環境省
Ministry of the Environment

EERA

“Roles of Recyclers and Practices of European Standards (ENs) under Framework of WEEE Directive.”

Norbert Zonneveld

Executive Secretary - EERA

EERA members

EERA recyclers

- Members treat > 2.200.000 tonnes of WEEE / year
- Total turn over in 2012 of ± € 850 million
- 35 companies; > 90 subsidiaries
- 30 treatment companies
- 4 smelters
- 2 down stream recyclers
- 2 re-use companies
- European wide

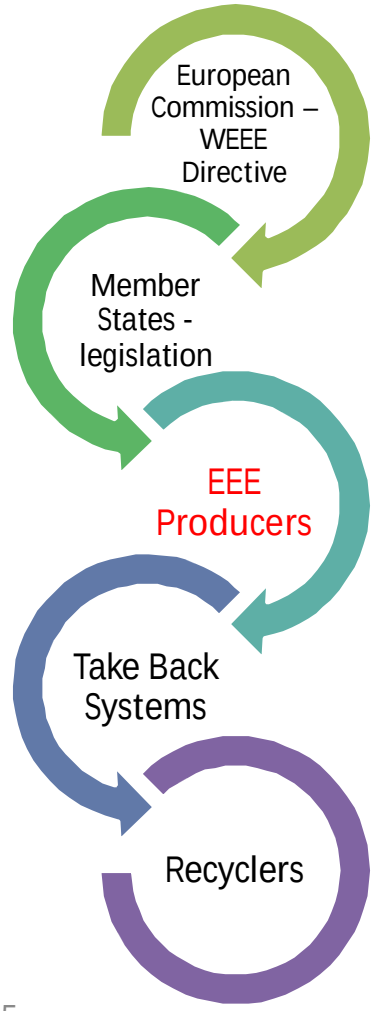
www.eera-recyclers.com

Agenda

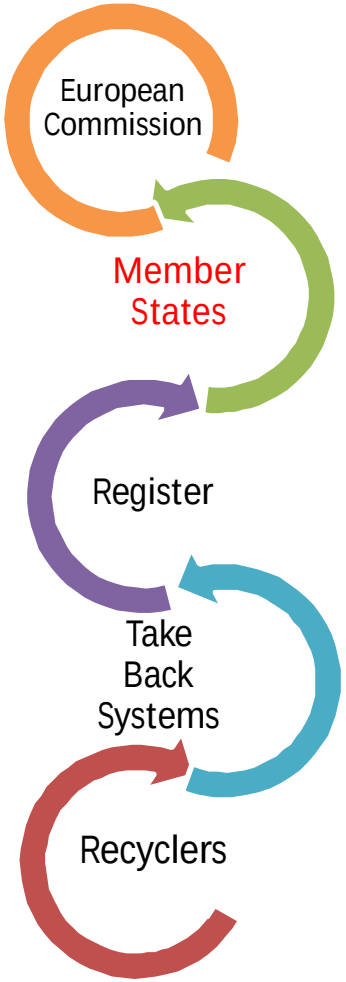
1. Framework and complexity of EU WEEE legislation
2. Targets
3. Results after 12 years WEEE legislation
4. Lessons learned in Europe
5. Where is the problem and how can it be solved?
6. Big challenges ahead !
7. Producers responsibility
8. Questions and answers

Framework of EU WEEE legislation

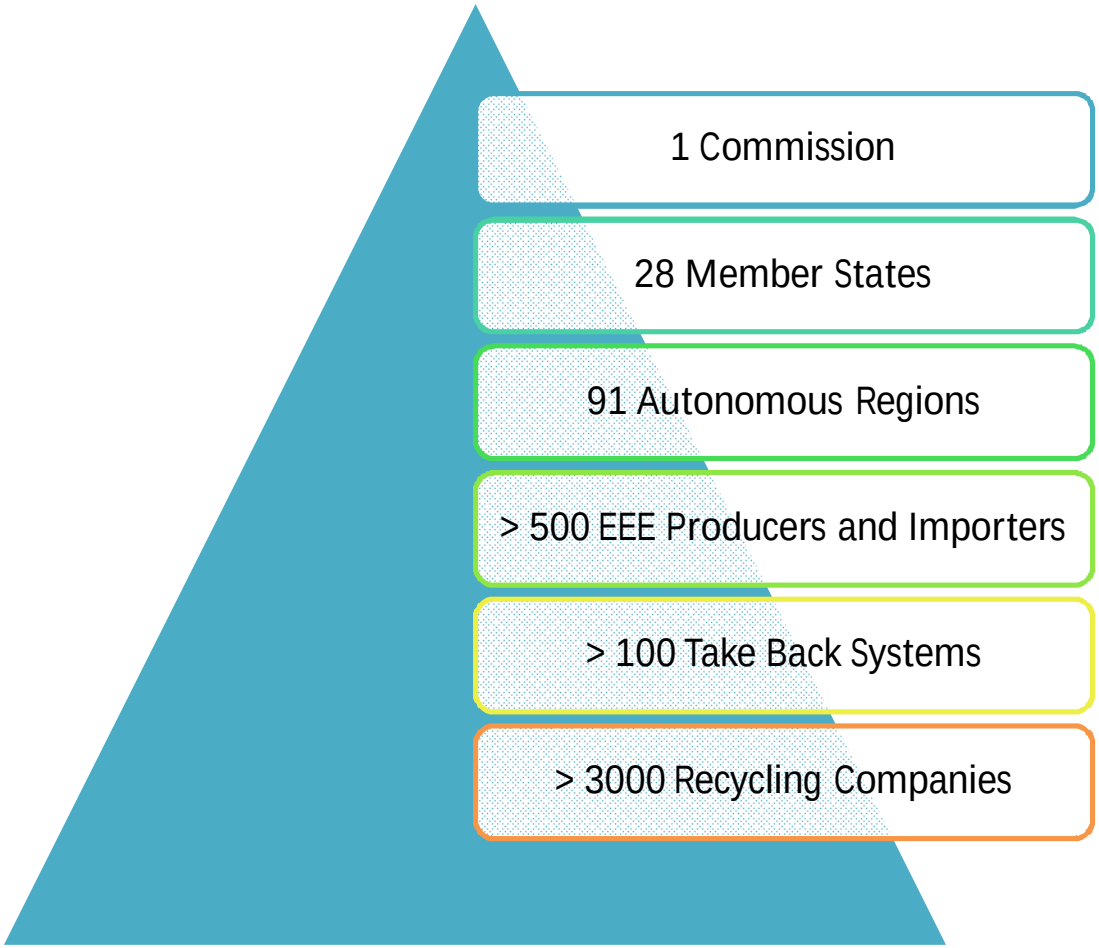
Responsibility



Information



Complexity of non-harmonised legislation



Scope of the WEEE Directive

1. Large household appliances
2. Small household appliances
3. IT and telecommunications equipment
4. Consumer equipment and photovoltaic panel
5. Lighting equipment
6. Electrical and electronic tools (with the exception of large scale stationary industrial tools)
7. Toys, leisure and sports equipment
8. Medical devices (with the exception of all implanted and infected products)
9. Monitoring and control instruments
10. Automatic dispensers

