

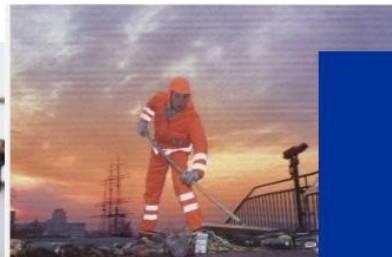


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# Perspectives and Opportunities of the Circular Economy

## ... and where are the solutions?





- The „best approach“ – Waste hierarchy
- Circular economy in Germany
- Commission’s proposals
- The recycling target for municipal waste
- Circular Economy needs markets: supply and demand
- The Polluter Pays Principle
- What now ?



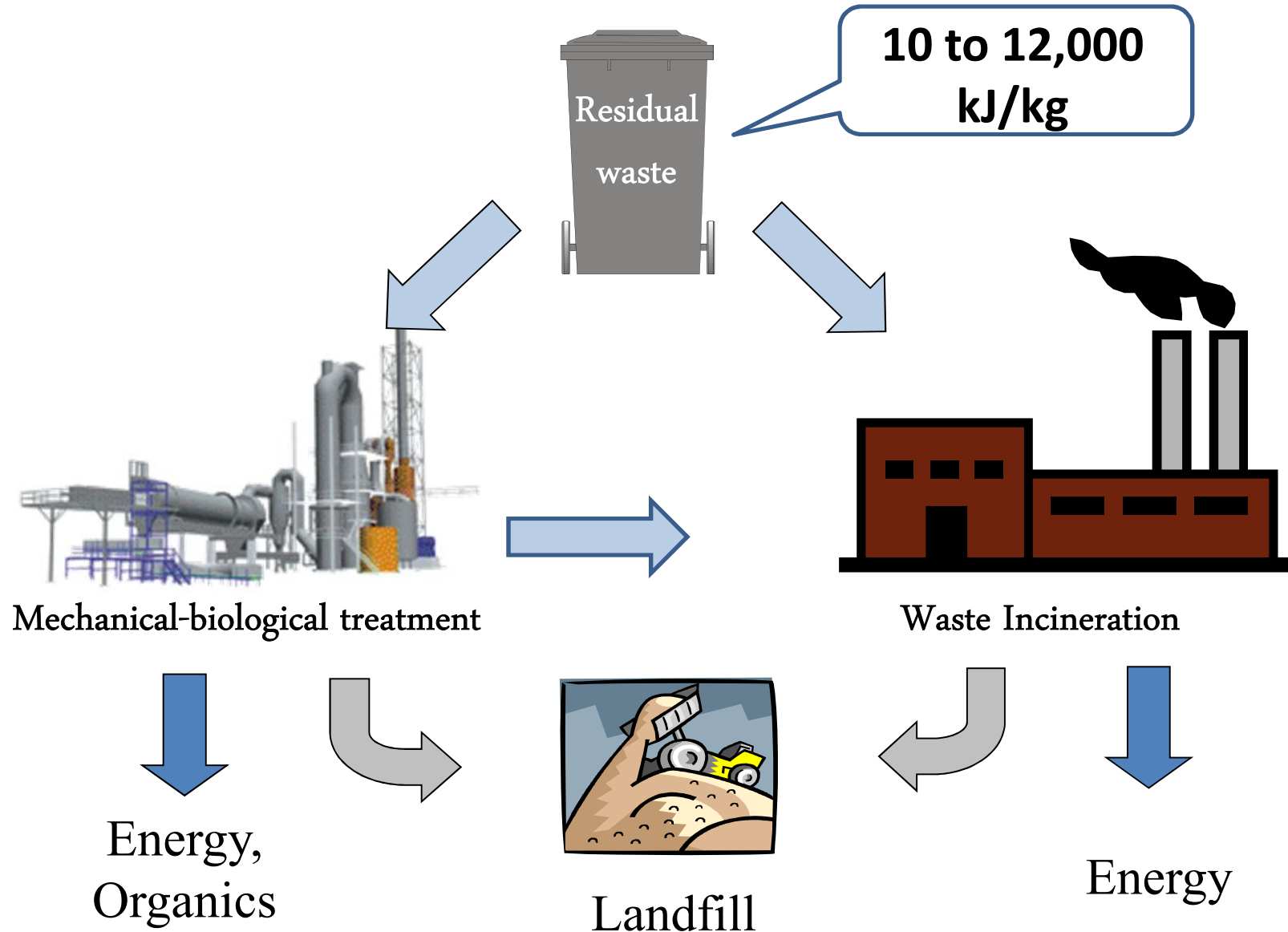
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# Pre-treatment of residual waste (obligatory in Germany since June 2005)





