

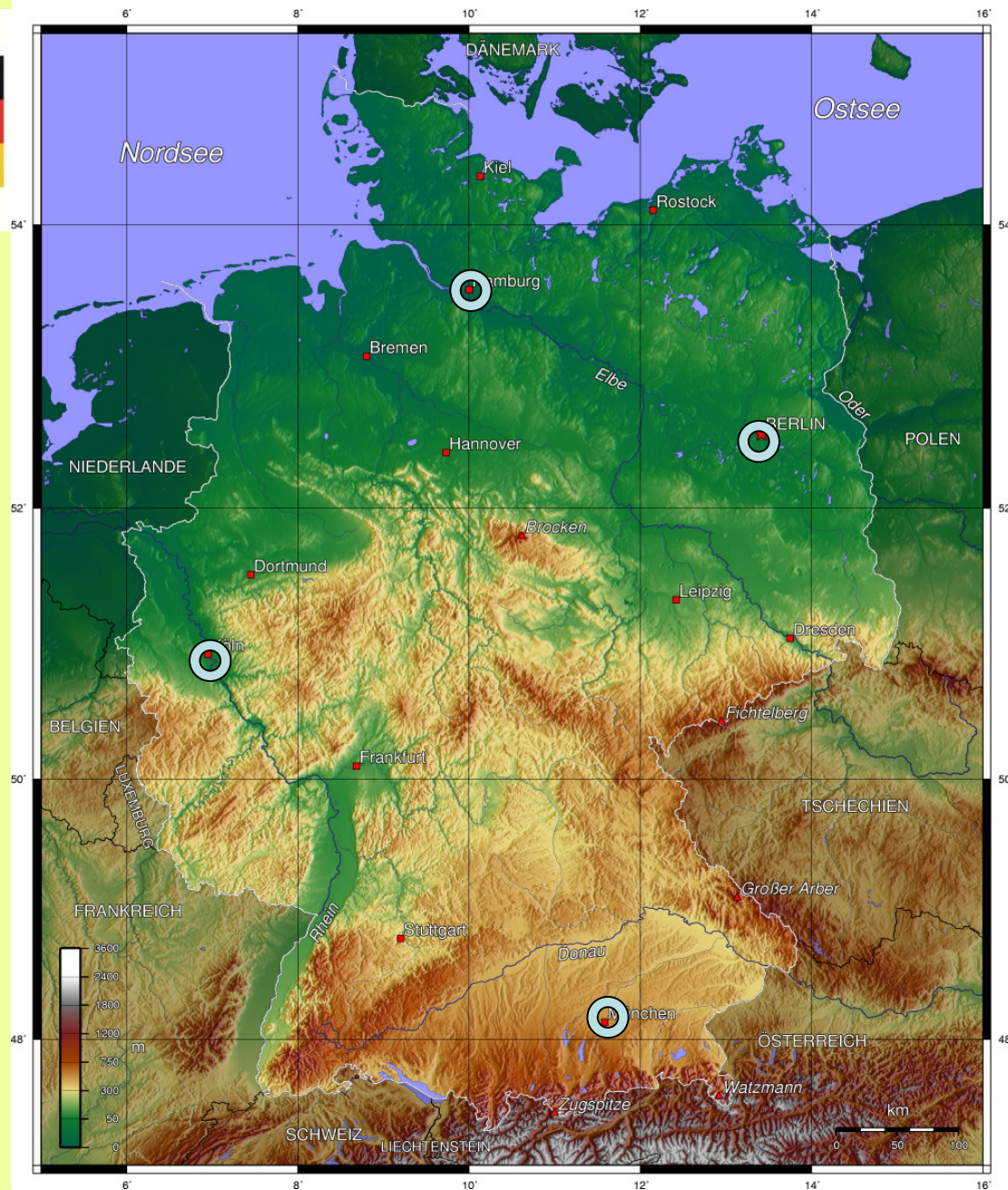


Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety



Enabling Conditions for Successful Private Sector Participation and Investment in the Waste Sector - Experiences of Germany -