Targets in the WEEE Directive

Collection, Recovery and Recycling rates

- Collection rates

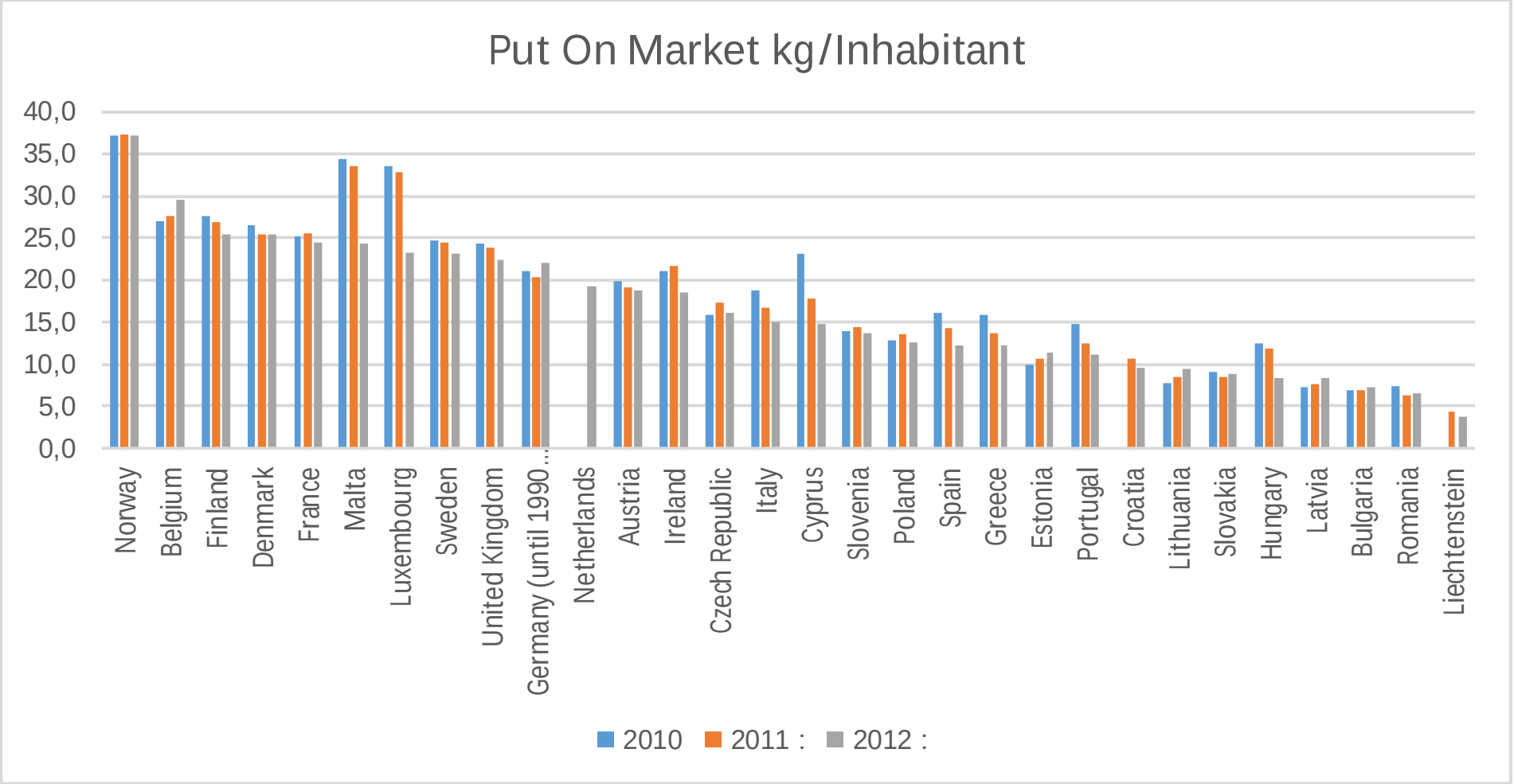
– From 2013 till now:	4 kg/inhabitant/year
– From 2016:	45 % of EEE put on the market – average POM of the 3 preceding years
– From 2019:	65 % of EEE POM

