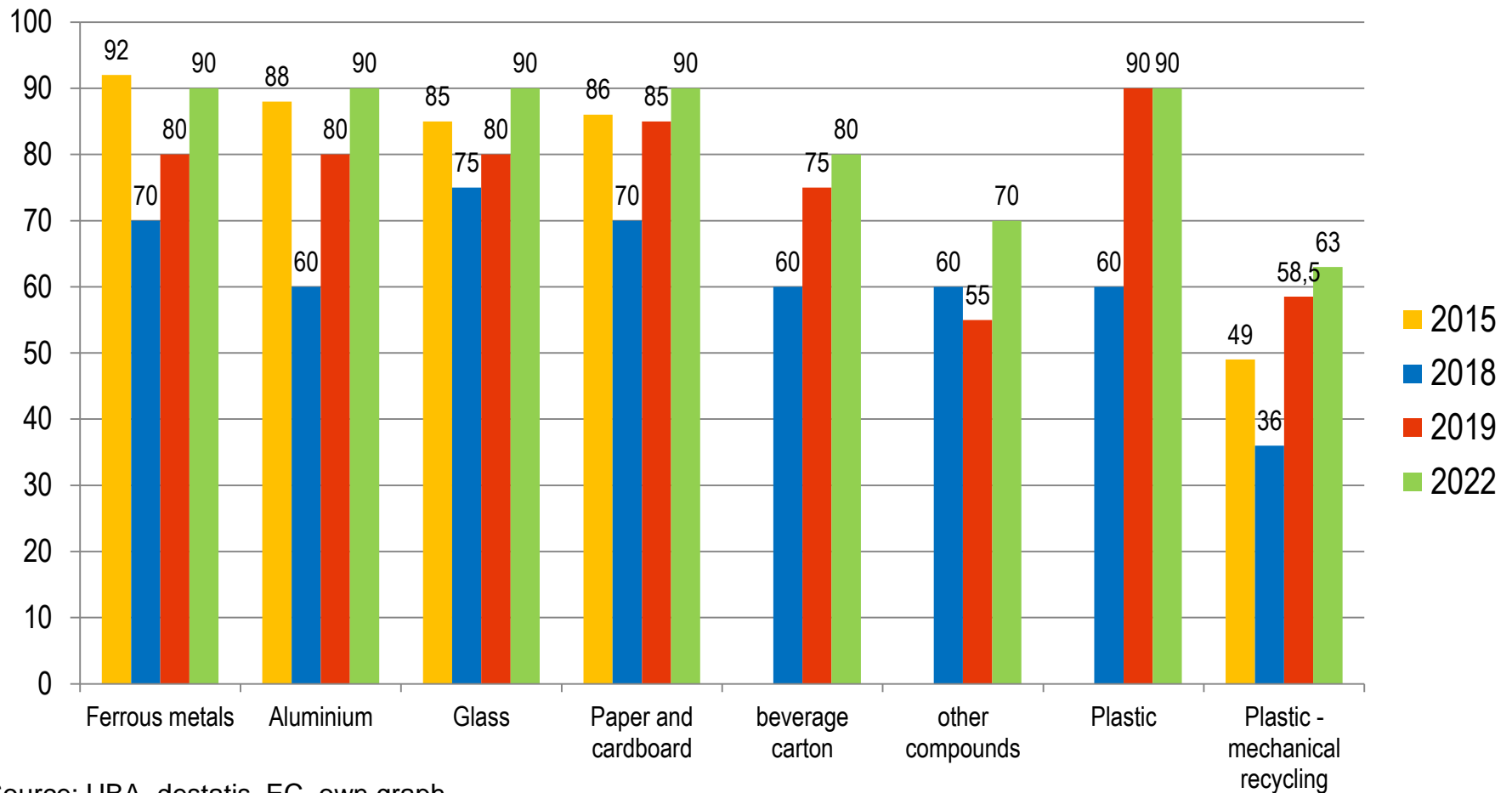


- By 2050, there will be 6 to 7 billion middle-class consumers around the world
- Since 1990, the EU's gross domestic product has grown by 50% while greenhouse gases have fallen 24%
- These are good steps, but we know these measures will not be enough
- 2015 - **circular economy package and action plan** - European Commission
- formally agreed 18 April 2018 by the European Parliament

