



The Management of Waste from Electrical and Electronic Products

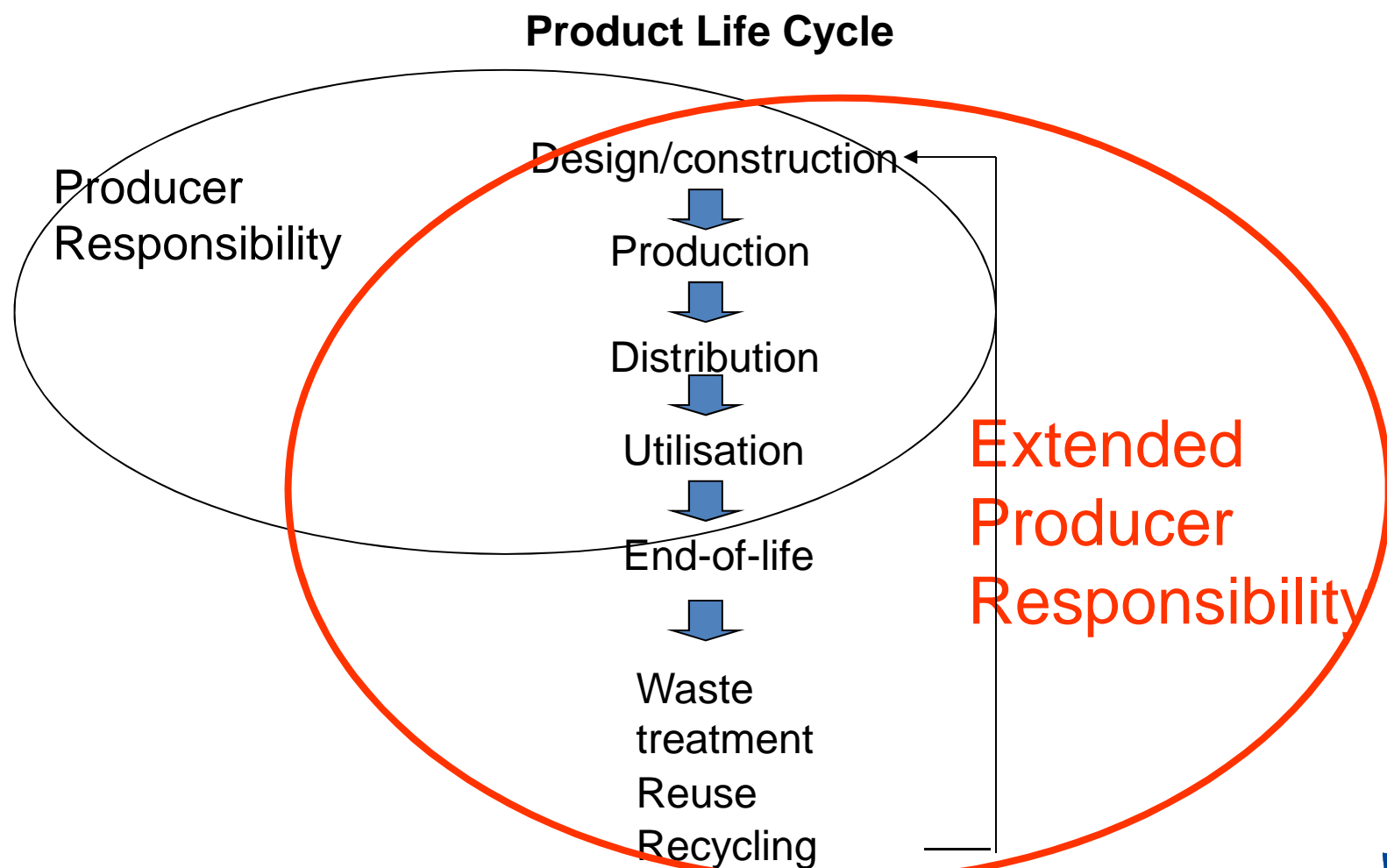
Experiences with the EPR approach in Europe and the Austrian Way

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WHAT IS EXTENDED PRODUCER RESPONSIBILITY ?