Recycling and recovery rates

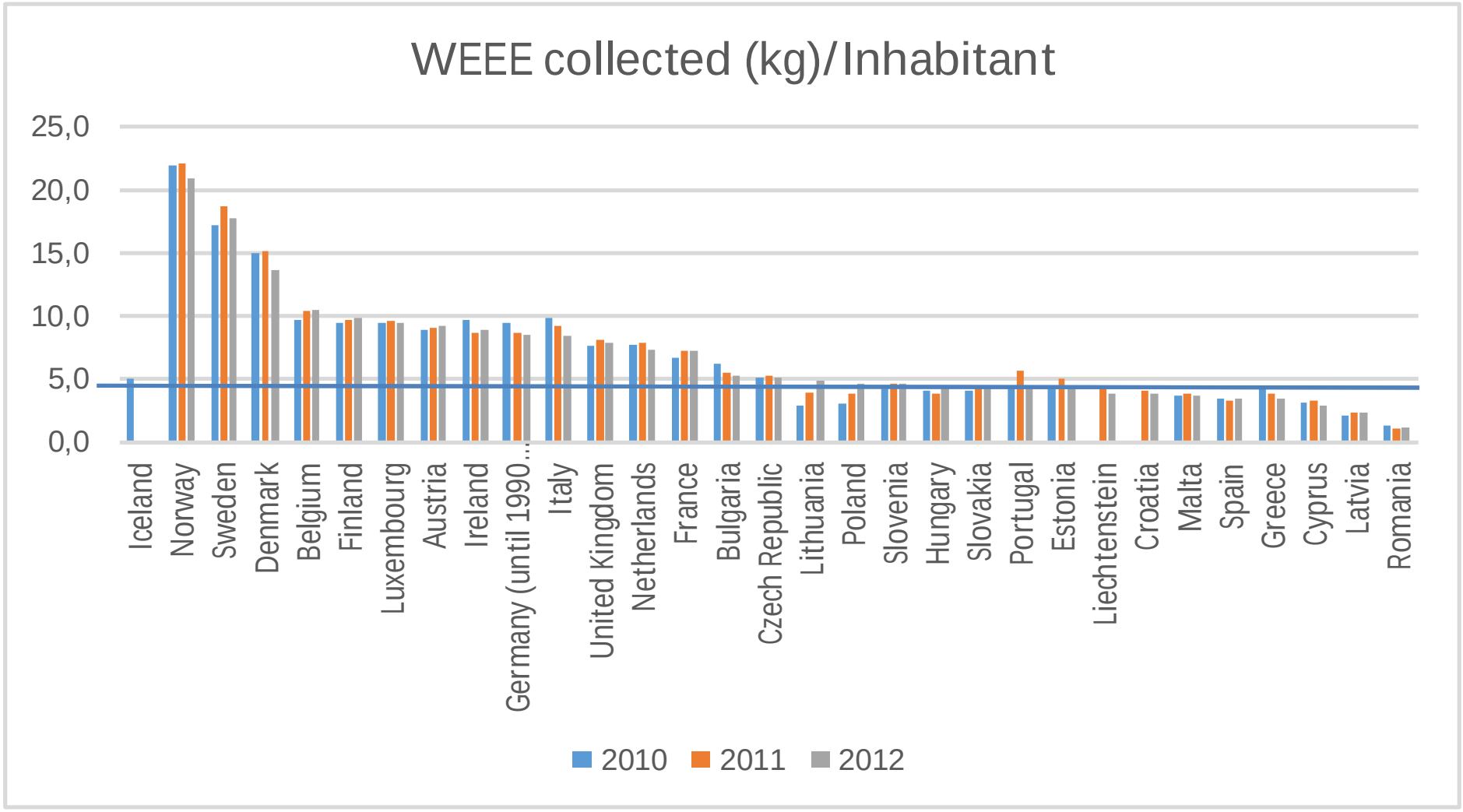
	August 2012 – August 2015	August 2015 – August 2018
Category 1 or 10 (LHHA – Dispensers)	• 80 % recovered • 75 % recycled	• 85 % recovered • 80 % recycled
Category 3 or 4 (IT, Displays, PV)	• 75 % recovered • 65 % recycled	• 80 % recovered • 70 % recycled
Category 2,5,6,7,8 or 9 (SDA, Lamps, Tools, Toys, Medical, Monitoring)	• 70 % recovered • 50 % recycled	• 75 % recovered • 55 % recycled
Gas discharge lamps	• 80 % recycled	• 80 % recycled

Targets -> to measure is to know

POM- EEE in Europe EuroStat 2015

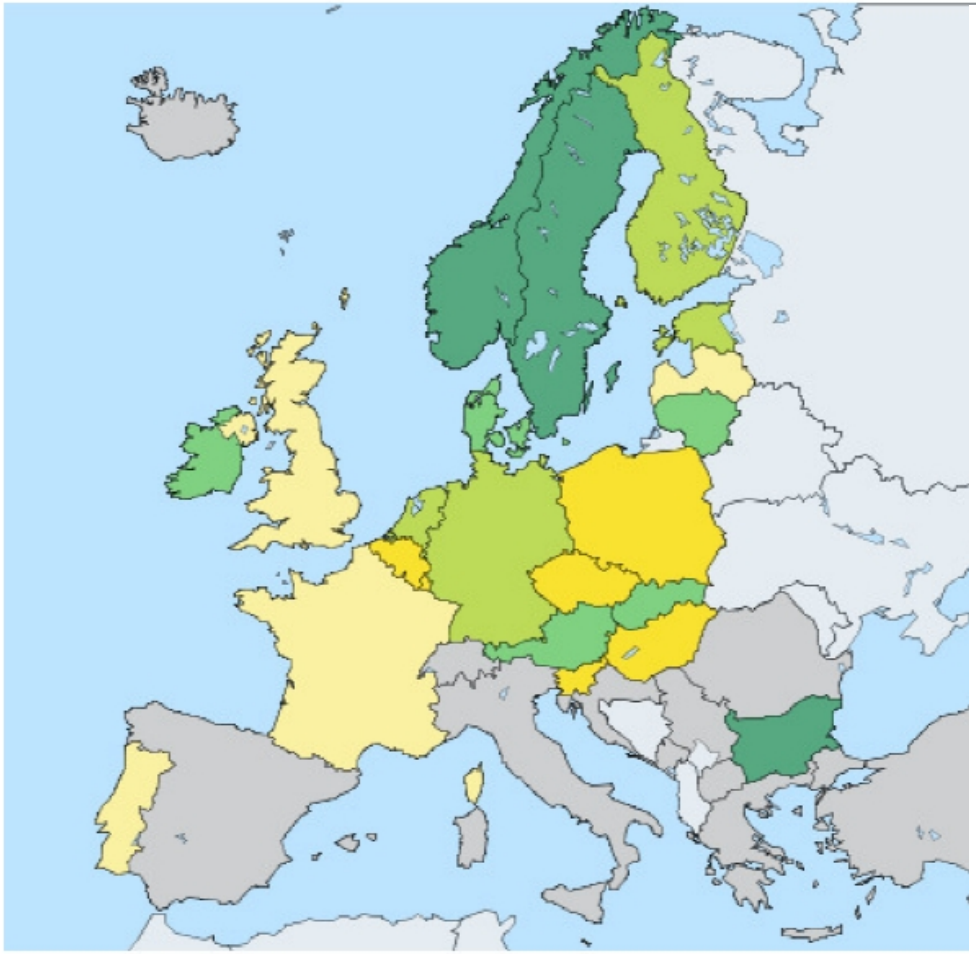


Collected in Europe Eurostat 2015



Recovery targets in Europe - 2012

Eurostat 2015



Legend

- 9.9 – 26.5
- 26.5 – 32.0
- 32.0 – 35.9
- 35.9 – 46.0
- 46.0 – 62.6
- Not available