The legislation defines specific recycling targets for **packaging EU**:

	<b>By 2025</b>	<b>By 2030</b>
All packaging	65%	70%
Plastic	50%	55%
Wood	25%	30%
Ferrous metals	70%	80%
Aluminium	50%	60%
Glass	70%	75%
Paper and cardboard	75%	85%

## New recycling targets for packaging waste and recycling quota 2015 [%]

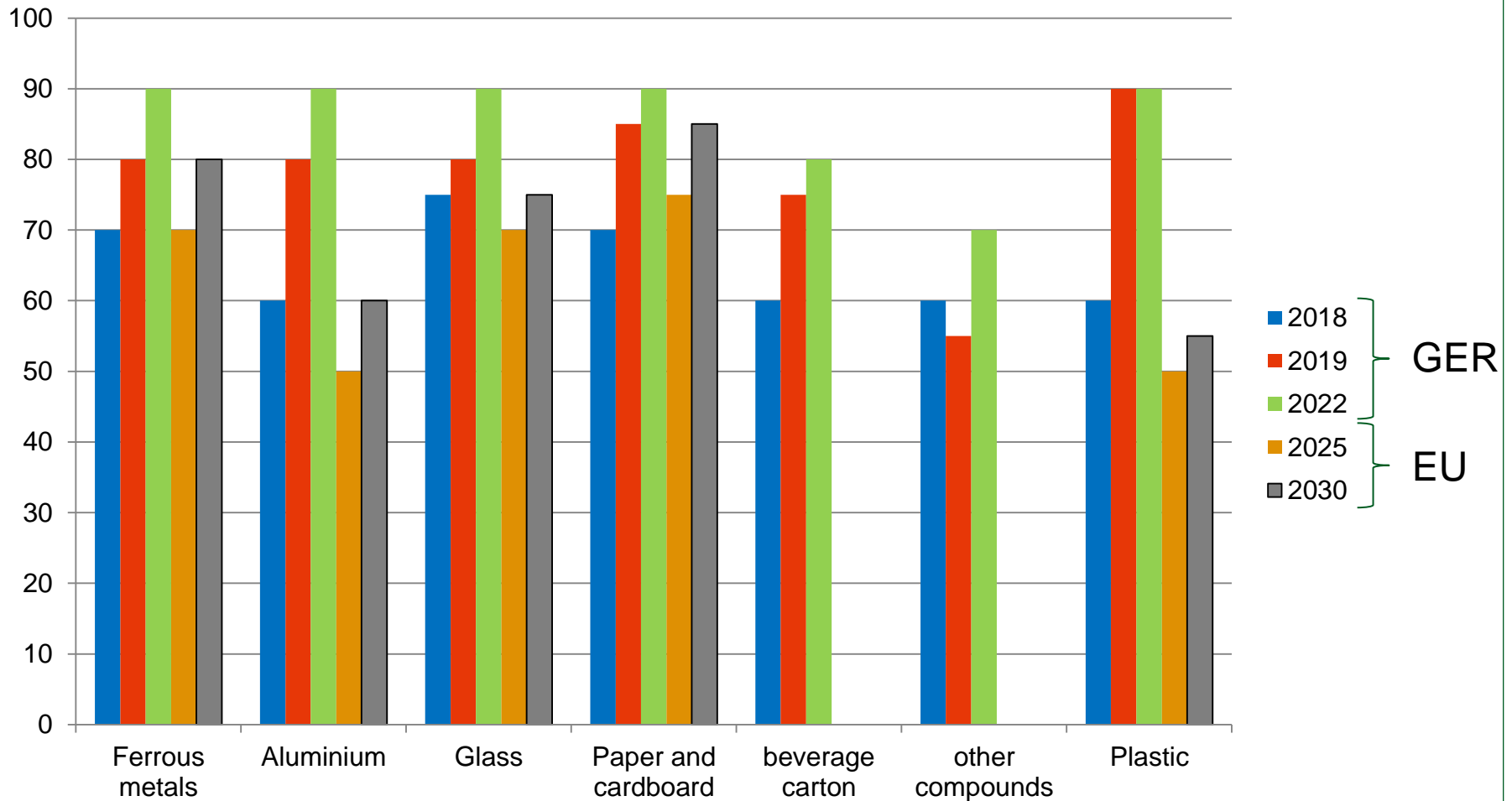


Source: UBA, destatis, EC, own graph

