



Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety



Germany's Experience on Moving Towards a Resource Efficient Society through Successful Engagement of Private Sector as Business Model

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81.7 Million inhabitants

231 inhab. per km²

4 Cities with more than 1 million inhabitants:

- Berlin (3.5 mio)
- Hamburg (1.8 mio)
- Munich (1.4 mio)
- Cologne (1.0 mio)

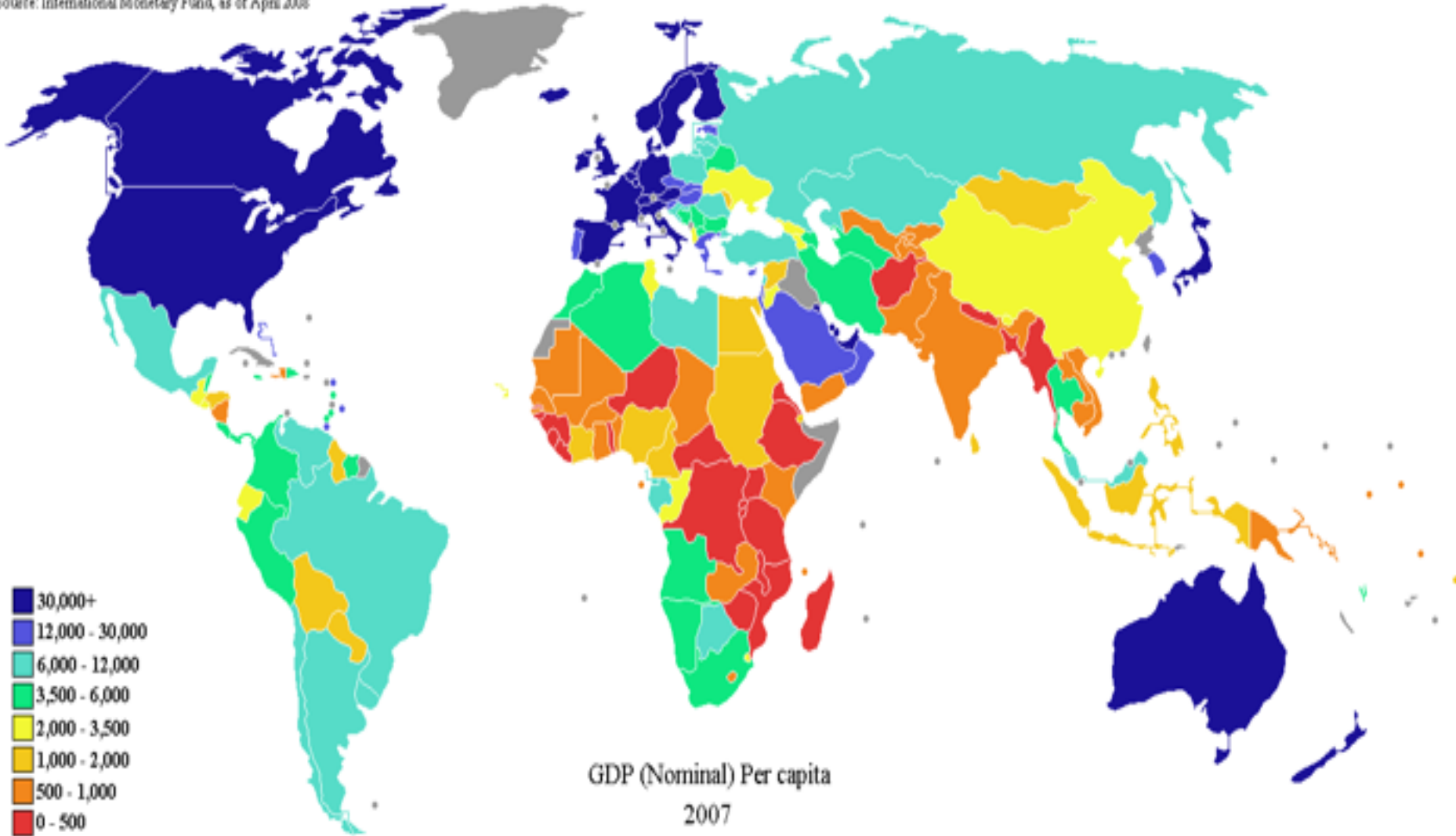
31 % Forests
Temperate climate
Water availability