Dr. Andreas Jaron



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)

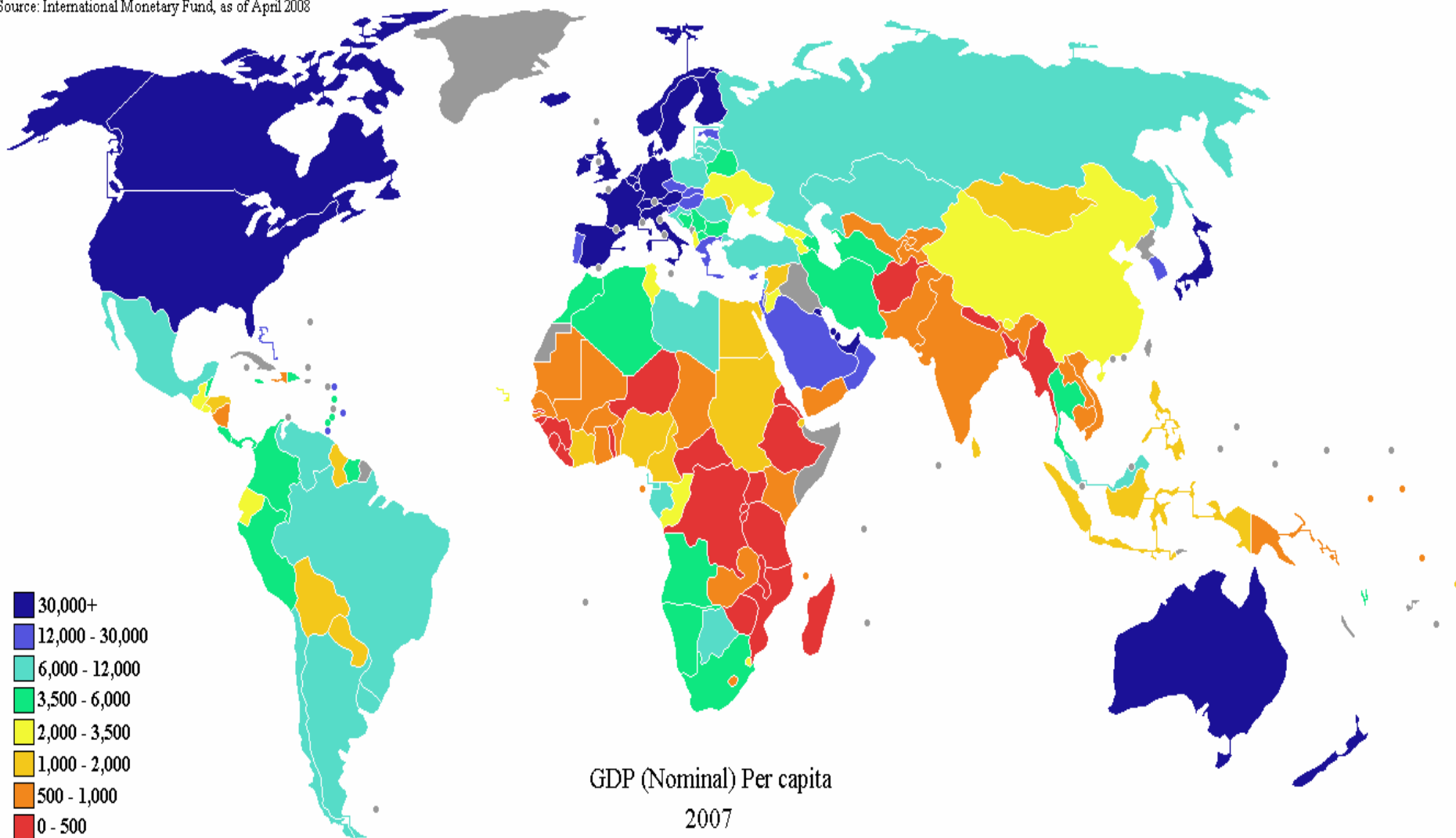
31 % Forests
Temperate climate
Water availability