# Circular Economy in Germany

## Germany: Basic Data (2014)

### Recycling

• <b>Total Waste Generation:</b>	<b>350 Mio to</b>	<b>(71 %)</b>
•		
• <b>Municipal waste:</b>	<b>51 Mio to</b>	<b>(66 %)</b>
• <b>[Household waste:</b>	<b>46 Mio to]</b>	<b>(67 %)</b>
• <b>Production and commercial waste:</b>	<b>59 Mio to</b>	<b>(52 %)</b>
• <b>Mining waste:</b>	<b>30 Mio to</b>	<b>( 0 %)</b>
• <b>C&amp;D waste:</b>	<b>209 Mio to</b>	<b>(88 %)</b>
• <b>[Treatment waste:</b>	<b>51 Mio to</b>	<b>(56 % )]</b>
• <b>[Hazardouzs Waste:</b>	<b>17 Mio to</b>	<b>(56 % )]</b>

Appr. **250,000 people** work in waste management  
Annual turnover of about **70 billion Euro**



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## Recycling by segregation / separation

Binding recycling target of 65% for 2020 !

No landfilling of untreated waste since 2005!



### Private Households

Bio waste  
Paper  
Packaging  
Glass  
[Metals]  
E-waste  
Batteries  
Textiles  
Hazardous waste  
Residues

### Commerce / Industry

+

Wood  
Plastics  
Metals  
Mineral waste  
other mono-charges:  
slags,  
sludges,  
RDF .....



## **Waste Management Infrastructure (2014)**

161	Waste-Incineration Plants (incl. 70 MWI)
687	Waste-to-Energy Plants
541	CP-Treatment Plants
2387	Biological Treatment Plants (Comp./Digestion etc.)
55	MBT
1325	Sorting Plants
1325	ELV-Dismantling Plants
305	WEEE-Dismantling Plants
116	Soil Treatment Plants
2172	C&D-Recovery Plants

