



Development of Legal Framework for ESM of E-waste including EPR Industry WEEE Policy Recommendation

Monina De Vera

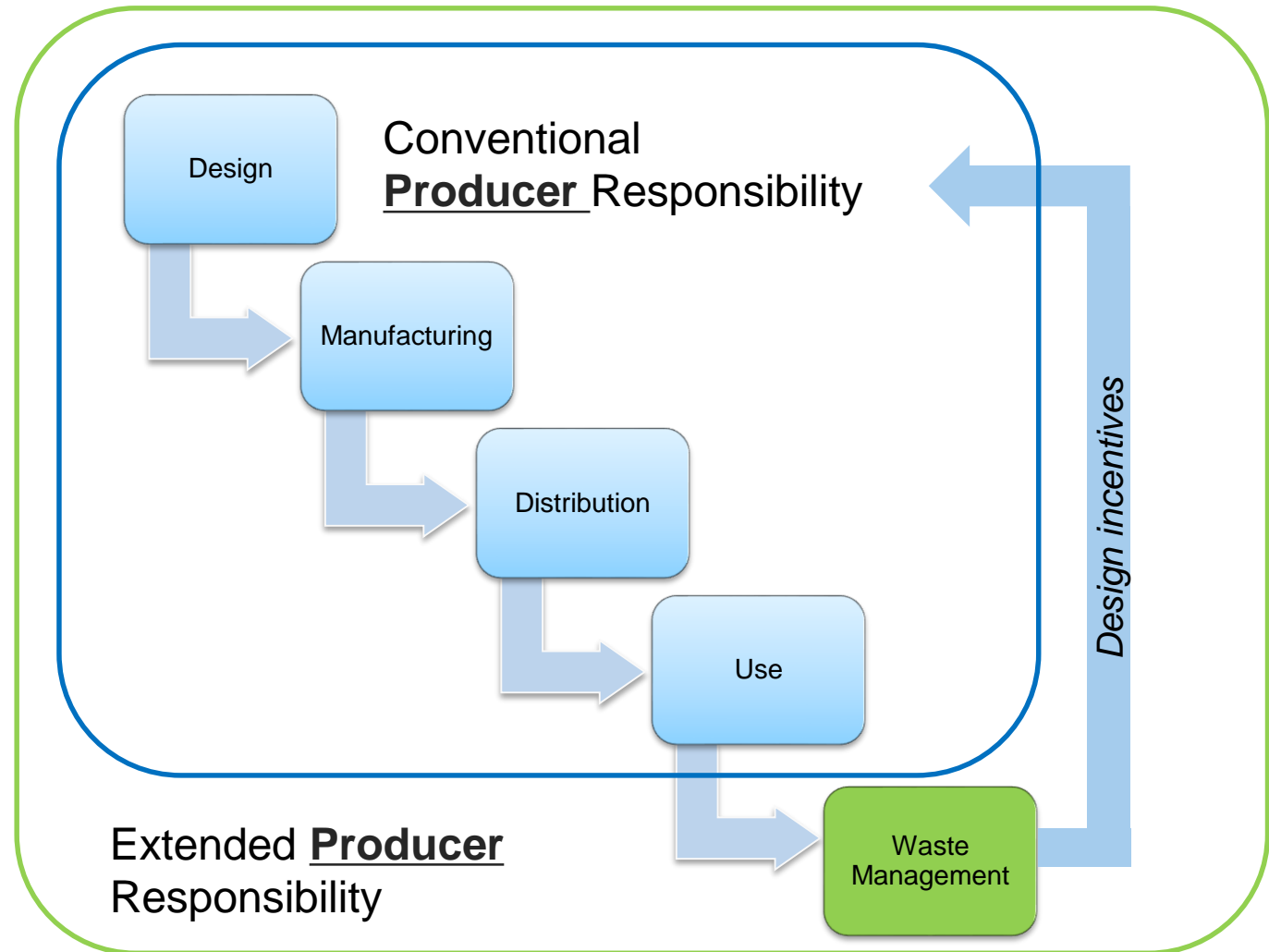