**High density
of industries**



GDP

Source: International Monetary Fund, as of April 2008





Federal Ministry for the
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1. European Union
2. Federal Republic
3. Länder States





Germany: Basic Data (2010)

		Recycling
Total Waste Generation:	333 Mio to	(71 %)
Municipal waste:	49 Mio to	(63 %)
[Household waste:	44 Mio to]	(63 %)
Production and commercial waste:	53 Mio to	(68 %)
Mining waste:	37 Mio to	(1 %)
C&D waste:	193 Mio to	(90 %)
[Treatment waste:	40 Mio to	(54 %)]
[Hazardous Waste:	17 Mio to	(57 %)]

- More than 200,000 people work in waste management
- Annual turnover of about 40 billion Euro
- 20 % of Kyoto-Targets (46 Mio to/a) by waste management



Waste Management Infrastructure (2009)

- 160 Waste-Incineration Plants (incl. 70 MWI)
- 633. Waste-to-Energy Plants
- 550. CP-Treatment Plants
- 30 Hazardous-Waste-Incinerators
- 2047. Biological Treatment Plants (Comp./Digestion etc.)
- 55. MBT
- 996. Sorting Plants
- 1321. ELV-Dismantling Plants
- 304. WEEE-Dismantling Plants
- 120. Soil Treatment Plants
- 2055 C&D-Recovery Plants