WEEE - category 1 or 10:
— 80 % shall be recovered, and
— 75 % shall be recycled;

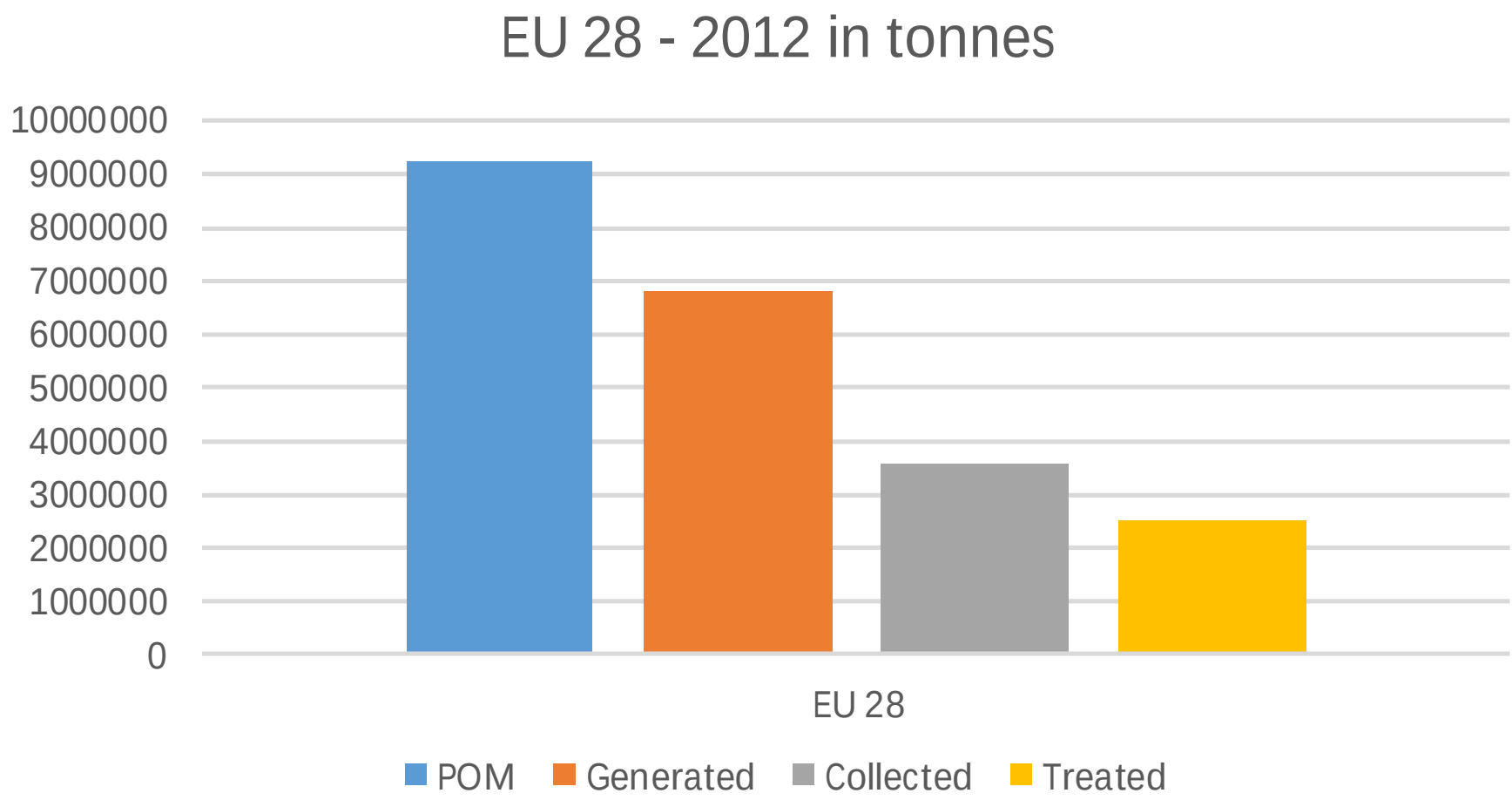
WEEE - category 3 or 4:
— 75 % shall be recovered, and
— 65 % shall be recycled;

WEEE - category 2, 5, 6, 7, 8 or 9:
— 70 % shall be recovered, and
— 50 % shall be recycled;

Gas discharge lamps, 80 % shall be recycled.