THE EPR PRINCIPLE IN EU WASTE POLITICS

- Applied in EU waste politics to:
 - Packaging and Packaging Waste(1994 etc)
 - Batteries and Accumulators (1994 etc)
 - End of life Vehicles (2002), tires
 - Waste Electronic and Electrical Equipment WEEE (2002)
- Lead to establishment of compliance systems in all countries manage recovery and recycling and collect industry fees
- Sufficient financing of recovery and recycling by industry is assured, no drop off costs for consumer

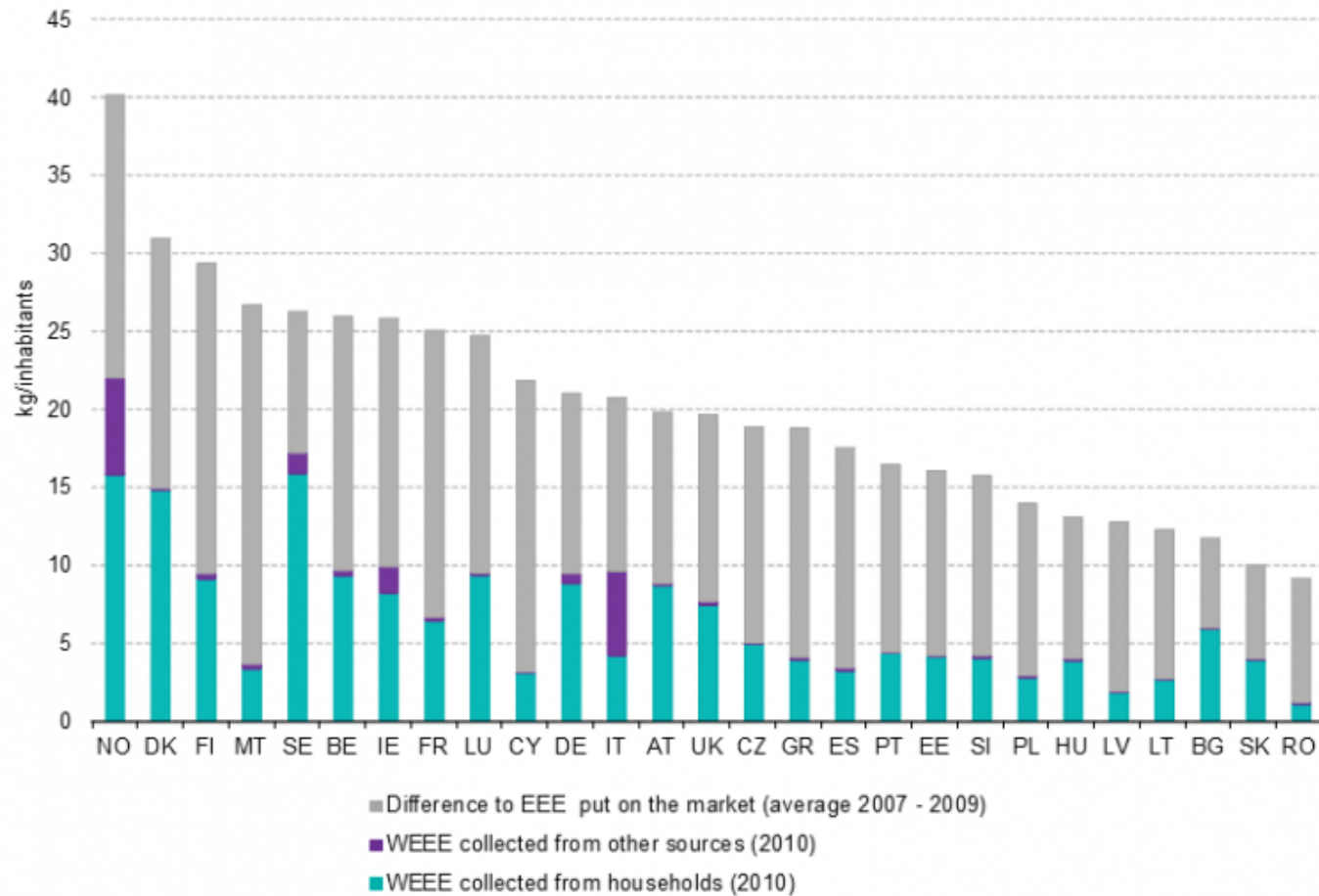


THE EPR PRINCIPLE IN EU WASTE POLITICS (CONT)

- Producer commitment to recycling and compliance costs leads to improved design and construction
- „future waste“ recycling gets industry support
- Recyclability is becoming a product quality criteria
- „free riding“ is undermining industry commitment and must be minimized