On behalf of ICT SEA Group

Take Back Strategy Manager, HP Asia Pacific Pte Ltd

EPR in principle

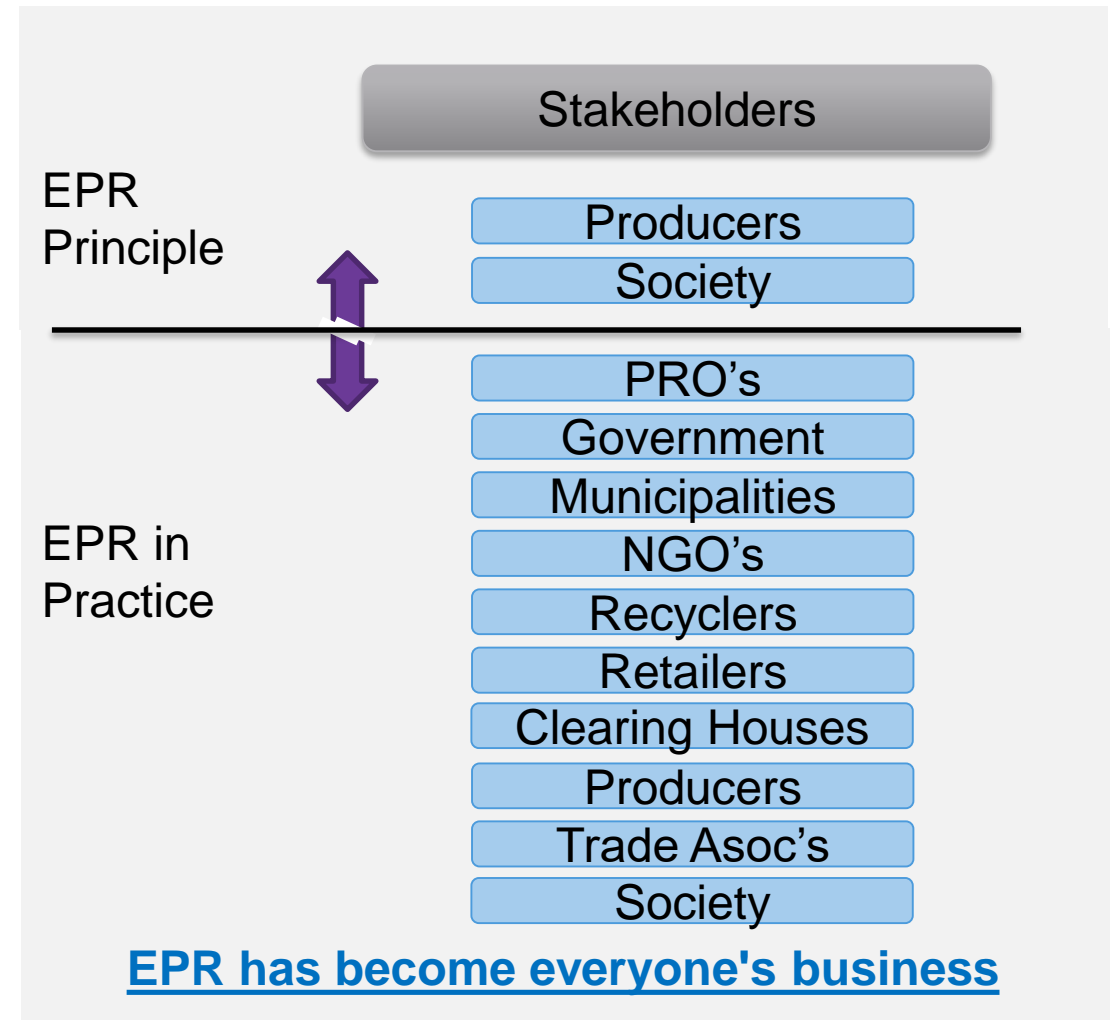
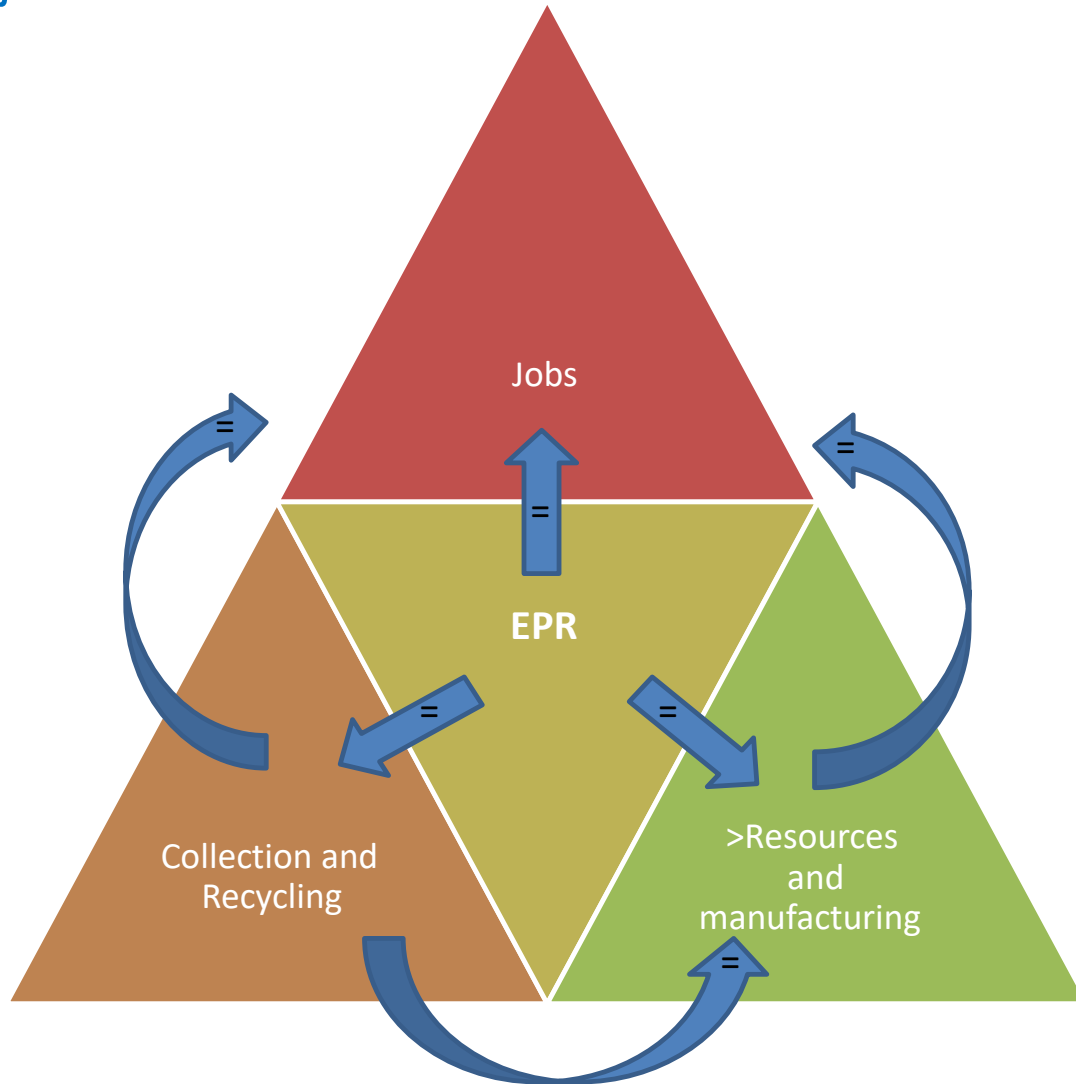
An environmental policy approach in which a producer's responsibility for a product is extended to the post-consumer stage of a product's life cycle.