# New recycling targets for packaging waste

## German Packaging Law 2018

## EU Circular Economy package



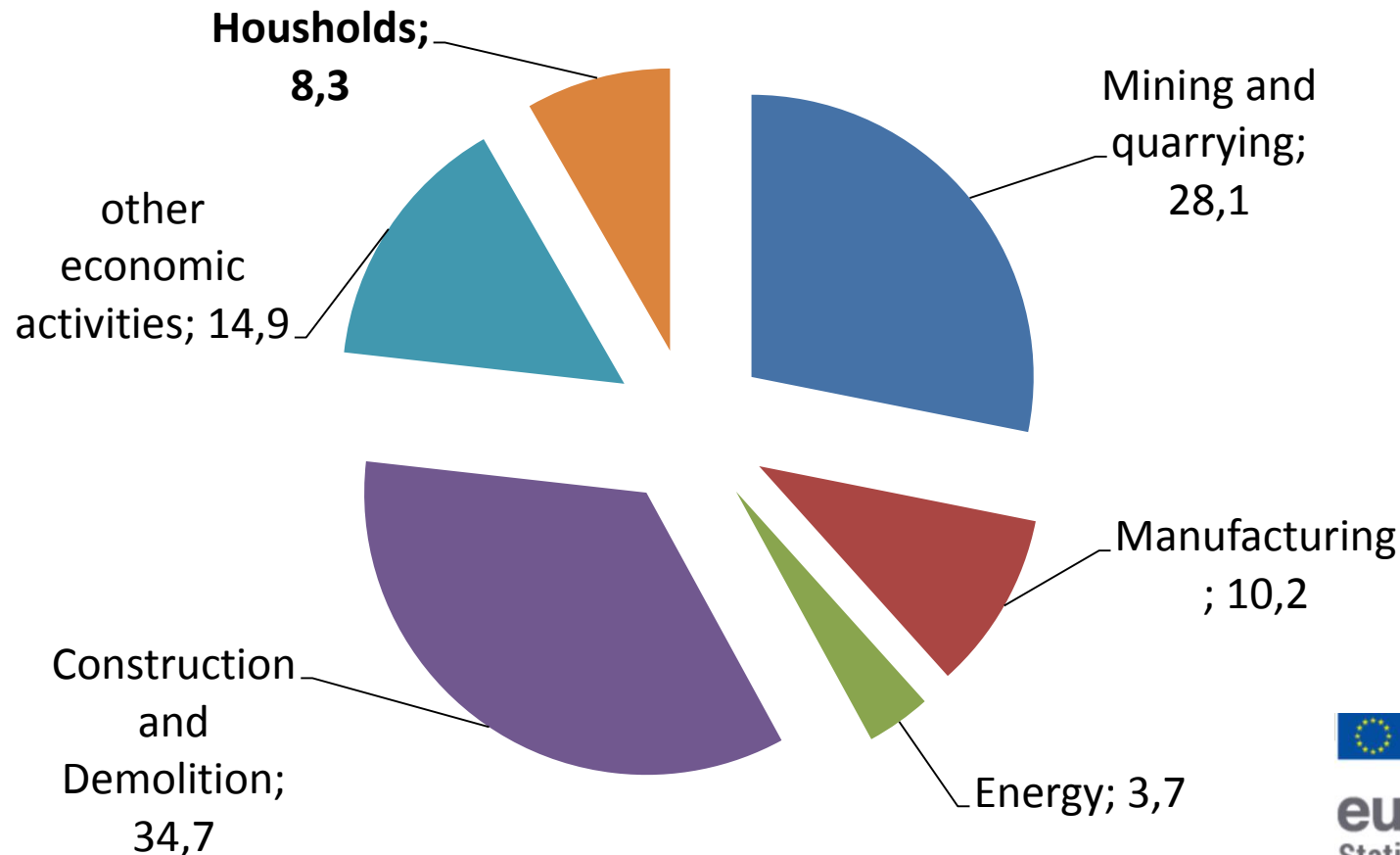
Source: UBA, destatis, EC, own graph



## Landfill reduction target - Phasing out landfilling

- Landfilling of waste makes no sense in a circular economy (pollute water, soil and air; climate relevance)
- By 2035 - amount of municipal waste landfilled must be reduced to 10% or less of the total amount of MSW generated
- Germany since 2005 – mandatory pre-treatment