14 958 Plants
3000 Companies
402 Municipalities



Environment

Economy

Sustainability

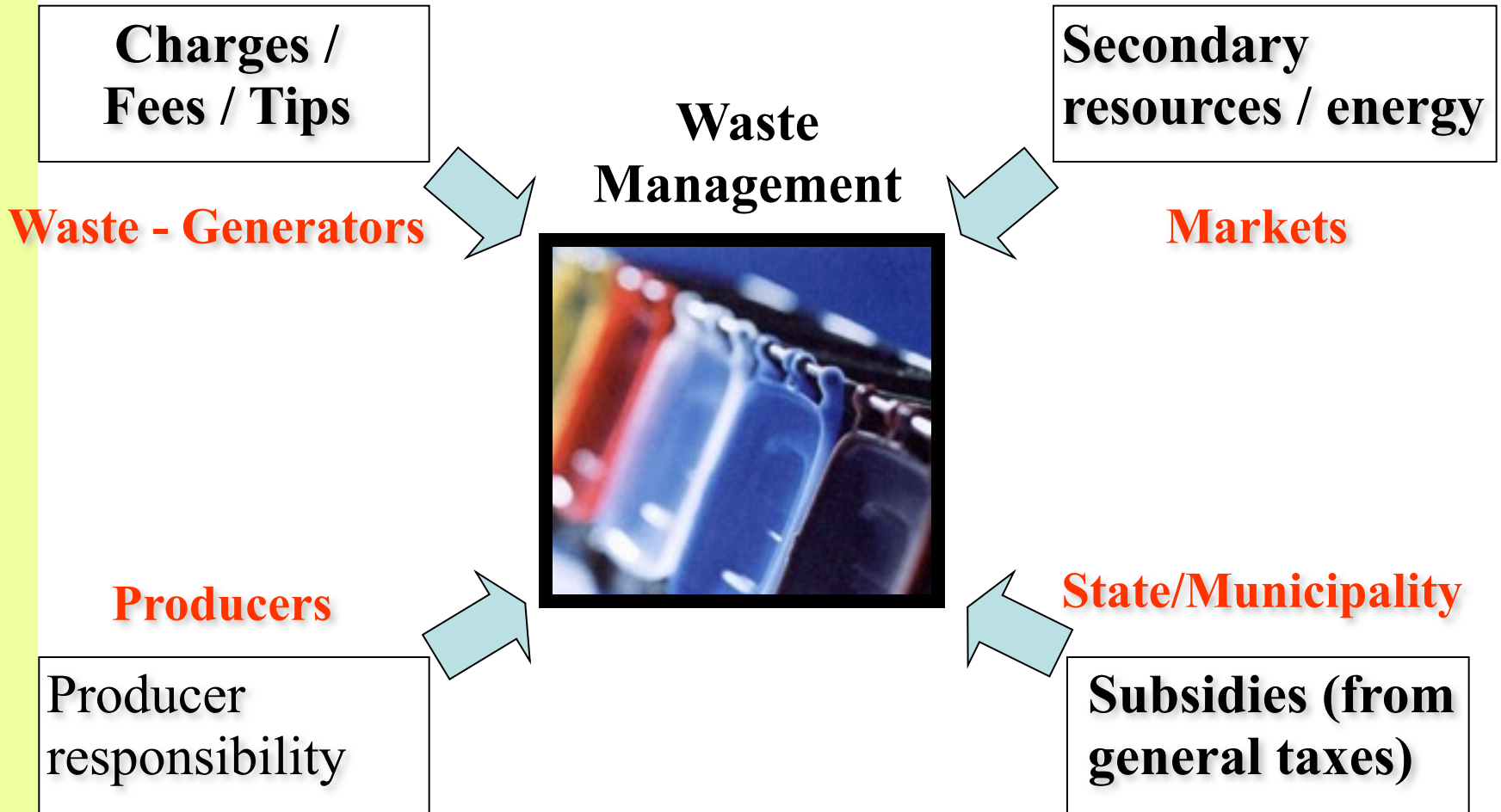
Society

Waste Management is sustainable, when:

- No or minimal negative impacts to the Environment
- No polluted sites for posterior generations
- Full use, recycling and other recovery of waste
- Treatment without dangerous emissions
- Positive CO₂ – balance
- Social and economic aspects taken into account



Financing of Waste Management (in general)





Who pays ?

Polluter { **Waste Generator**
Producer of Good } **Pays Principle !!!**

Incentives for:

Waste Prevention / Better Design

Re-use

Segregation at Source

Separation

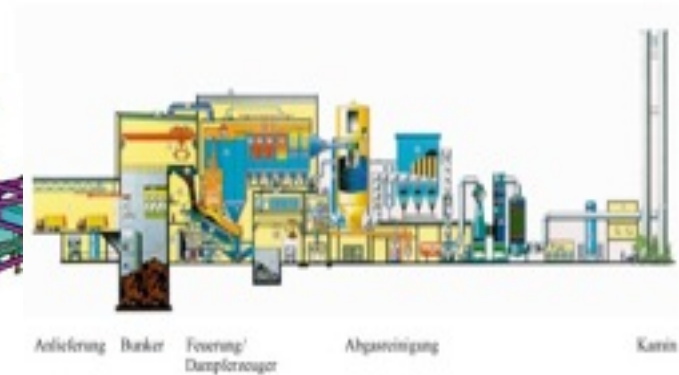
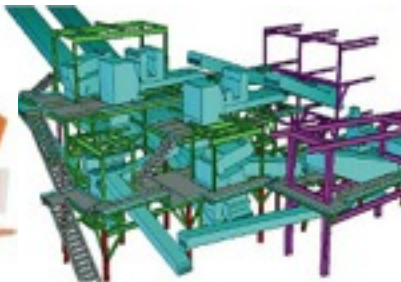
Recycling / Recovery

Investments / Turnover



Investments

Who should invest ?

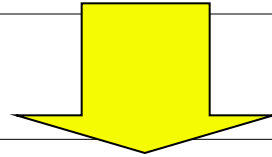




Private Engagement needs Certainty and Reliability

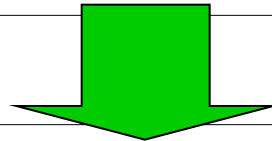
1. Rules !!!!!