**15 501 Plants**

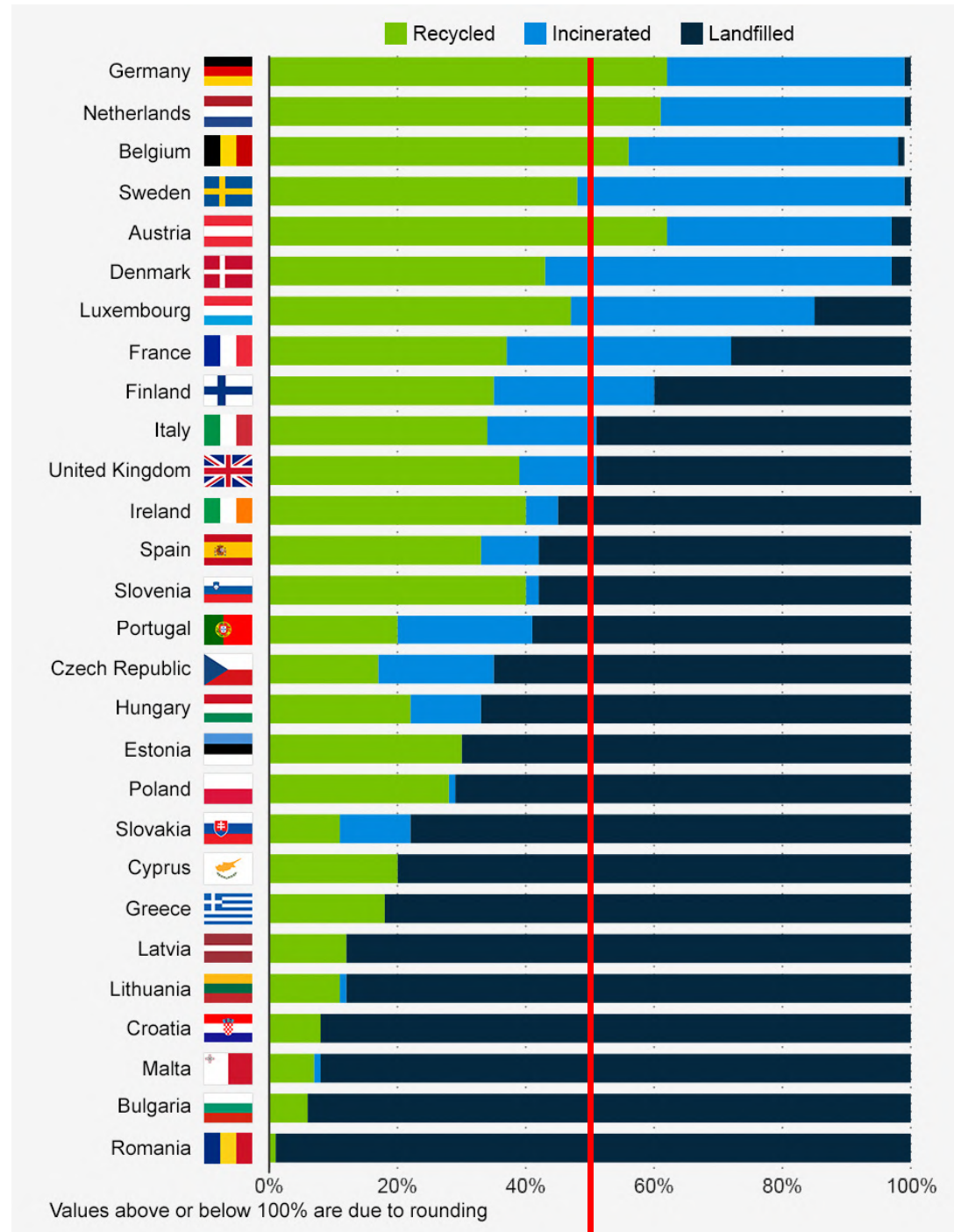
**7000 Companies**

**402 Municipalities**



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## Recycling rates in 2014



Source:  
Eurostat 2016





## Calculation Methods (currently)

### Waste amount (Art. 11 WFD) (aka „Methods 1 to 4“)

1. Paper, metal, plastic and glass from households
2. Paper, metal, plastic and glass from entire municipal waste
3. The entire household waste
4. The entire municipal waste