**EPR is about
landfill avoidance
and
Design incentives**



EPR in practice

Is seen as a mechanism (solution) to finance collection, recycling, stimulate industry, and create jobs.



The Paradigm Shift



From e-waste...

...to resources

What is E-waste?

ELECTRICAL 50%

30% Large and Small Domestic Appliances (excluding Refrigerators)

20% Refrigerators

Source: EMPA Swiss Federal Laboratories for Material Testing & Research



E-waste: 40-50M tons produced WW annually
Source: UNU

E-waste: The Fastest growing waste stream
Source: UNU

ELECTRONIC 50%

15% DVD/Players, CD players, radios, Hi-Fi's and other Consumer EEE

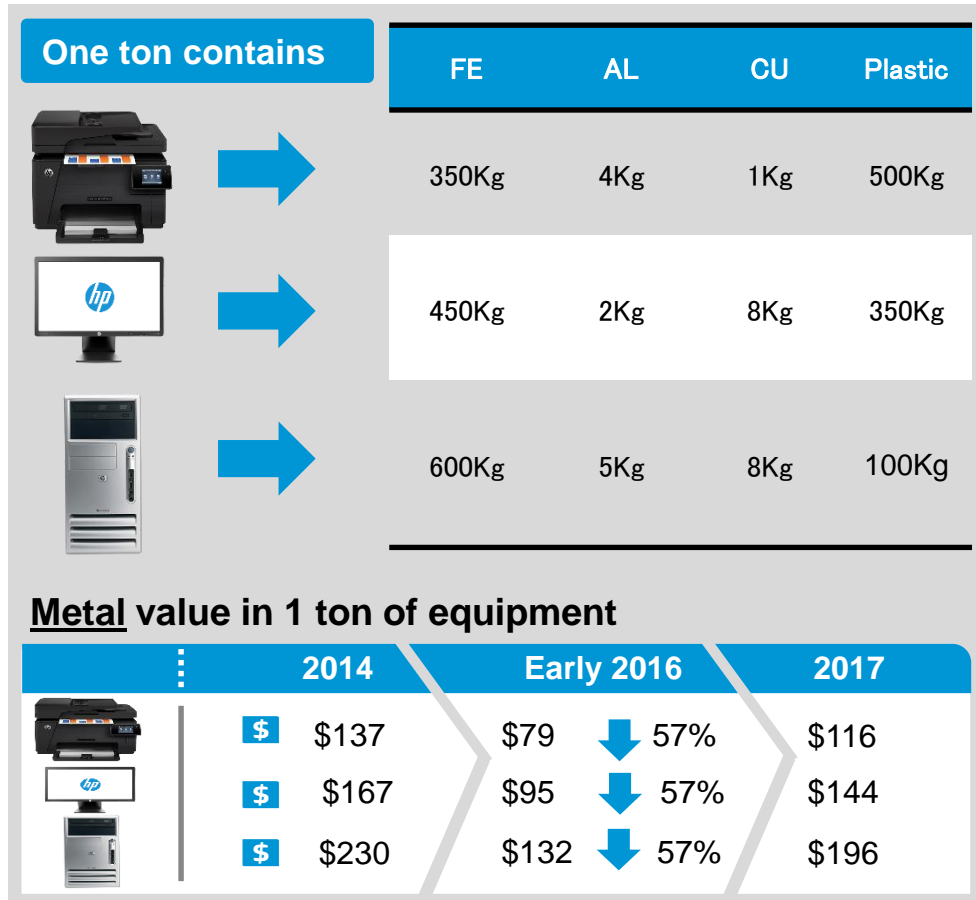
15% Computers and other IT (excluding Monitors)