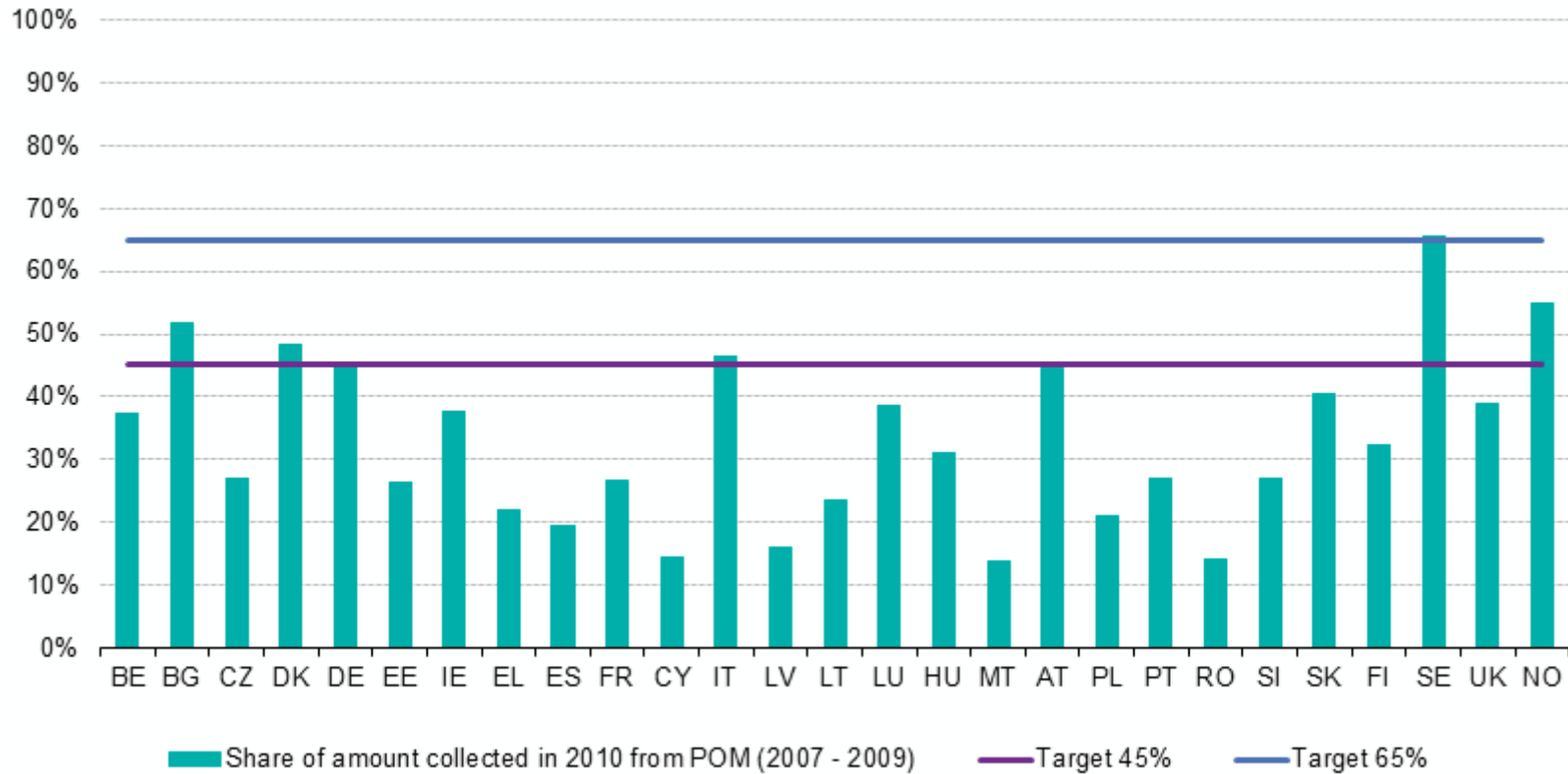
EEE PUT ON THE MARKET AND WEEE COLLECTED, PER CAPITA AND YEAR



Source: Eurostat 2014



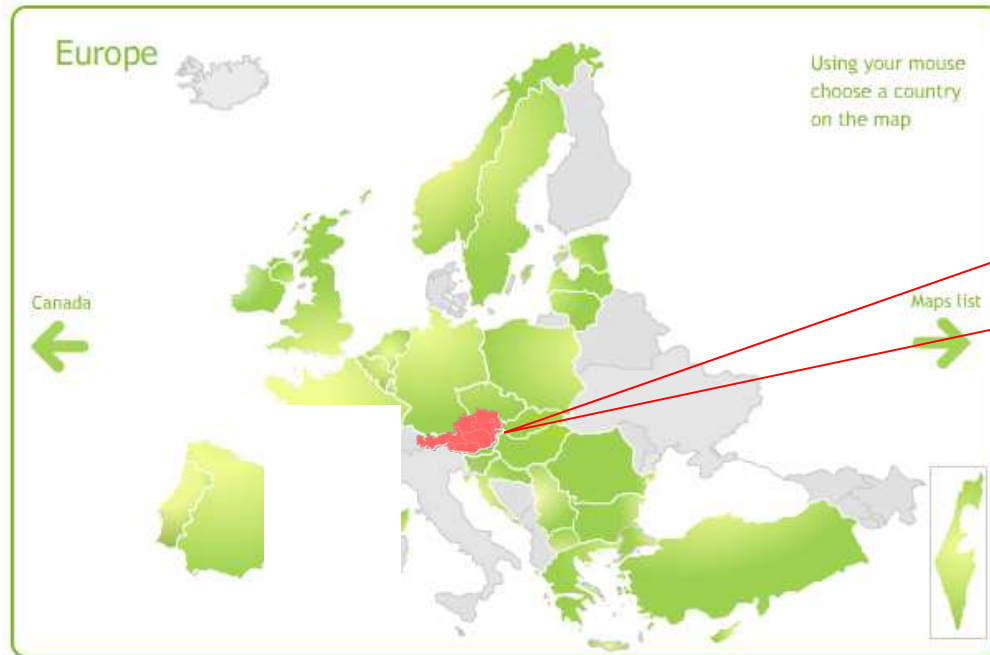
COLLECTION RATE IN PERCENT OF THE AVERAGE WEIGHT OF EEE