Official statistics EU on POM, Collected and Treated WEEE

Eurostat2015

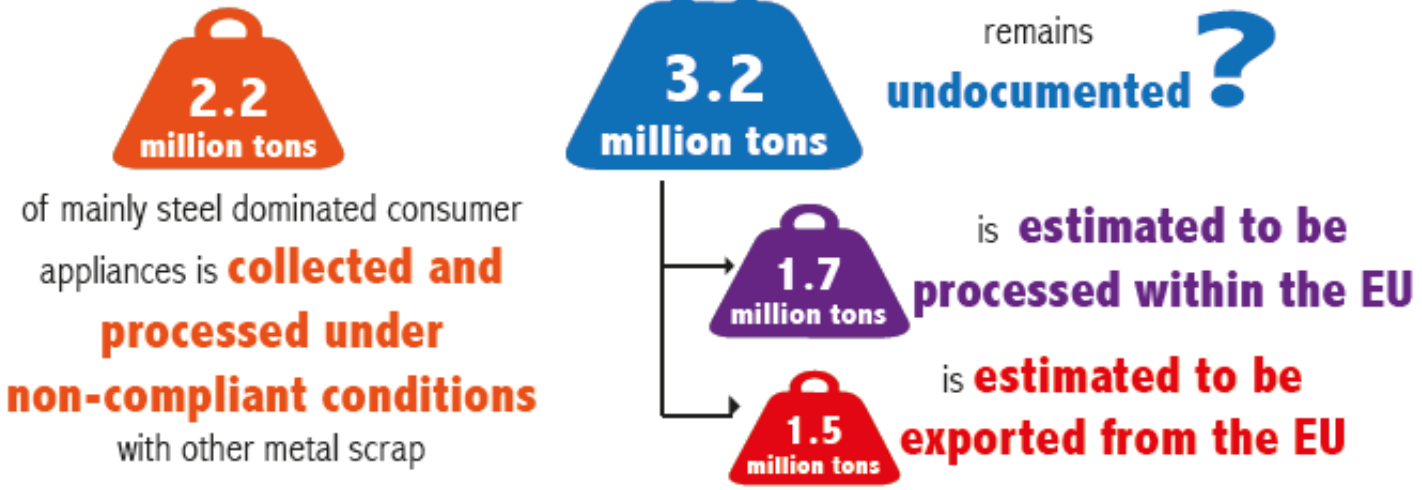


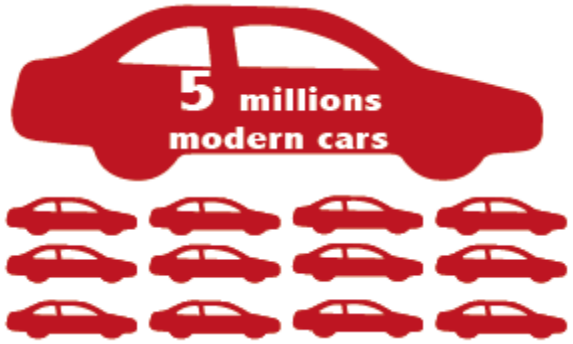
Results after 12 years WEEE legislation according CWIT 2015

- Some 4.7 million tonnes (i.e. ± 50 % of POM) valued at between EUR 800 million and 1.7 billion – is wrongfully mismanaged or illegally traded within Europe itself.

- 1.3 million tonnes departed the EU in undocumented exports. These shipments are likely to be classified as illegal.

Lost resources and environmental damage





84,000 tonnes of fridge compressors are stolen before collection, equal to the CO_2 equivalent of 5 million modern passenger car on the road...

Annually!

http://www.cwitproject.eu/

Improper collection:
Theft at collection points -> environmental damage is done

Improper treatment:
If WEEE is mixed with scrap and ELV's

Financial consequences

due to **bad disposal behaviour consumers**

€ 300 – 600 million = ¥ 40 – 80 billion

Of **scavenging** of valuable components, only considering compressors from temperature exchange equipment, hard disks, memory and other small IT components

€ 200 – 500 million = ¥ 27 – 67 billion

represents the **intrinsic material value** not available for compliant processing in Europe

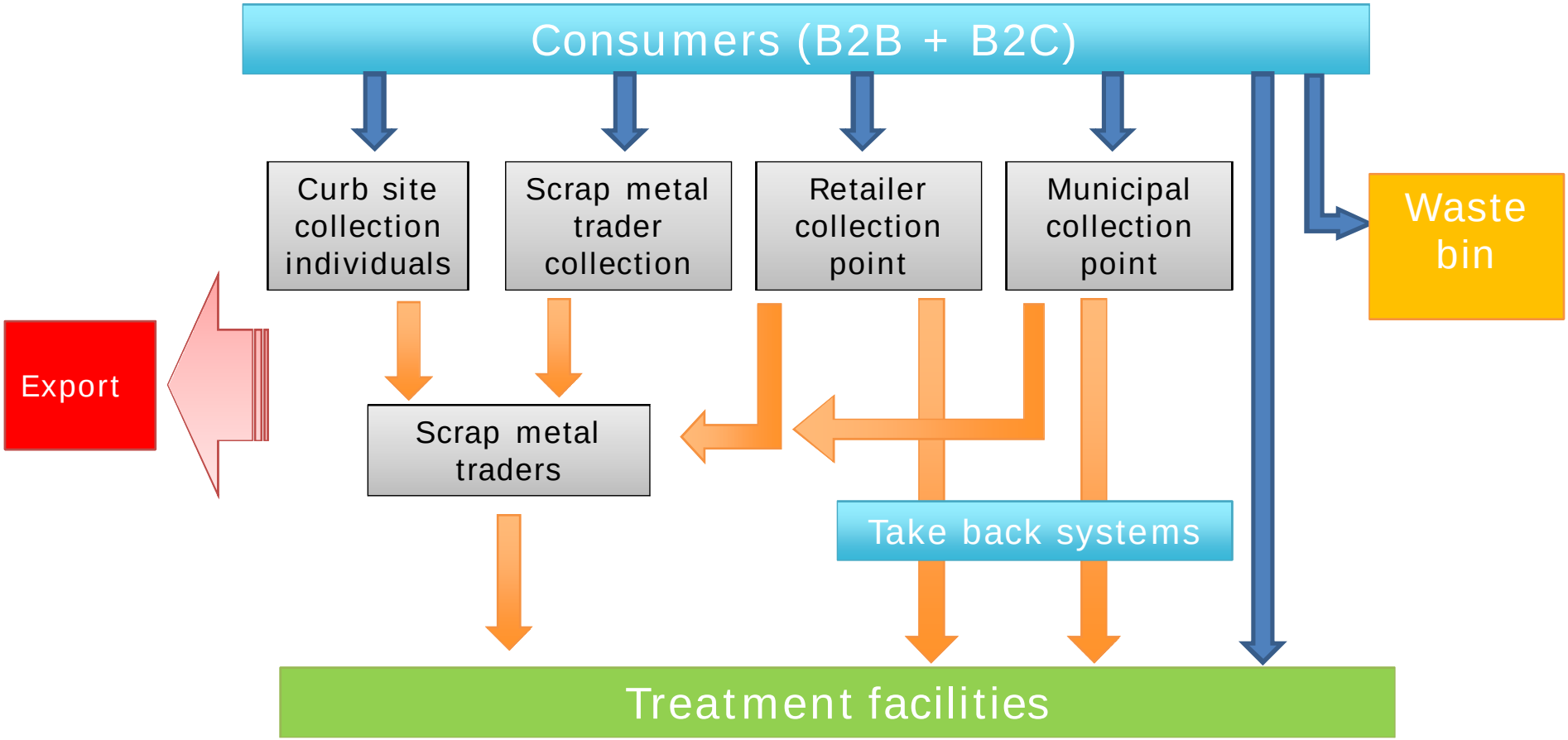
€ 800 – 1.700 million = ¥ 107 – 227 billion