Clear, stringent, comprehensive legislation on duties, responsibilities, technical and organisational standards and requirements



2. Enforcement !!!!!

Prohibition and stopping of low standards, permitting procedures, regularly monitoring by authorities (government, administration, police),



3. Financing !!!!!

Investments, Running Costs, Loans for high standards



Green Economy

Ecological Benefits



Protection of

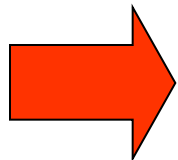
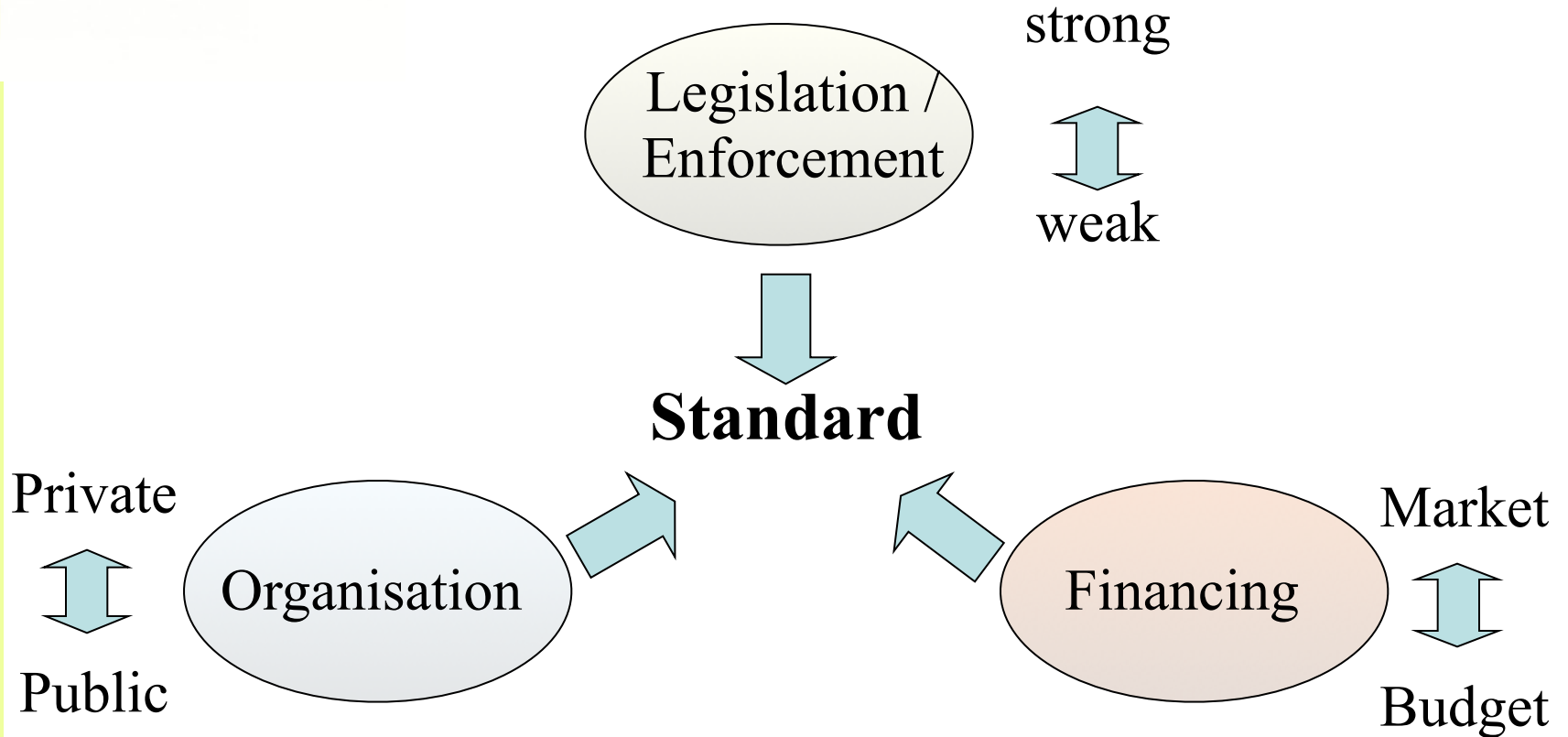
- Resources
- Environment
- Climate

Economic Benefits

- Investments
- Turnover
- Profits
- Employment
- Level Playing Field
(Competition)