10% Televisions

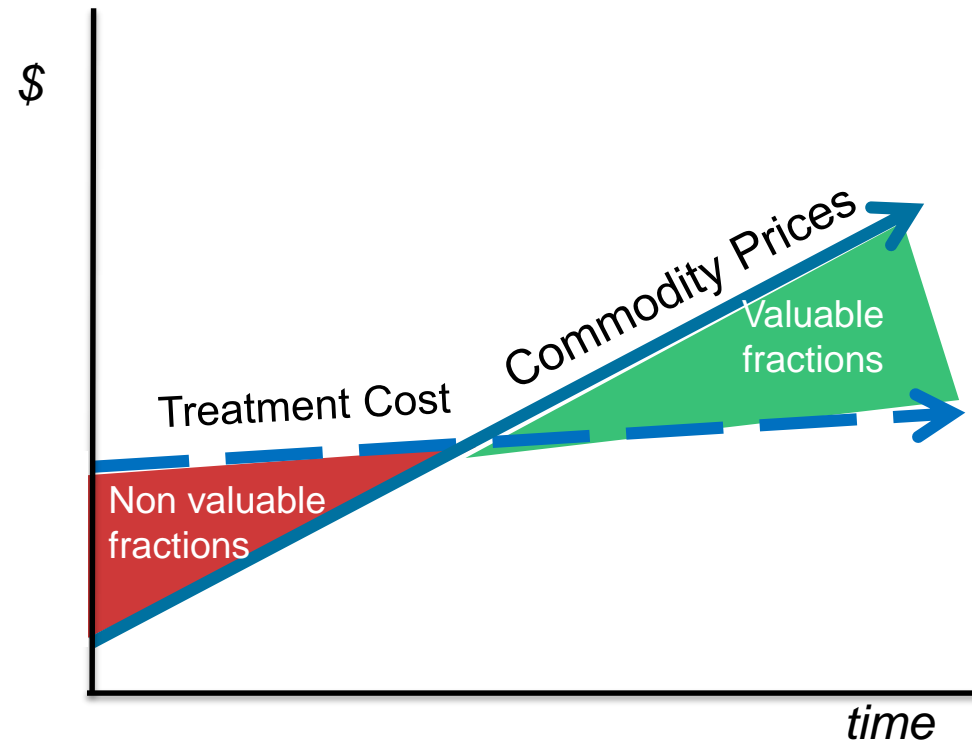
10% Monitors

General experience across the globe

IT-waste has value



Material trends and treatment costs



Source: HP

All WEEE Flows and e-waste economics

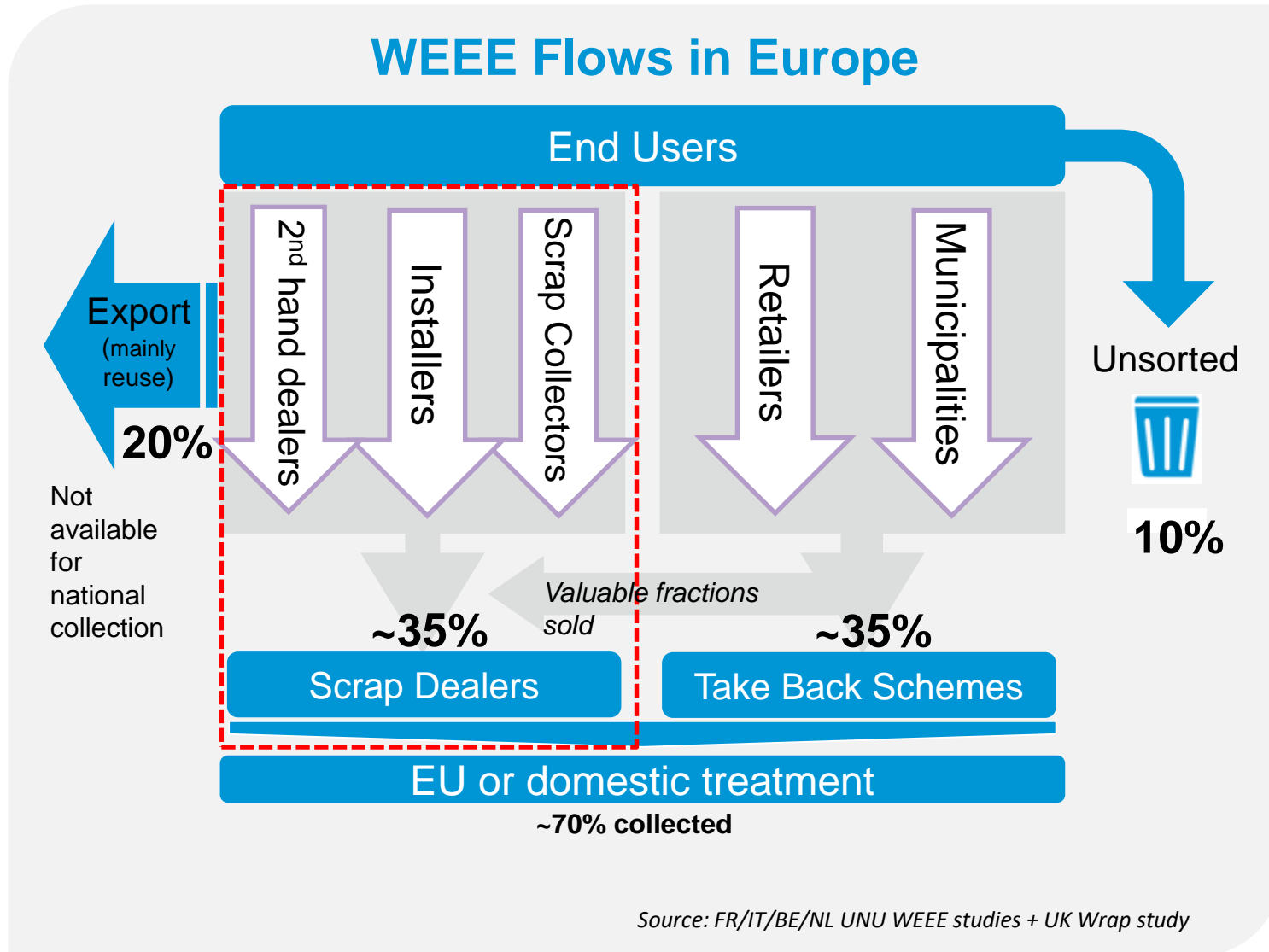
Recyclers prices when WEEE delivered to Recycling Facility (excluding transport) (Germany Jan 2017 prices)