Lessons learned in Europe

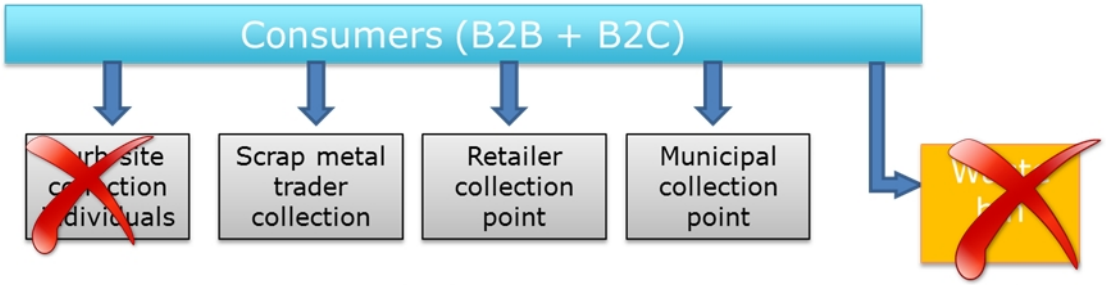
- Statistics are not reliable and too dated. Governments and EU need to improve the statistical reporting.

- After 12 years EPR – extended producers responsiblity is not working; targets are not met.
  - Not enough collected and/or improperly collected
  - 2/3 of WEEE treatment is not compliant with WEEE Directive

Why is this the case?



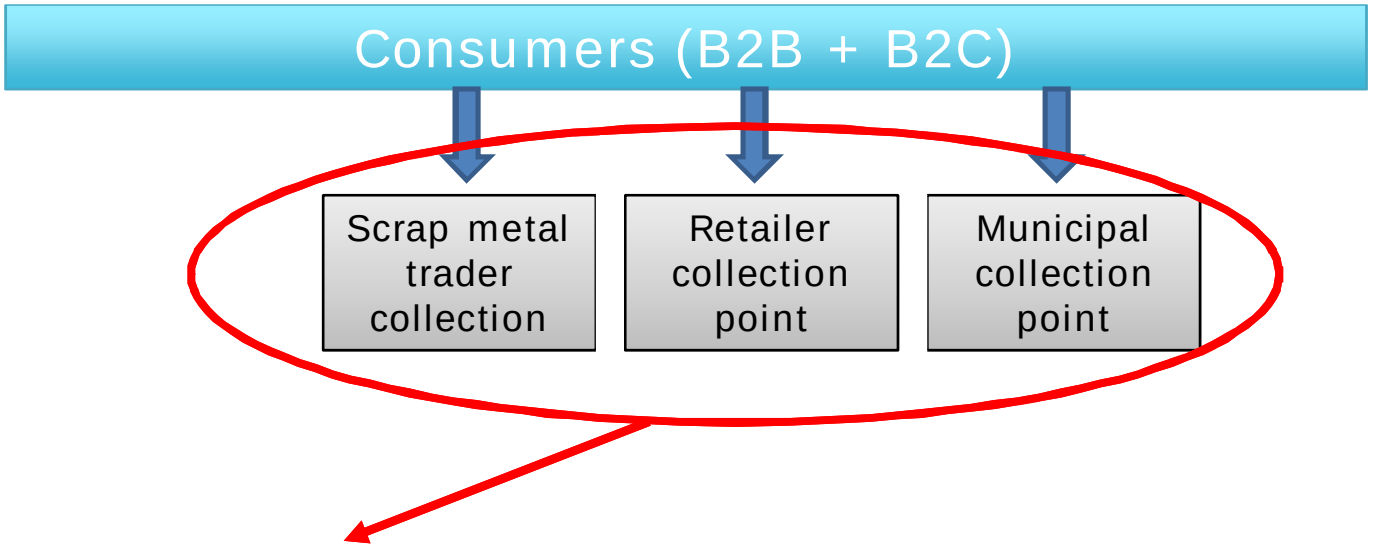
How can it be solved?
1. Good collection



- Increase of public awareness: step up in communication campaigns and incentives for consumers is needed.

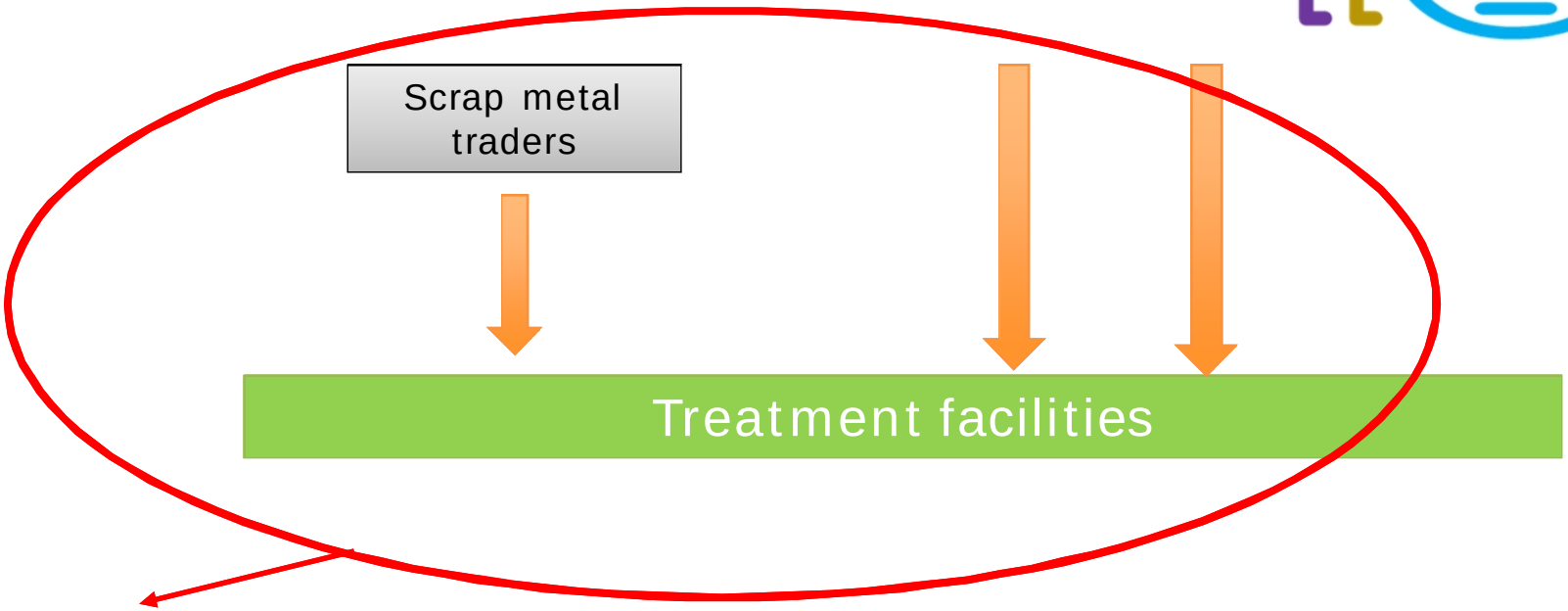
- In many EU countries, collection facilities are exposed to theft of valuable components:
  - make collection points visible
  - increase the number
  - improve security