How to reach high standards



- Good Governance – Strong Policy
- Effective Organisation
- Market Financing

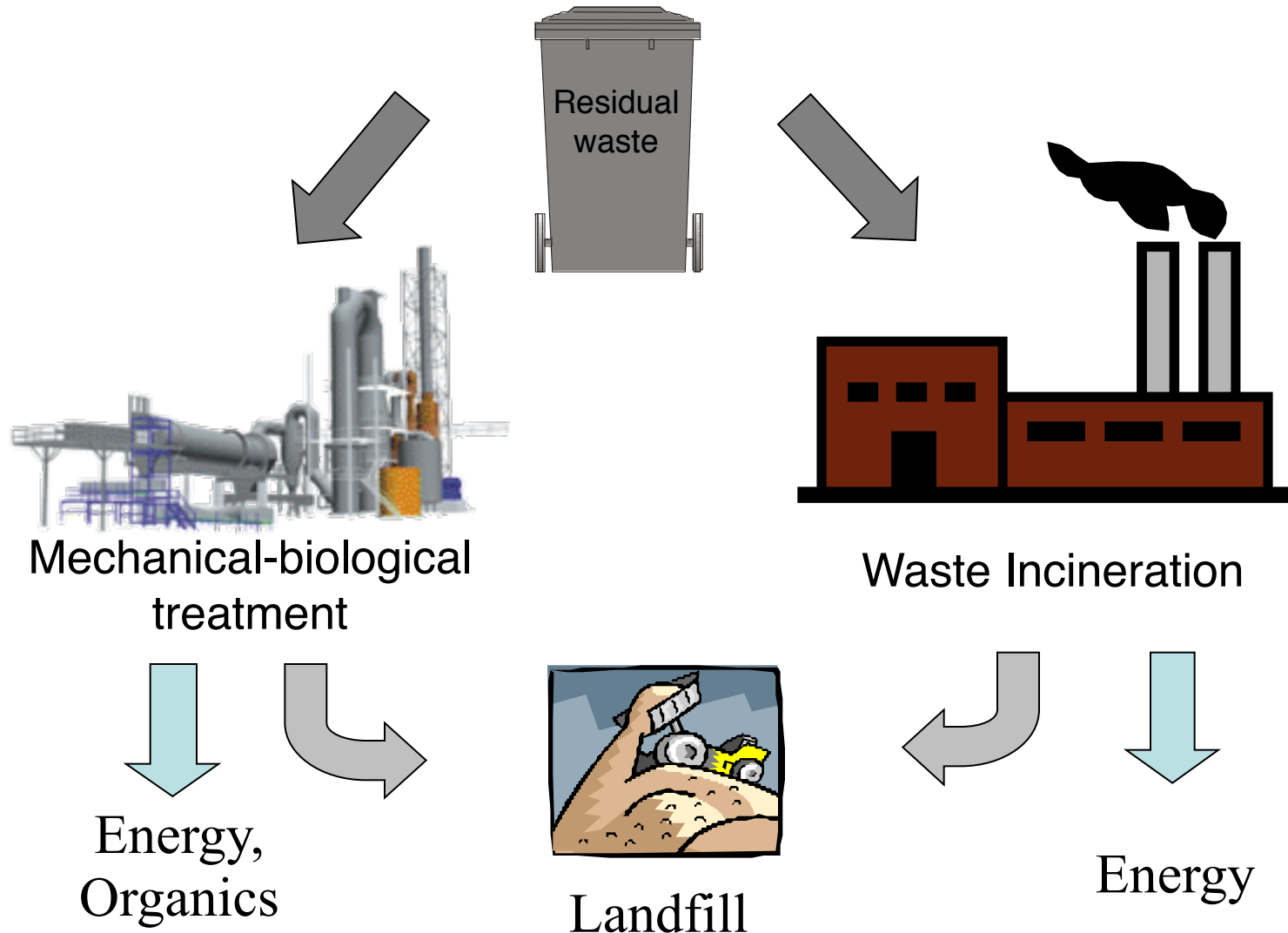


Legislation

- 1972** Closure of 50 000 dumps in Germany
- 1986** First obligations for Recovery and Recycling
„3R“-Policy
- 1991** First Regulation on Extended Producer Responsibility
- 1996** General Recycling Obligation
„Circular Economy“ – number of regulations
- 2005** Landfill Ban



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





Waste



Separate Collection

Re-use



Recycling

Recovery



Residues



Pre-Treatment



Disposal





Recycling by segregation / separation

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:

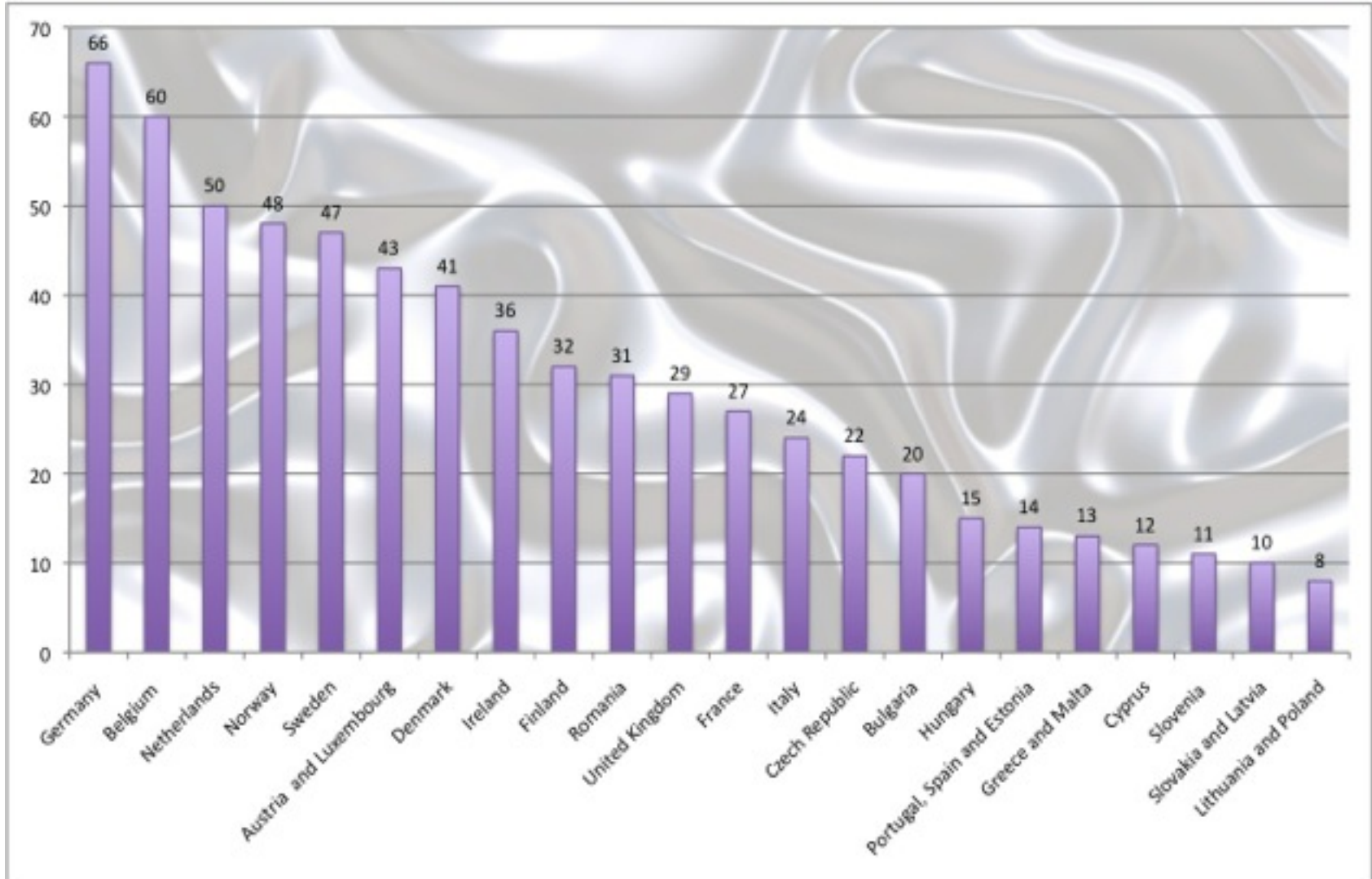
slags,

sludges,

RDF



Recycling Rates in Europe

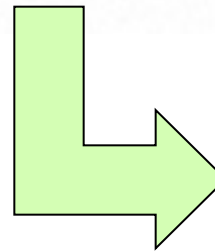
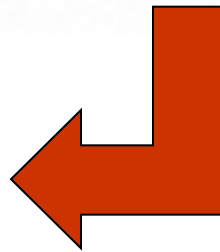




Keep dry and wet waste seperated !