### Point of measurement COM decision 2011/753/EC

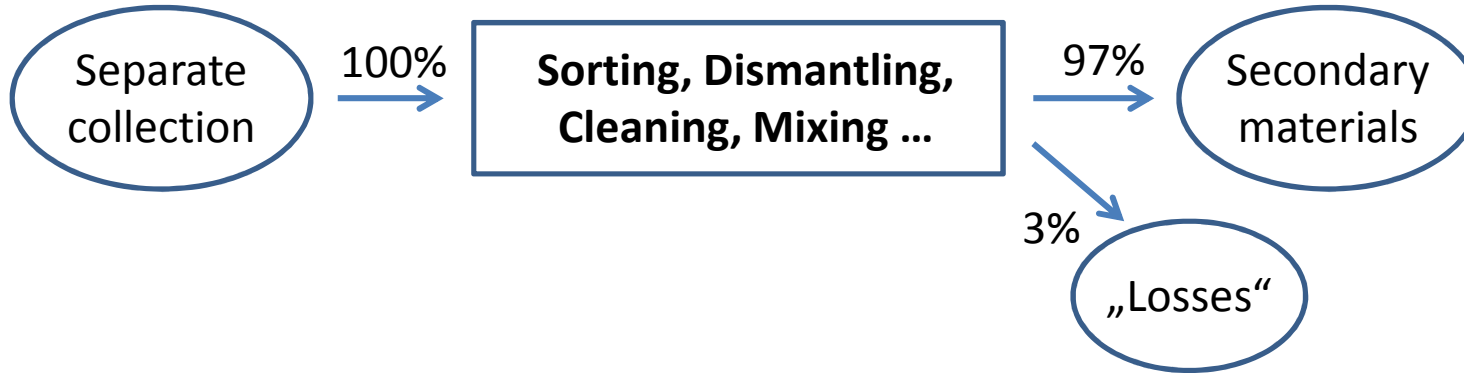
- a) Input of the „final“ recycling facility
- b) Output of any sorting (minus losses)
- c) Input of first facility of separate collected waste (no significant losses in further recycling)

**Germany uses 4.c) → 66%**



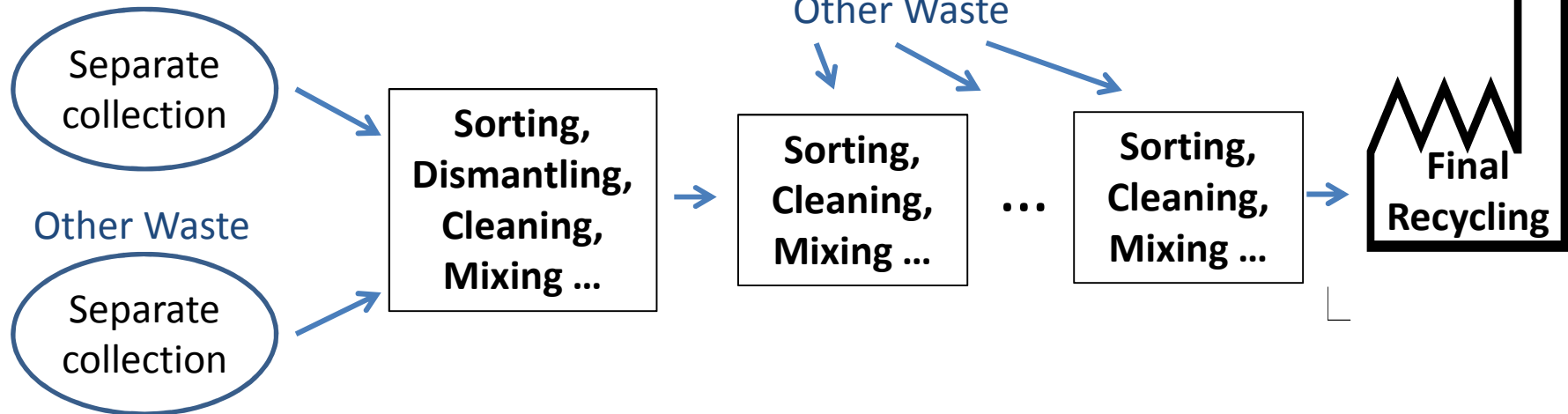
# Losses

## Municipal Waste



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## Municipal Waste





## COM - Proposal

### Method 4.a) or 4.b)

**The entire municipal waste**

measured either as

- **Input of the „final“ recycling facility** or
- **Output of any sorting** (minus losses)