Product Category	From	To
Large Domestic Equipment*	-95€/t	-50€/t
Cooling Equipment*	110€/t	160€/t
Televisions/Monitors (only CRTs)*	55€/t	90€/t
Mixed IT CE and Small Household Equipment (without CRTs)*	-80€/t	-50€/t

...when recycled by specialists

* Data from EUWID (overview of the German Recycler Market): <http://www.euwid-recycling.de/maerkte.html>

A lot of e-waste is collected without Producer intervention



- Many types of e-waste has a residual material value
- In most countries there exists a collection network driven purely by market forces
- In Europe this has led to what we call as **parallel/complimentary flows**
- Failure to capture information on these flows has led to low “official” collection rates

Examples from across the world



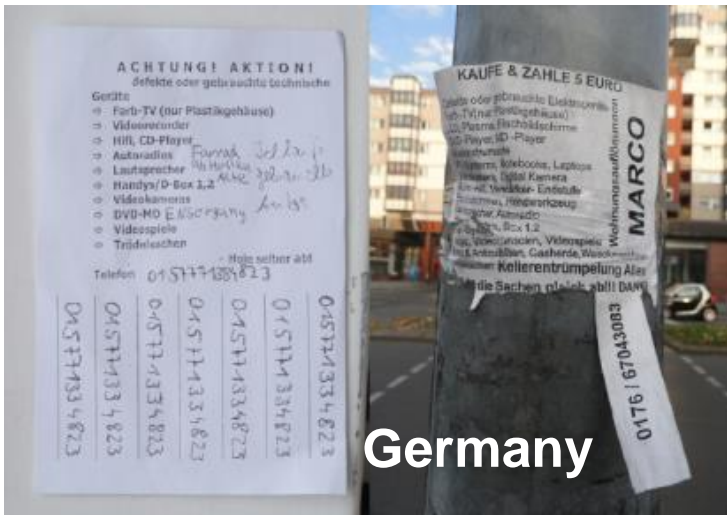
UK



Pakistan



Brazil



Germany



Ghana



Bulgaria

Examples of scrap metals market trading

FOR GOLD RECOVERY -14+
Motherboards 85+ audio,



1,09 AUD

eBay.au Shop

DETAILS

see offer

Scrap Metal fridges and old
car



150,00 AUD

eBay.au Shop

DETAILS

see offer



Computer Boards Scrap Gold
recovery 7.2lbs pins precious

\$24.99 Buy It Now



koosha077

13 - 14lb Computer Electronics
Scrap Boards For Precious Metal

ss 31.68 Buy It Now



computer scrap

EMIRATES METALS S.R.L.

EUR 250-4000 / Metric Ton

25 Metric Tons (Min. Order)



Computer Motherboard
Scrap , computer ram scrap

DONTHAI TRADING

US \$300-350 / Metric Ton

25 Metric Tons (Min. Order)

Policy recommendations

To set or not to set a collection target?

If there is

- good collection infrastructure,
- mandatory recycling standards,
- allocation of waste arising,
- an obligation for all waste arising to be treated,
- all actor participation and
- proper enforcement