- **Household wastes represents only 10 Mass%**



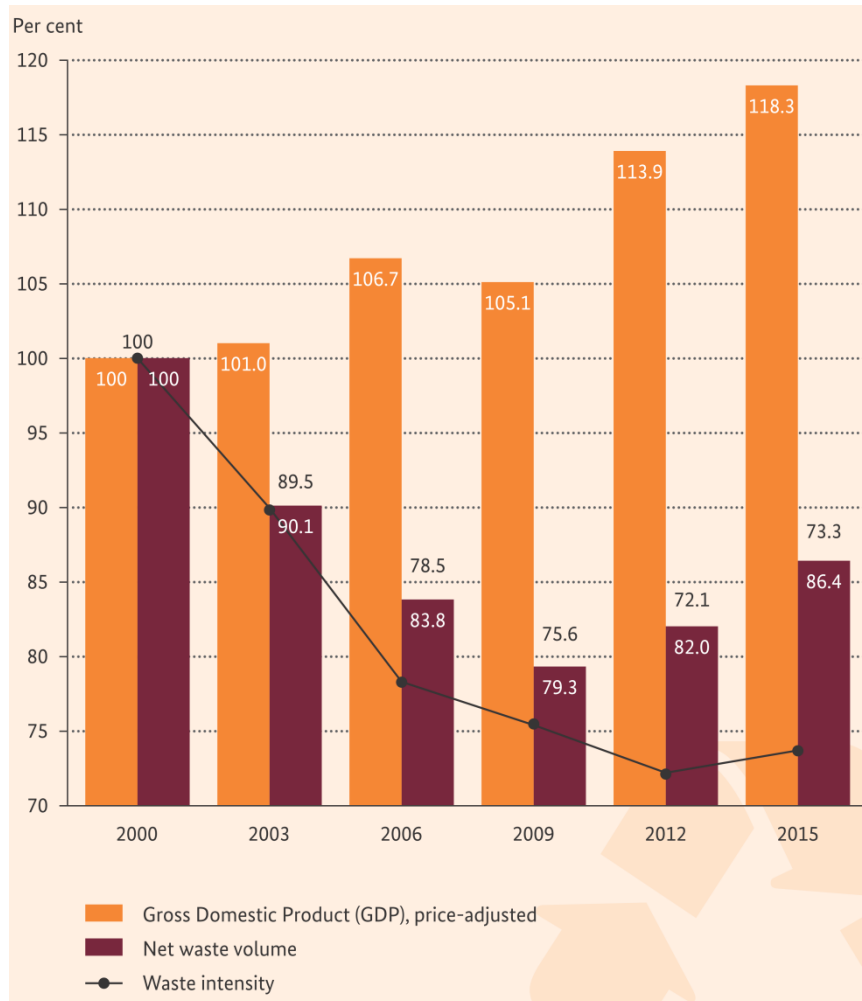


## Effects of bad waste recycling and treatment

- Loss of resources and raw material
- Impacts on the climate (landfill gas, loss of resources)
- Impacts on the environment (in particular biodiversity and ecosystems)
- Impacts on human health (landfilling, air pollutants, contamination of freshwater sources and agricultural soils)



## Severing the link between waste volumes and economic output 2000 - 2015



- decoupling waste volumes from economic output?
- need to recover raw materials and energy carriers from waste
- more waste prevention!