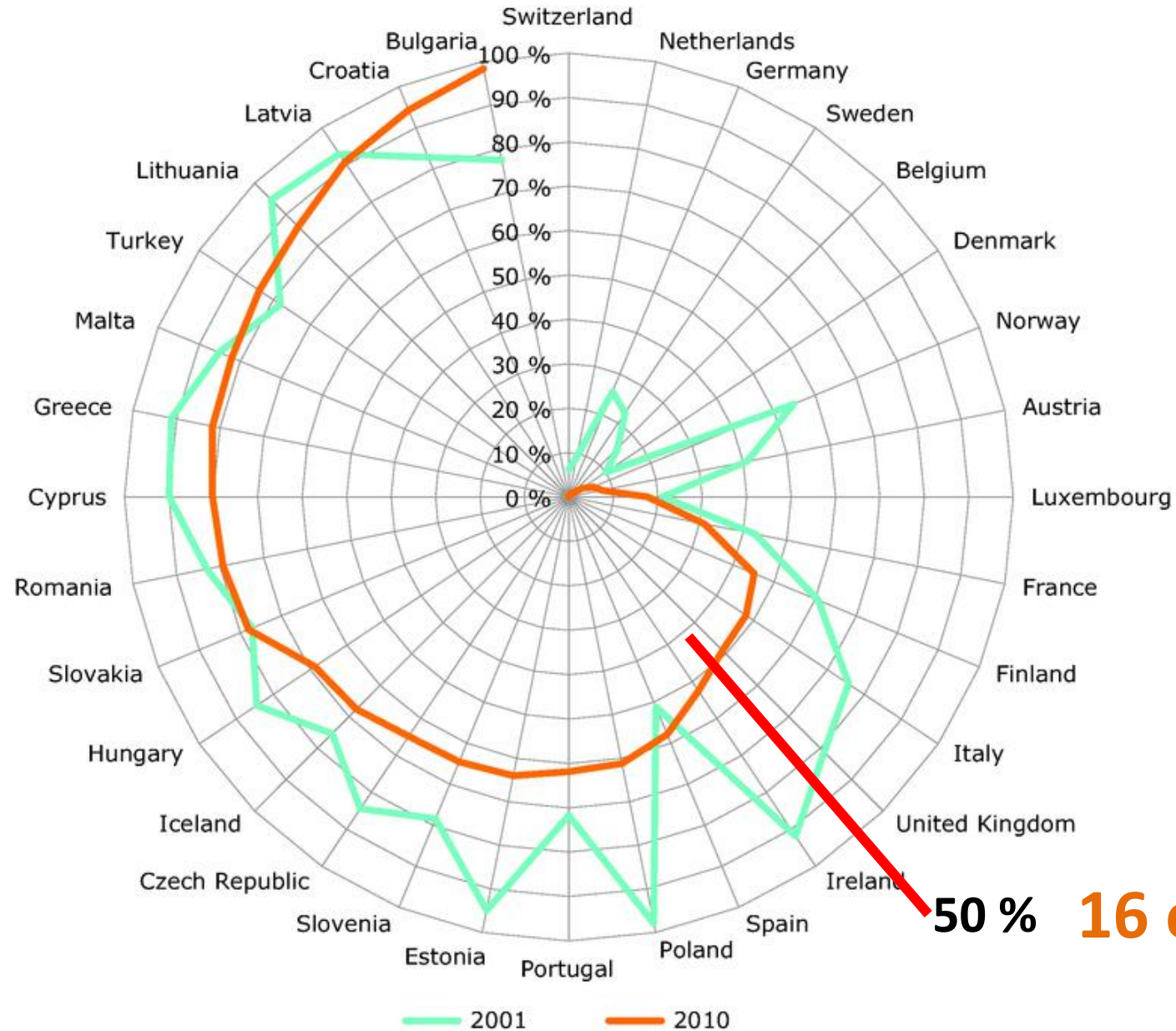
**But: Statistical data not possible !**

- Mixing with other waste
- End of waste status
- Trade of grades / qualities
- Imports and exports