1. Good collection



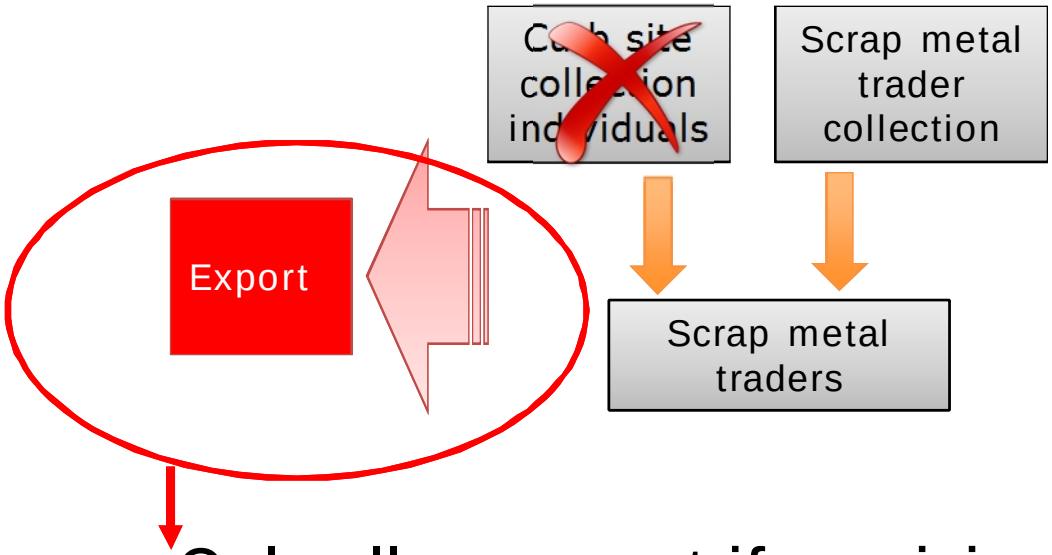
- Legally require certification according standards for collection and logistics
- TS 50625 – 4 Specification for collection and logistics associated with WEEE

2. Good treatment – Drivers License Model



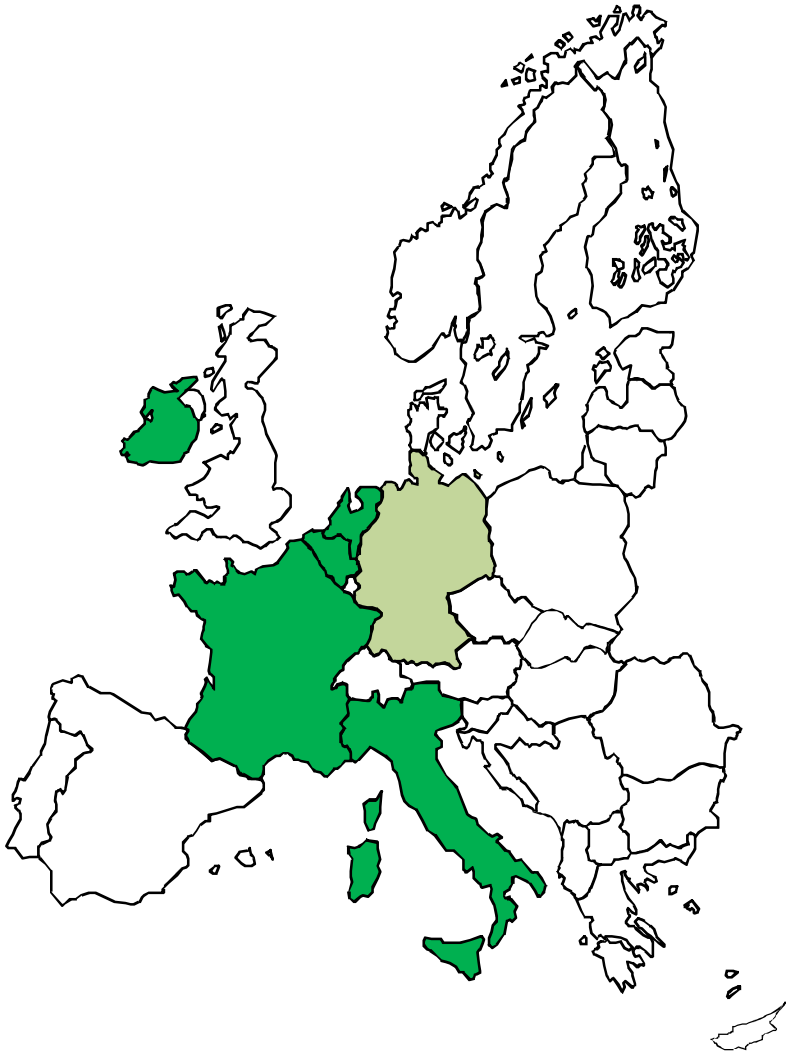
- Legally require certification according to WEEE treatment standards
- EN 50574 – Cooling and Freezing Appliances
- EN 50625 – series (General treatment, CRT and FP displays, Lamps, PV and End-processing)

3. No uncontrolled export



- Only allow export if receiving company also holds a certificate for WEEE treatment standard.
- In line with Basel Convention – WEEE is classified as hazardous!

Member States that legally require certification of treatment – October 2015



enforcement & compliance

Big challenges ahead !

- Already now the situation on collection and recovery rates are alarming…….
- and it will get far more difficult.

- Miniaturization

Martin Cooper and the First Cell Phone in 1973.

Google Glass - 2014.