**Biological
Treatment**

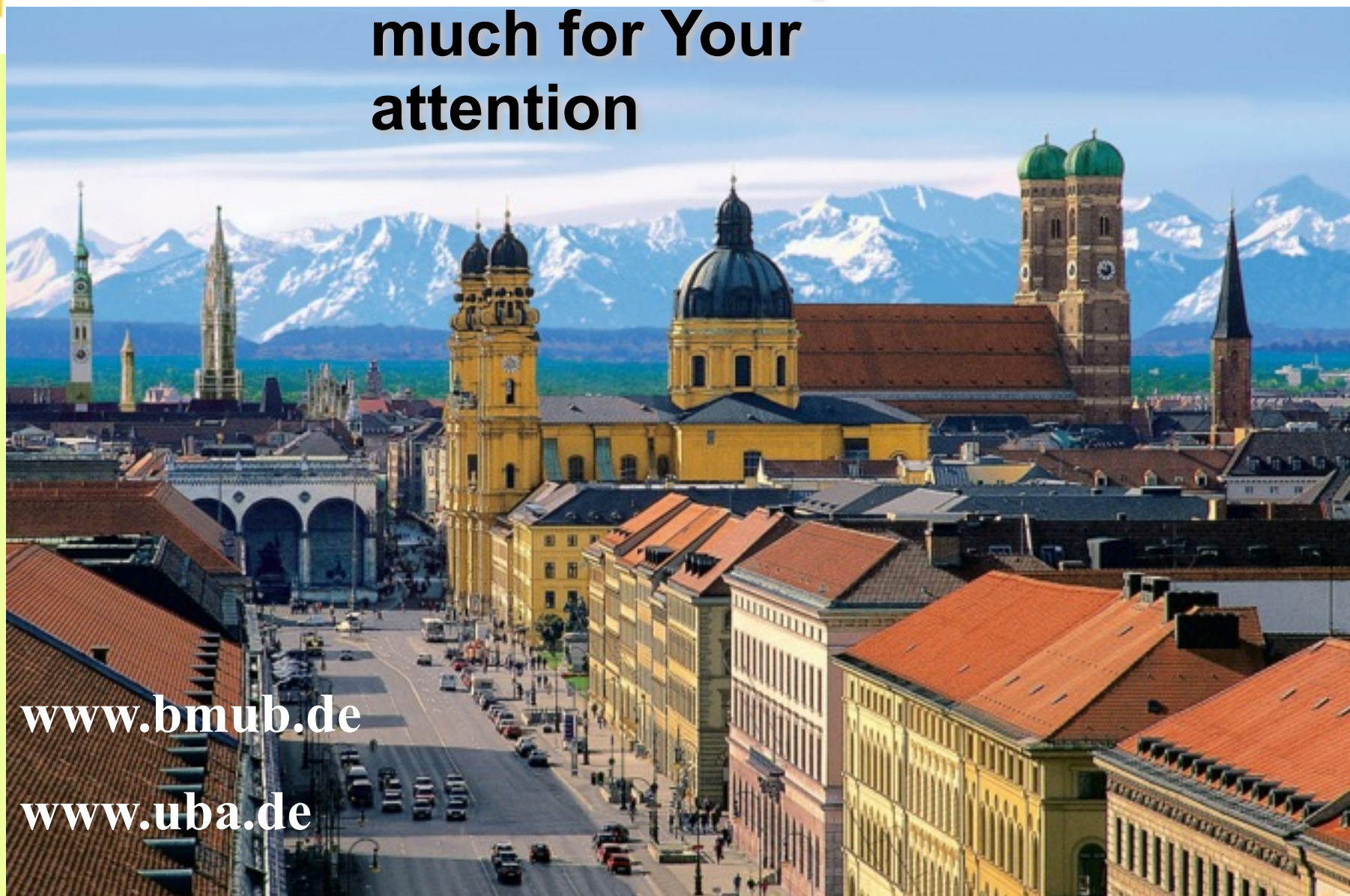


**Seperation
Recycling**



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Thank You very much for Your attention



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