**High density
of industries**



GDP

Source: International Monetary Fund, as of April 2008





Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety

1. European Union
2. Federal Republic
3. Länder States





General Data

Waste Management in Germany 2010

- Total Waste Generation: **332.4 Mio to (net)**

Municipal waste: **49.2 Mio to**
incl. Household waste: **44.0 Mio to**
(= 540 kg / person)

Production and commercial
waste: **53.2 Mio to**
Mining waste: **36.9 Mio to**
C&D waste: **193.1 Mio to**

- 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

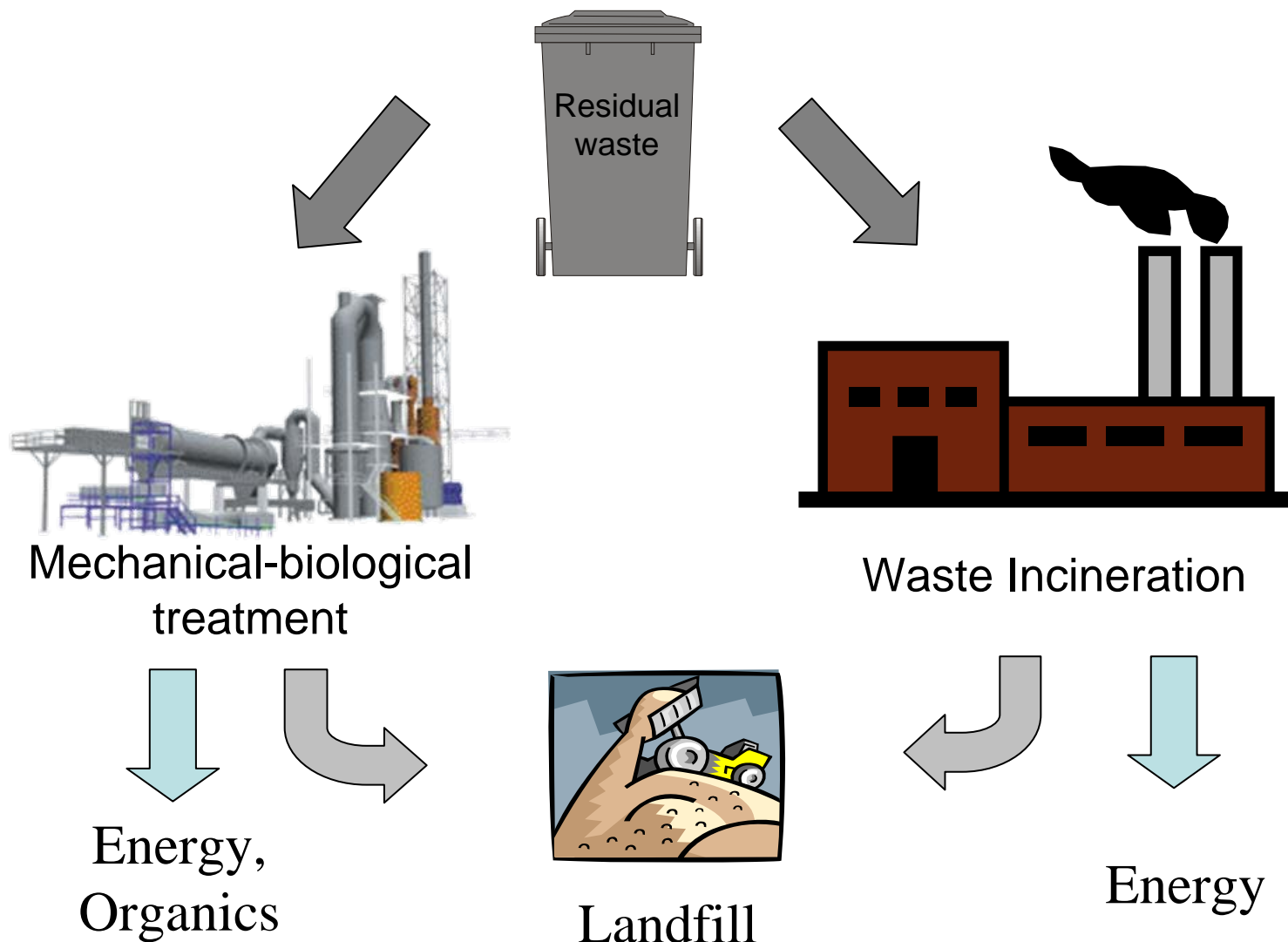


Legislation

- 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,

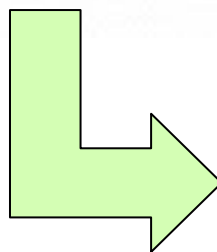
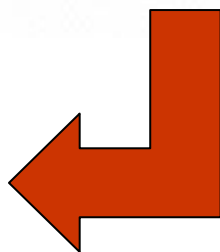
RDF



Keep dry and wet waste seperated !