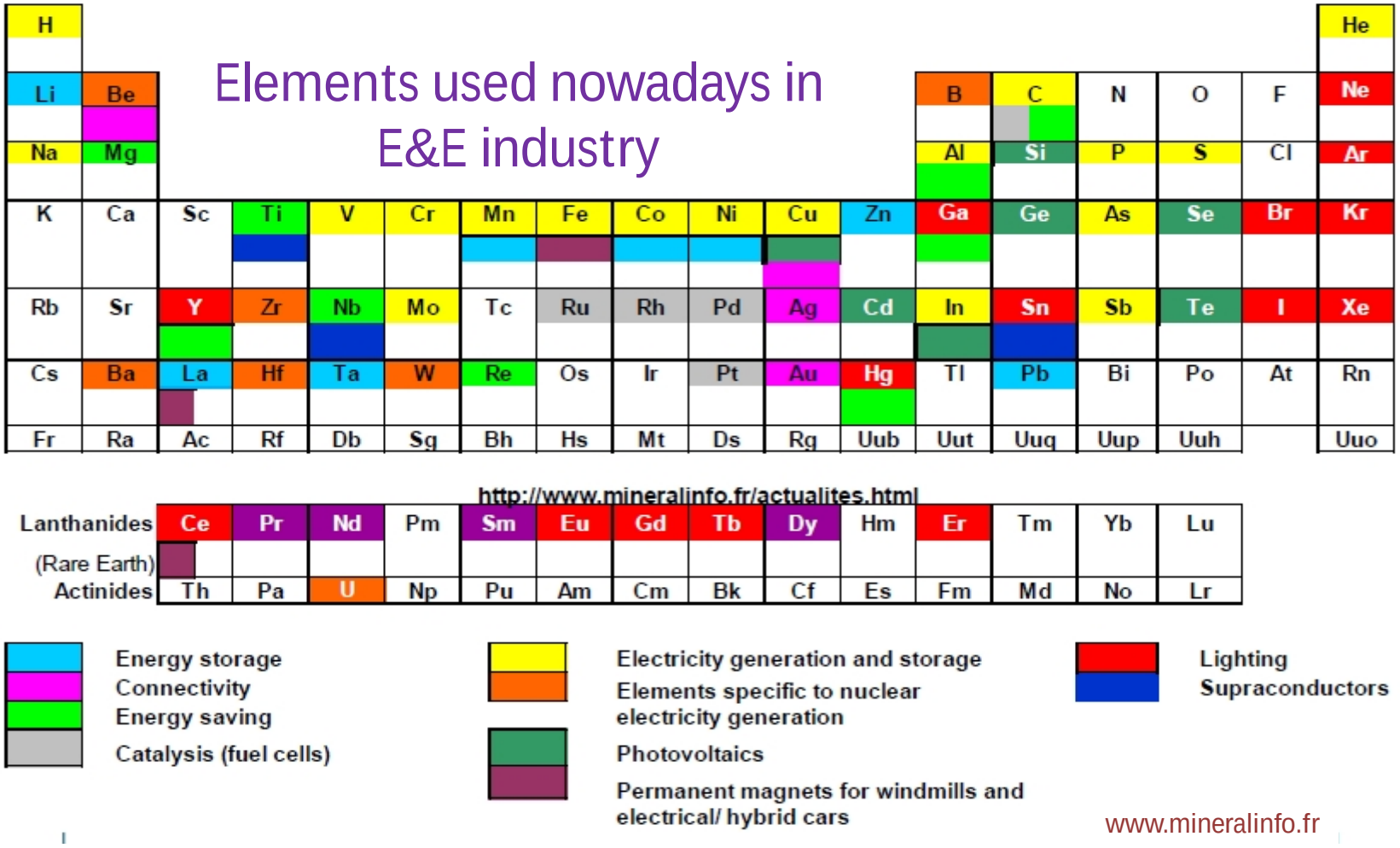
Elements used by our ancestors 100 years ago in EEE

H																He
Li	Be										B	C	N	O	F	Ne
Na	Mg										Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Uub	Uut	Uuq	Uup	Uuh		Uuo

Lanthanides (Rare earth elements)	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Hm	Er	Tm	Yb	Lu
Actinides	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

www.mineralinfo.fr

Increased complexity



Smaller -> more in the waste bin

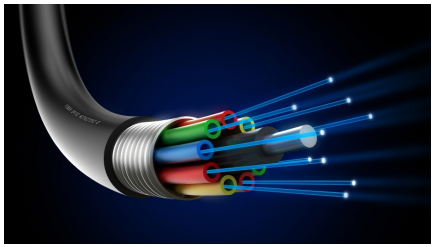


Less valuable materials used

- Less precious metals and rare metals.

- More and new (complex) plastics, (e.g. carbon fibre re-enforced plastics, glass as filler)

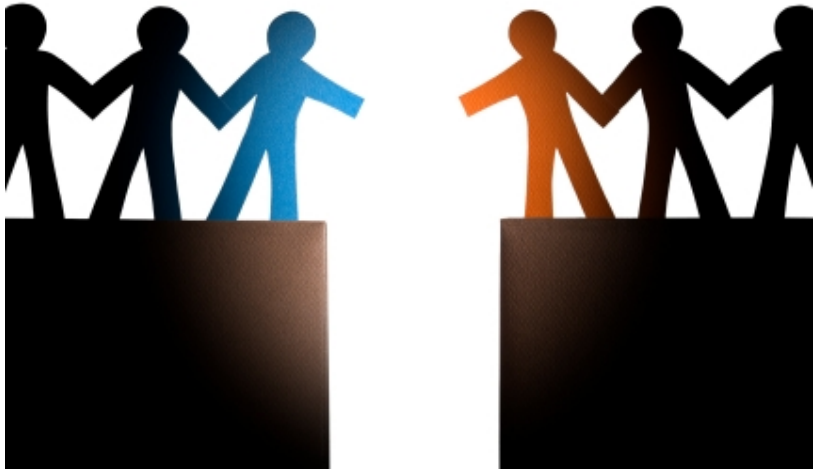
- Revolutionary technology (e.g. copper wires replaced by fibre optics)



How could these challenges be addressed?

- Ecodesign of EEE must be linked with recycling of WEEE

- Producers should involve stakeholders to meet extended producers responsibility i.e.
  - Recyclers
  - Scrap metal traders
  - Consumer groups – NGO's
  - Scientists
  - Authorities



Thank you for the invitation!

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