Source: Eurostat 2014



AUSTRIA



Capital: Vienna
Area: 84,000 km²
Population: 8.2 million
GNP2013: 313 billion €
(38 K€ per capita)

Total Waste Generation:	49 million t
(81 million m ³)	
Household waste (MSW):	3.1 million t
(25 million m ³ , 380 kg/cap.a)	
WEEE collected	75.000 t
(ca. 9 kg/cap. pa)	



WEEE MANAGEMENT IN AUSTRIA

- 4 competitive compliance systems (PRO) in place, of which 2 are profit oriented
- Collection through municipalities, retail chains, stores, producers, waste operators
- WEEE volumes collected in 2013: 75.000t, ca 50 % of EEE put on the market
- Ca 9 kg WEEE collected per capita
- Ca 100 companies or 30% of volume audited in 2013



OBLIGATIONS FOR MANUFACTURERS AND IMPORTERS

- ✓ Join a authorized compliance scheme PRO)
- ✓ Marking their products with the crossed over waste bin

- ✓ Register as a manufacturer
- ✓ Providing an area-wide collection system
- ✓ Reporting amounts of EEE put on market
- ✓ Reporting WEEE collected
- ✓ Ensuring treatment of WEEE according to the legal standards



transferred to PRO
authorized by
Ministry

- ✓ Reports quantities put on the market to PRO per month/quarter
- ✓ Pays the resulting fees (per weight or per piece) to PRO per m/qu

Obligations of retailers:

- ✓ Take back used devices on a 1:1 basis (take back one used similar device when a new one was sold)



TASKS AND RESPONSIBILITY OF PRO

- PRO achieves authorization from Government if legal requirements are fulfilled:
 - maintains nationwide collection organisation through contracts with municipalities , waste operators, retailers etc
 - transparent calculation, equal treatment contracts
 - Ministry approved prices
 - sufficient reporting and auditing system

- PRO takes over all obligations from the obligated manufacturers or importers

- PRO informs consumers



TASKS AND RESPONSIBILITY OF PRO (cont)

- PRO organizes and finances the environmentally sound collection and treatment of WEEE according to its market share (compensate municipalities, waste operators and recyclers)
- PRO reports
 - regularly amounts of EEE put on the market by its customers (quarterly report)
 - amounts of WEEE collected by PRO (monthly report) to the official clearing house
- PRO submits to yearly audit by Ministry



TASKS AND RESPONSIBILITY OF MUNICIPALITIES

- Establish WEEE collection facilities for consumer for free of charge drop off
- Ensure orderly collection and storage per category
- Inform consumer
- Hand over collected WEEE to PRO facilities or take care of legal collection directly
- Report to PRO and Government Authorities



WEEE FINANCING, COLLECTION AND RECYCLING



FINANCIAL IMPACT IN AUSTRIA

Total Collection and Recycling	quantity p.a.	t	76.000
Total industry payments ca	p.a	€	16-18 Mio

Impact on EEE (per unit):

Medium size Washing machine (8-35 kg)	€	0,16
Medium size refrigerator	€	6,00
Medium size TV (25 kg) € 0,19 per kg	€	4,75
Mobile phone (200g) € 0,036 per kg	€	0,072

Source: ERA, Austria



BENEFITS FROM THE WEEE REGIME IN AUSTRIA

- Before 2005
 - WEEE Treated as shredding material like cars
 - Little recovery of non ferrous components
 - No recycling of WEEE plastics
- Since implementation of WEEE regulation
 - Better resource recovery
 - Development of a small but vital and highly specialized WEEE recycling industry (>20 new plants, approx. 200 new jobs)
 - Increased industry support for recycling projects
 - Growth of organized reuse efforts



SOME LESSONS LEARNED IN AUSTRIA

- handover from collection agents to systems not mandatory (depends on material market prices)
- EU definitions difficult to apply (dual usage etc)
- Illegal shipments (documentation of working order)
- Amount of reuse difficult to define
- Weight change issue (weight of new equipment is lower (payment base), weight of old equipment is higher (cost base))