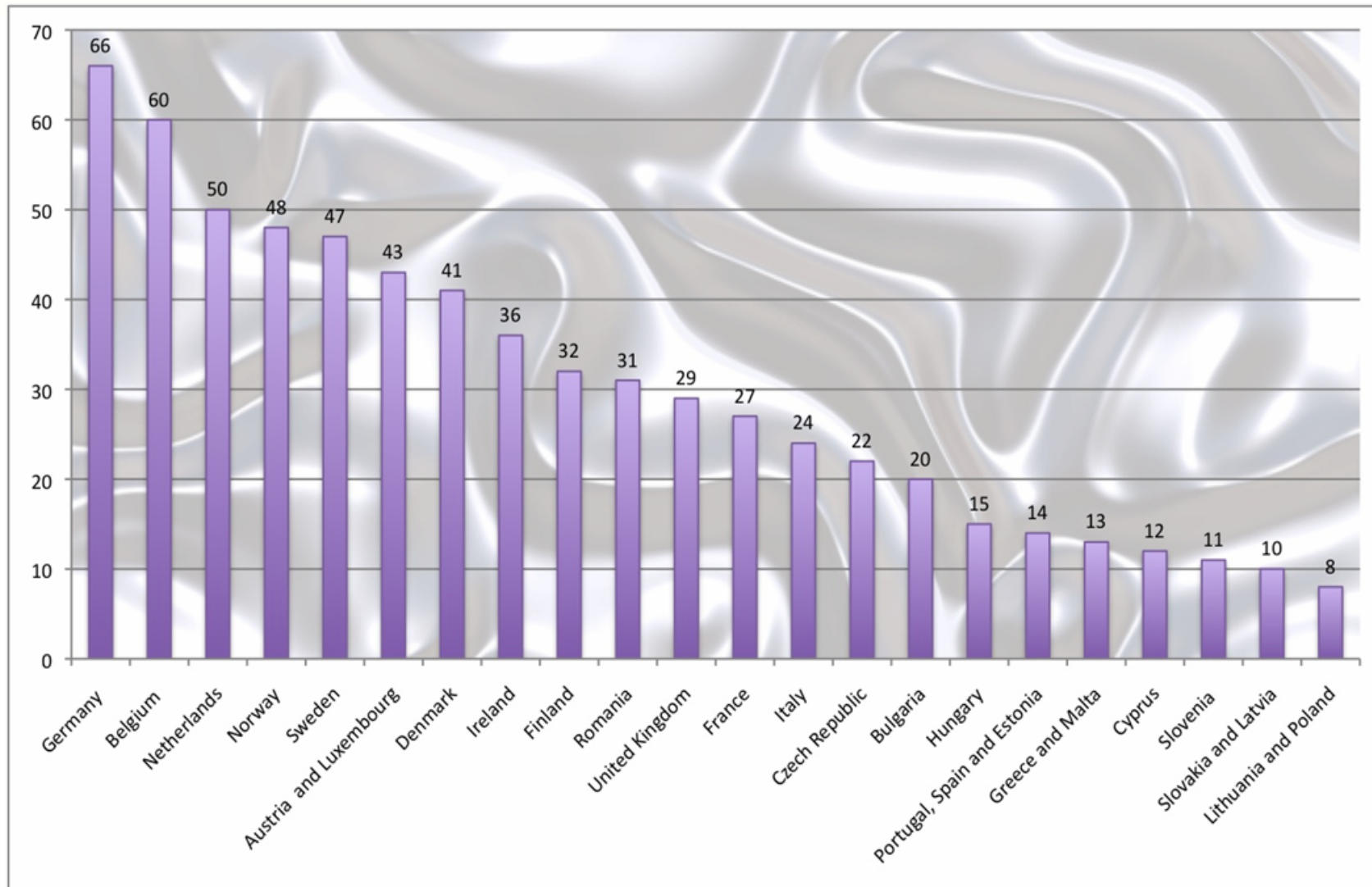
**Biological
Treatment**



**Seperation
Recycling**

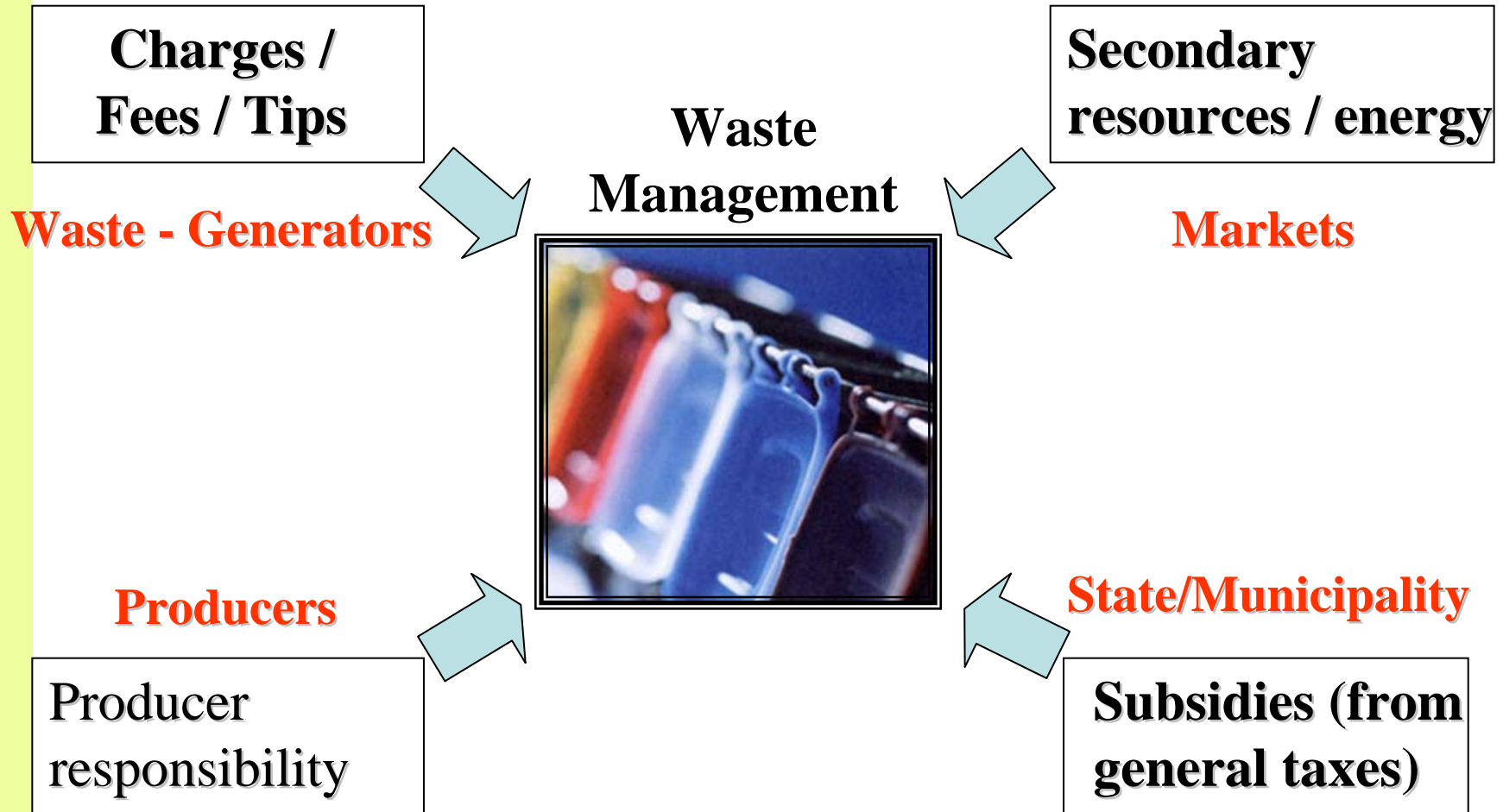


Recycling Rates in Europe





Financing of Waste Management (in general)