**Currently more  
than 20 Member  
States send just  
estimations !!!**



# Landfilling

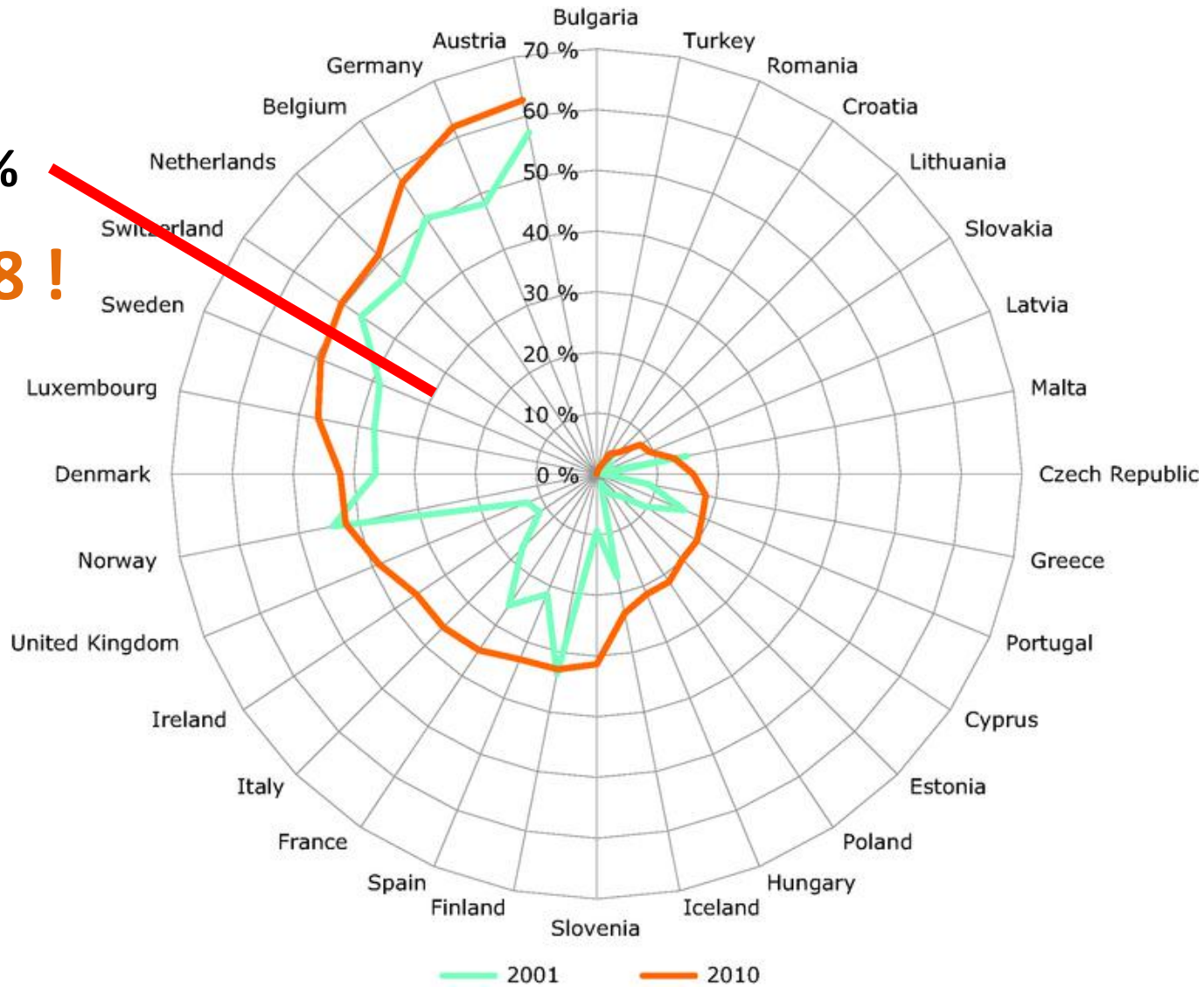


**50 % 16 of 28 !**



# Recycling Rates

50 %  
4 of 28 !