Waste Management in Germany 2018 UBA

Federal Statistical Office, 2017

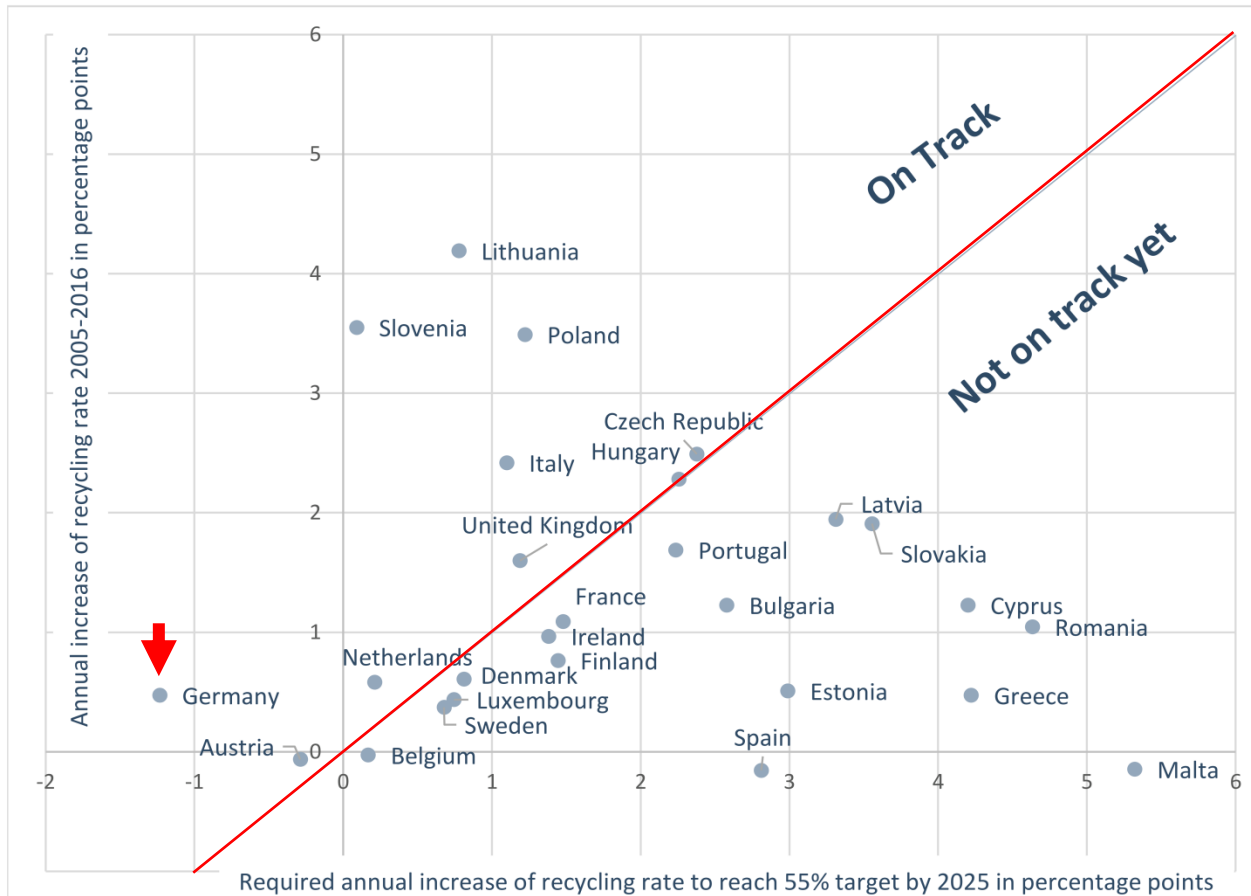


## Problems of the last two years

- No clear shift to waste avoidance; increasing waste amount
- Slow switch from landfilling to recycling
- Recycling targets – some countries not on track  
(A few with a recycling tradition on track; No low-level recycling country on track)
- New Measurement for recycled materials to what is really recycled