Who pays ?

Polluter $\left\{ \begin{array}{c} \text{Waste Generator} \\ \hline \text{Producer of Good} \end{array} \right\}$ **Pays Principle !!!**

Incentives for:

Waste Prevention / Better Design

Re-use

Segregation at Source

Separation

Recycling / Recovery

Investments / Turnover



Investments

Who should invest ?

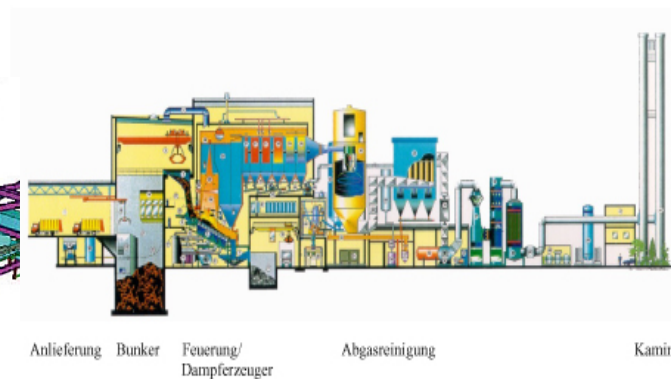
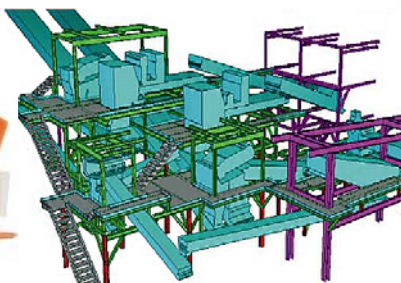
STATE

Government
Municipality ...