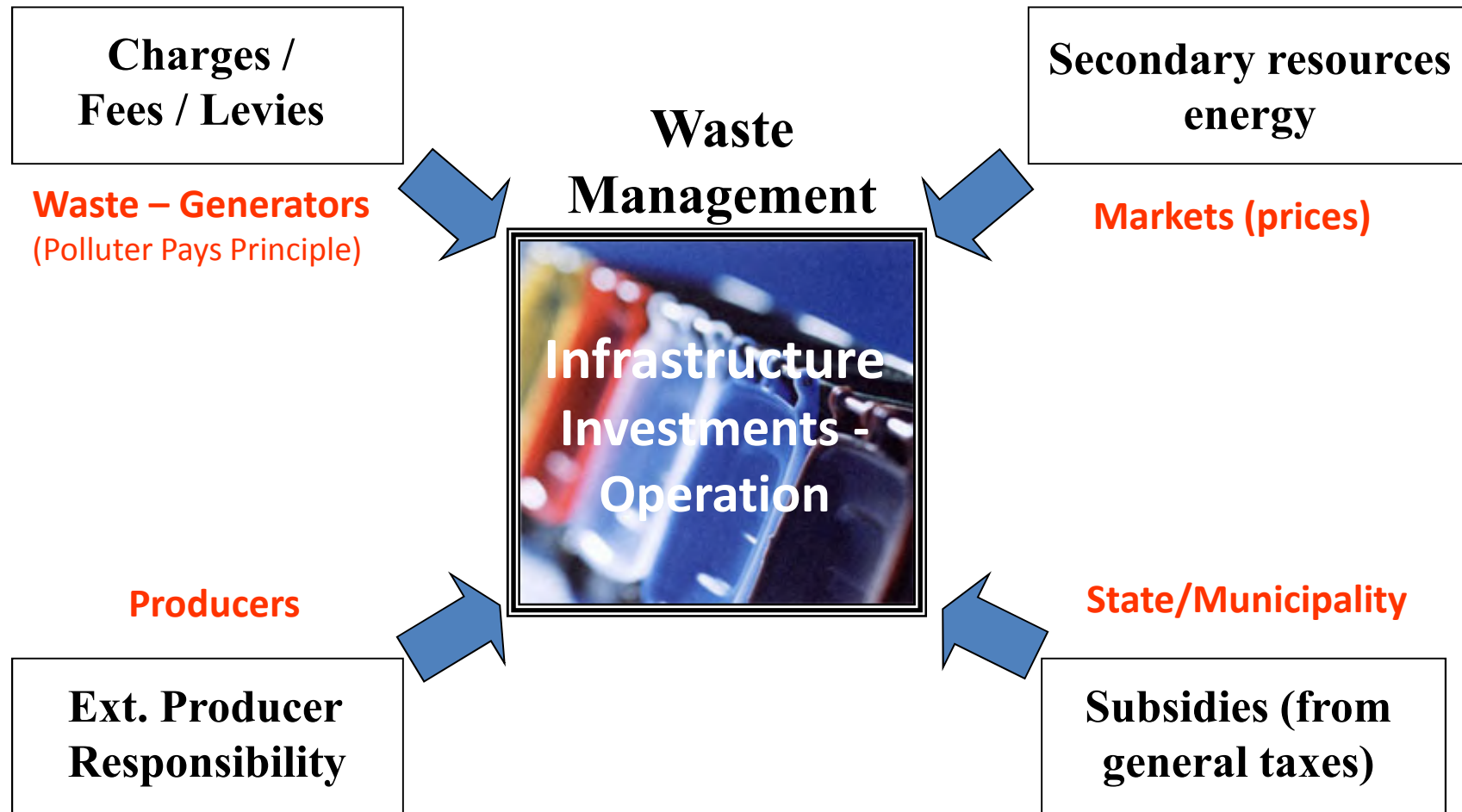




**WHO  
PAYS ?**



# Financing of Circular Economy (in general)





## German position

- Germany has already highest recycling rates (65% target for 2020 in German law!)
- EU needs ambitious targets and requirements (ecological and economic reasons)
- We need EU-legislation which can be implemented **by all member states**
- Regulations have to be clear, practical and leading to ecological benefits
- Crucial is the **Polluter Pays Principle** to reach targets