then collection targets may not be needed

Focus on



Recycling Standards



Enforcement

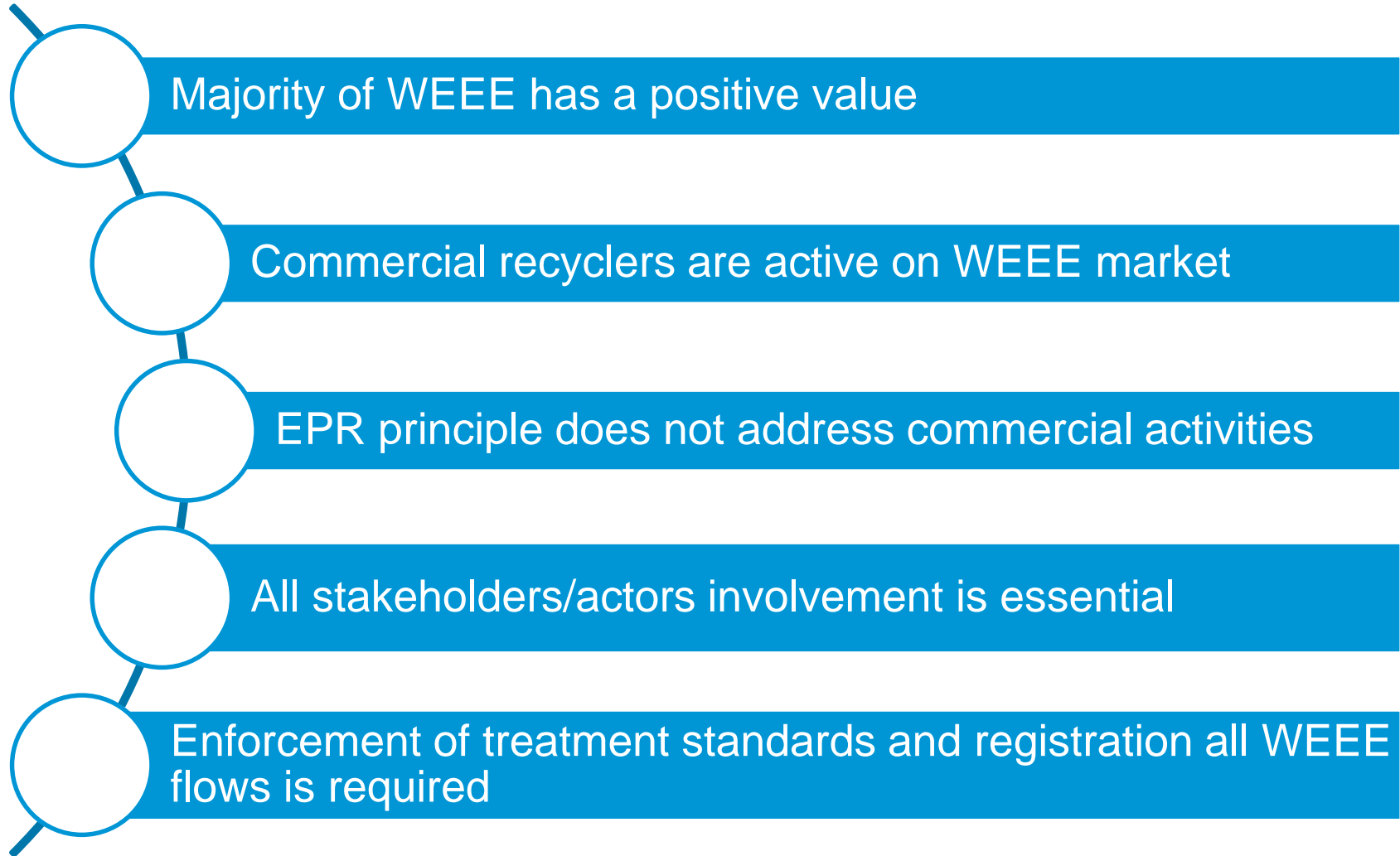


Consumer Awareness



All Actors

Conclusion



Thank you



Policy recommendations

To set or not to set a collection target?

In case targets are deemed necessary then...

SET TARGETS

Based on actual WEEE generated (available for collection)

- Minus exports new products
- Minus exports of used equipment for second hand


= Net e-waste Generated



MEASURE ACHIEVEMENT

Based on all e-waste treated by certified recyclers

Collected by:

- Municipalities/Retailers
- Producers self collection
- Approved arrangements
- 3rd parties
 - Recyclers
 - Asset mgt co's
 - Scrap Dealers


= Total Treated

The Approach to Recycling Differs Depending on the Product

- For example, TV & PC differ substantially as shown. So are White goods.

		TV	PC
Collection factor	Collection style	B2C	B2B
	Life cycle	Long (15–17 yrs)	Short (6–8 yrs)
	Reuse rate	Low	High
Cost factor	Logistic cost	High (30kg / unit)	Low (1kg / unit)
	Recycling cost	High (less metals)	Low (Rich in metals)

How to take responsibility of a scheme, & manufacturers' responsibilities differs by product characteristics.