**Technique
Organisation
Administration**

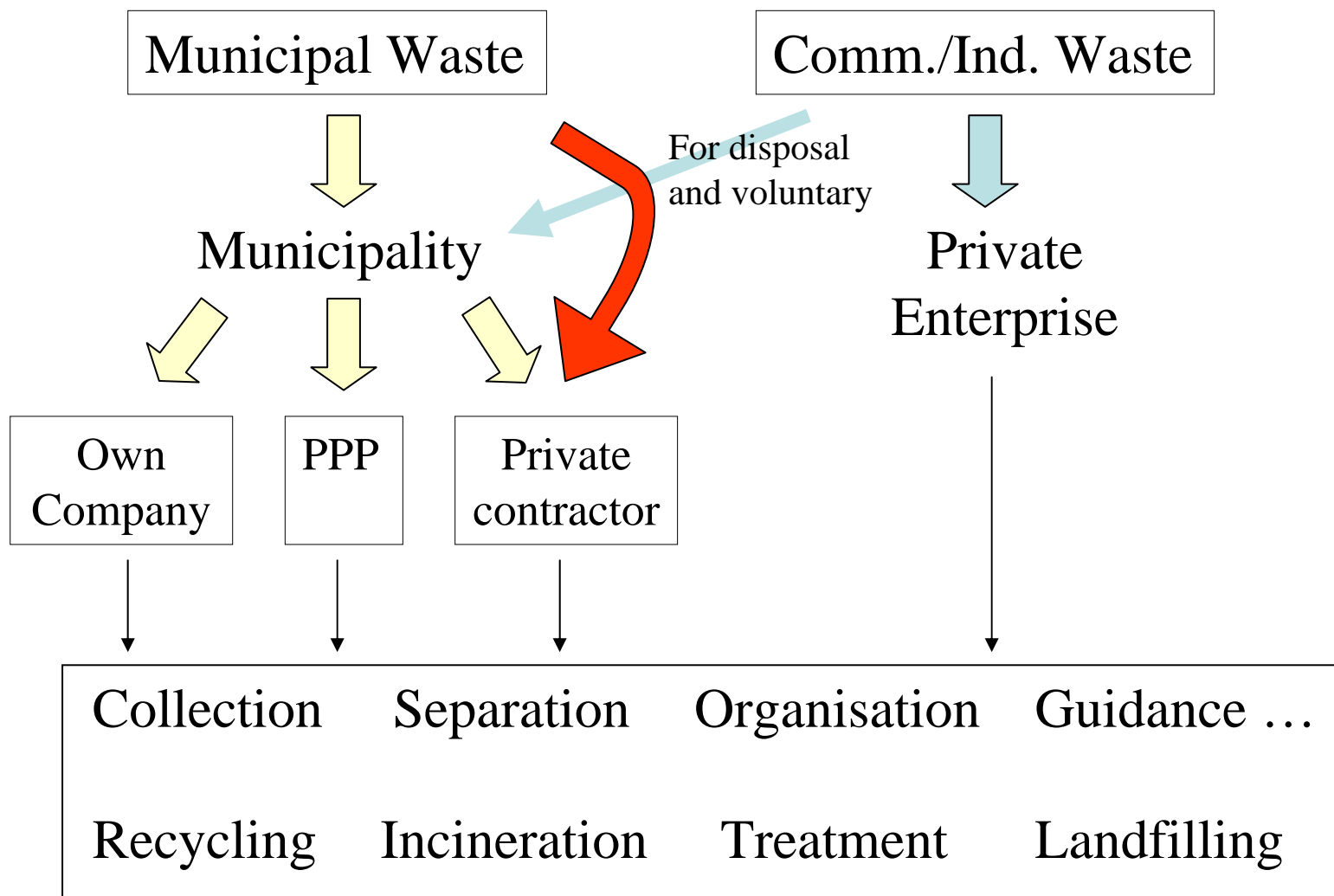
PRIVATE

Enterprises
Bank ...





Organisation of Waste Management

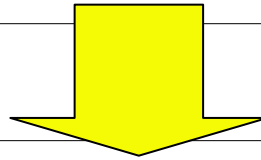




Private Engagement needs Certainty and Reliability

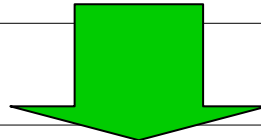
1. Rules !!!!!