## Success if ...

### **Polluter Pays Principle**

Art. 14 WFD

### **Private Investments and Operation costs**

Incentives and sustainable financing

### **State sets the legal frame**

Duties, requirements, monitoring, sanctions

**GOOD  
GOVERNANCE**

### **Fees, charges, service prices, EPR etc. set by the costs**

Market, competition, employment, profits

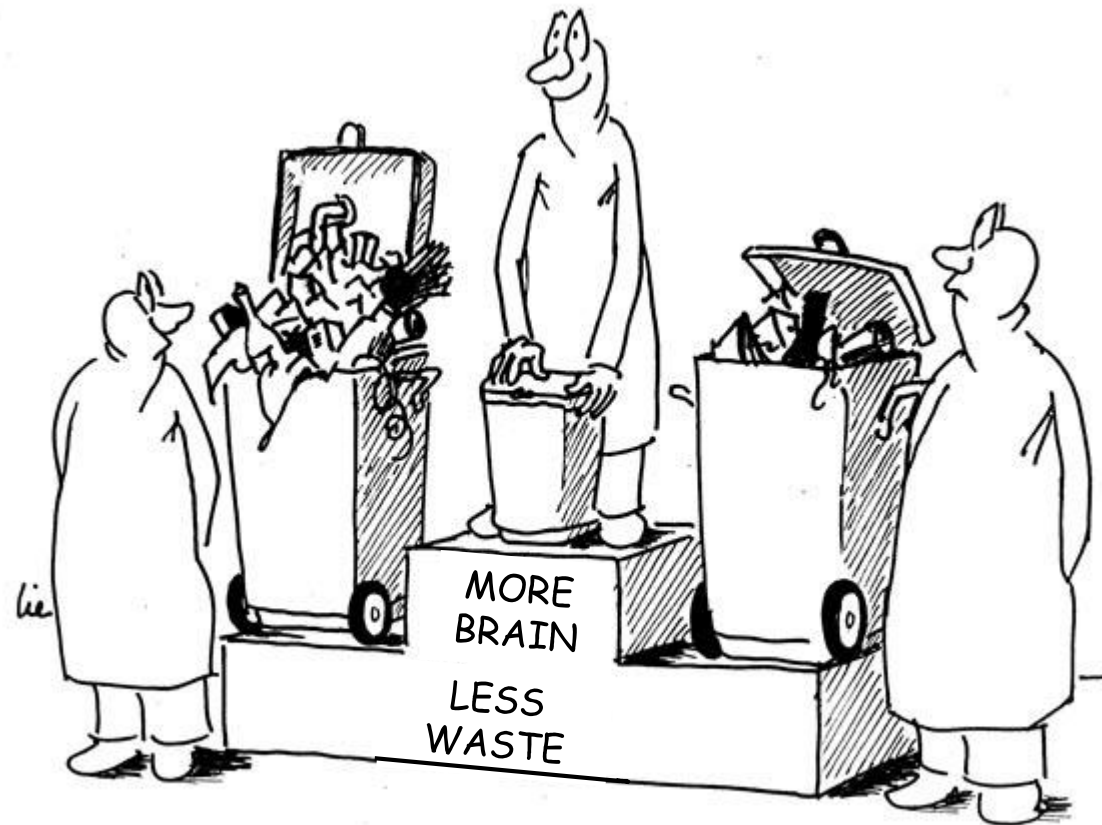
### **No taxes, but high requirements**

No wrong price signals



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**Grazie per  
l'attenzione !**



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