## Wide differences between Member States

In percentage points



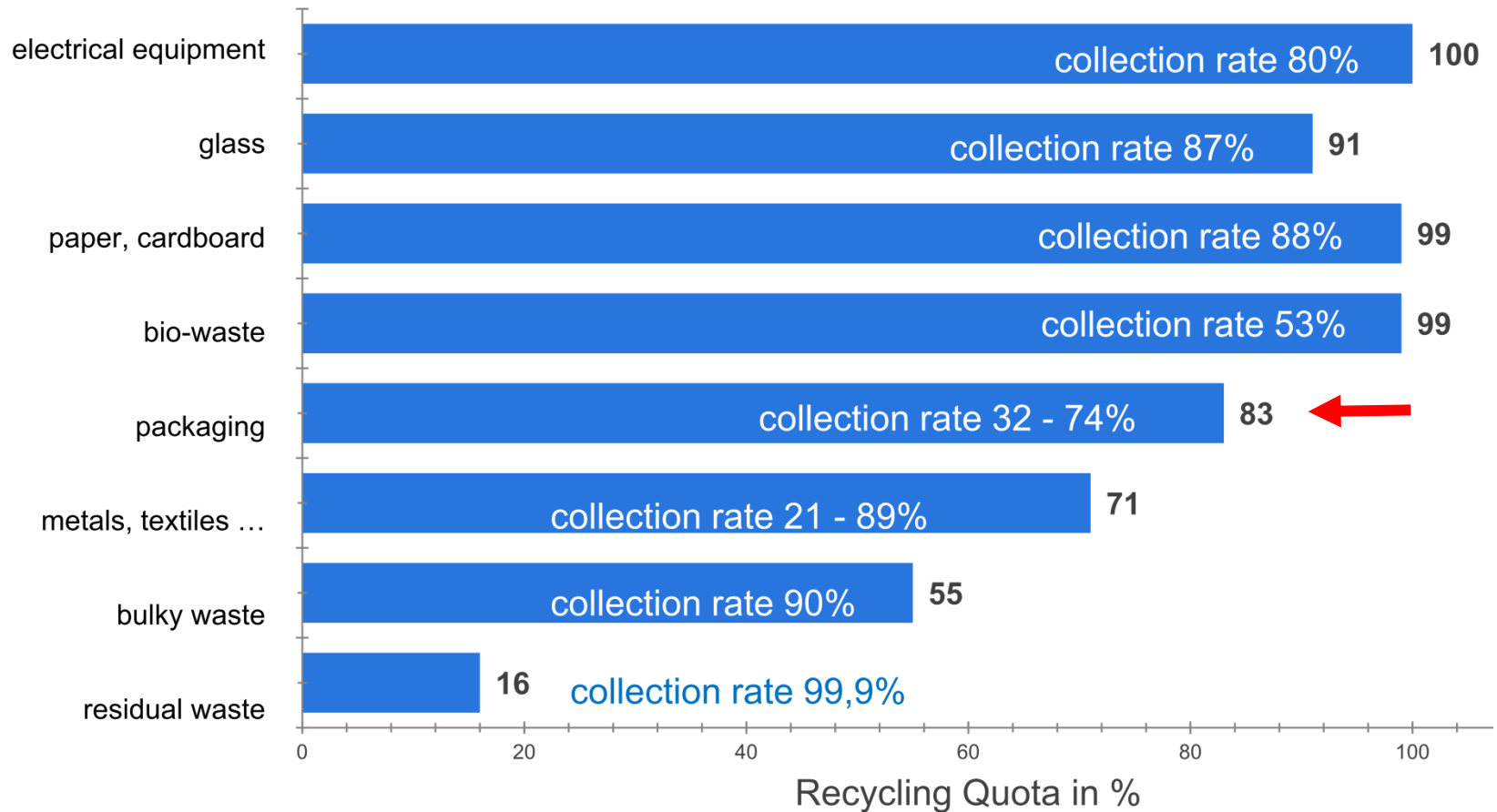
**On track:**  
recycling rate grows slower than in the past decade to reach the 2025 target.

**Not on track yet:**  
recycling rate has to grow faster than in the past decade to reach the 2025 target.

(without Croatia), Ireland and Portugal: 2014; Slovenia: 2015

Data source: Eurostat, 2018. Neligan, Adriana, 2018

# MSW-Recycling Quota in Germany (2014)





- 2015 Germany 5.92 Mio. tonnes **plastic waste**
- $\approx$  25% Export, 50% of this to PR China (740,000 tonnes)
- 2016 Export to PR China 767,000 tonnes
- “Design for Recycling” to better the recycling quality
- Intensify collection of plastic packaging and **commercial plastic waste**
- Better quality inside the collection bins
- Sorting quality of the sorting plants start with the in-put!
- We need more sorting capacity to produce better sorting quality
- The sorting will need more money!
- We need more capacity to use more waste-plastic!



## Conclusions

- More national measures concerning waste management needed
- Enforce the restructuring of waste management infrastructure in many EU countries
- Recycling of some wastes are very challenging
- New materials and technologies needed
- Resource conservation is only possible with functioning markets for secondary raw materials!!!!
- Too much energy production from plastic waste!
- Maybe, we have to pay more money for better material recycling

**Thank you for your kind attention!**

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