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

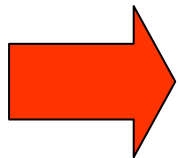
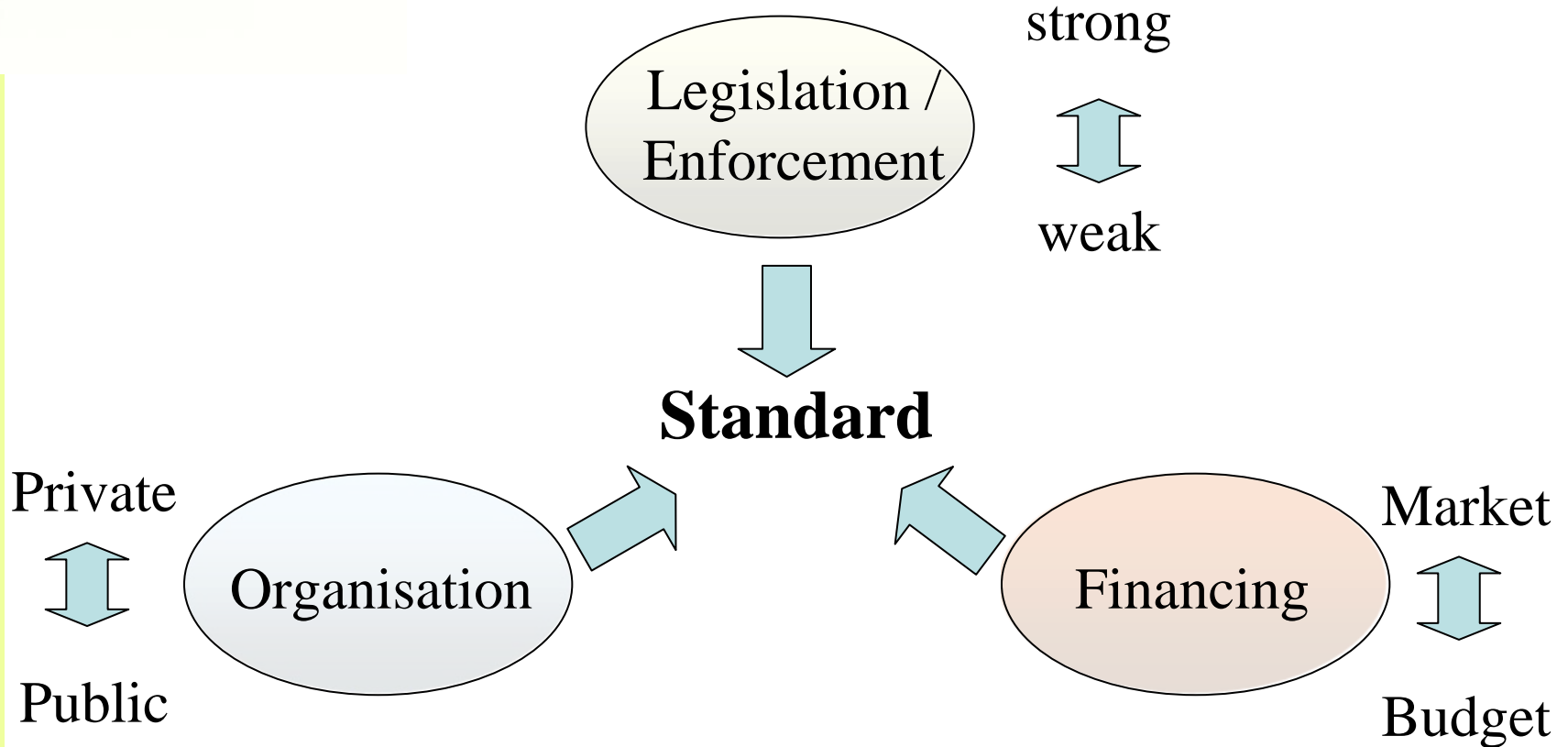


Economic Benefits

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



How to reach high standards



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



Role / Inclusion of the Informal Sector

- Private, commercially interested
 - High recycling rates in certain waste streams
 - Low standards
 - Socially discriminated
-
- Partner in local waste management !
 - Support of Waste-Picker-Unions
 - Education and social projects
 - Increase of environmental and health standards (slowly and in cooperation)



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Thank You very much for Your attention

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