

CURRENT TRENDS OF E-WASTE MANAGEMENT

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CONTENTS

- **Introduction to BIR**
- **Environmentally Sound Management of Computing Equipment**
- **Obstacles to Environmentally Sound Management of Computing Equipment**
- **Future challenges**

THE WORLD FEDERATION OF RECYCLING INDUSTRIES

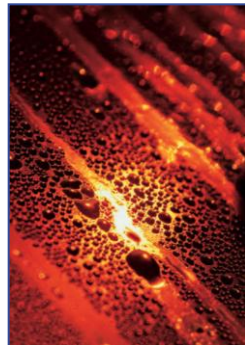


- Almost **900** companies and national federations
- In **72** countries worldwide

A DIVERSIFIED COMMODITY STRUCTURE

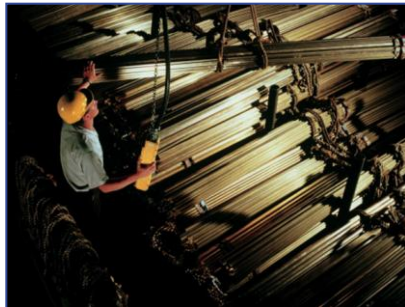
4 Commodity Divisions:

- Ferrous metals
- Non-ferrous metals
- Paper
- Textiles

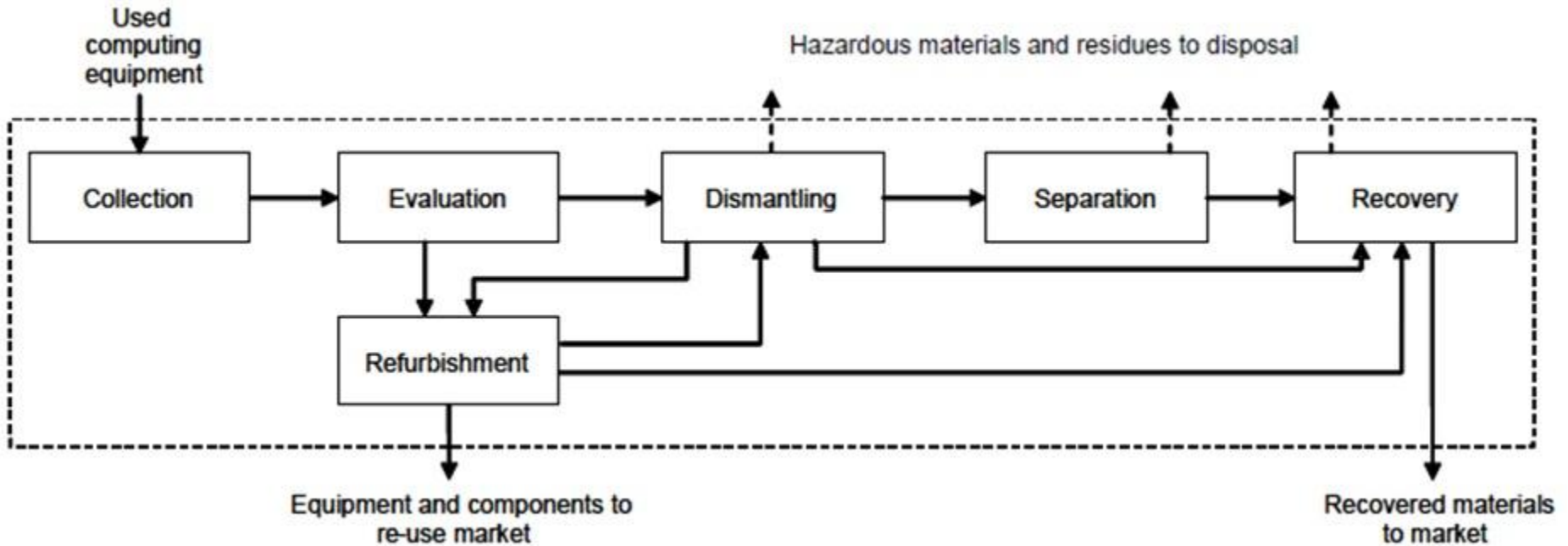


4 Commodity Committees:

- Stainless steel & special alloys
- Plastics
- Tyres
- e-Scrap



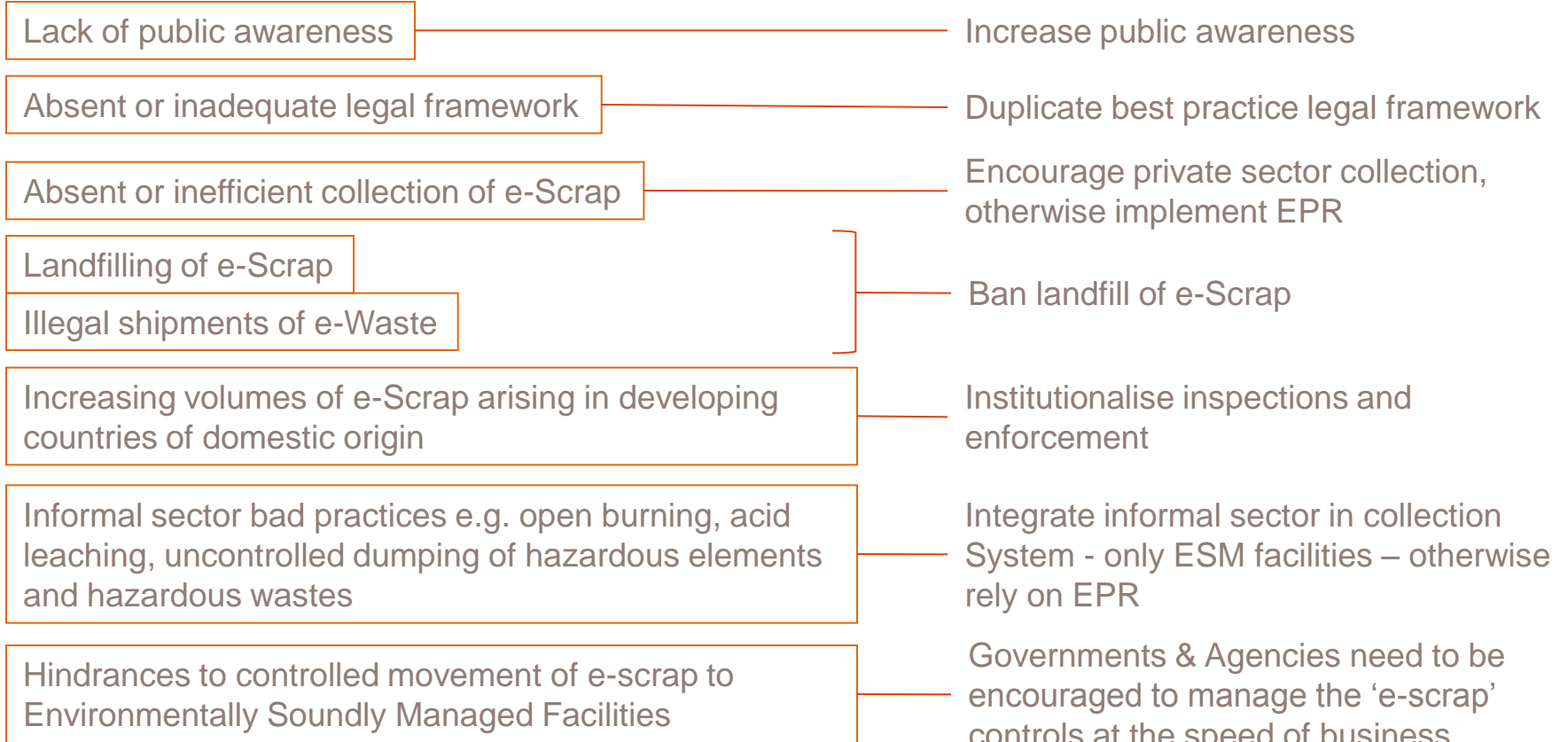
ENVIRONMENTALLY SOUND MANAGEMENT OF COMPUTING EQUIPMENT



INFORMAL SECTOR COLLECTION & PROCESSING



OBSTACLES & POSS. SOLUTIONS TO ENVIRONMENTALLY SOUND MANAGEMENT OF COMPUTING EQUIPMENT



INCOMPLETE LIST OF HYDRO- & PYRO- METALLURGICAL FACILITIES PROCESSING CIRCUIT BOARDS

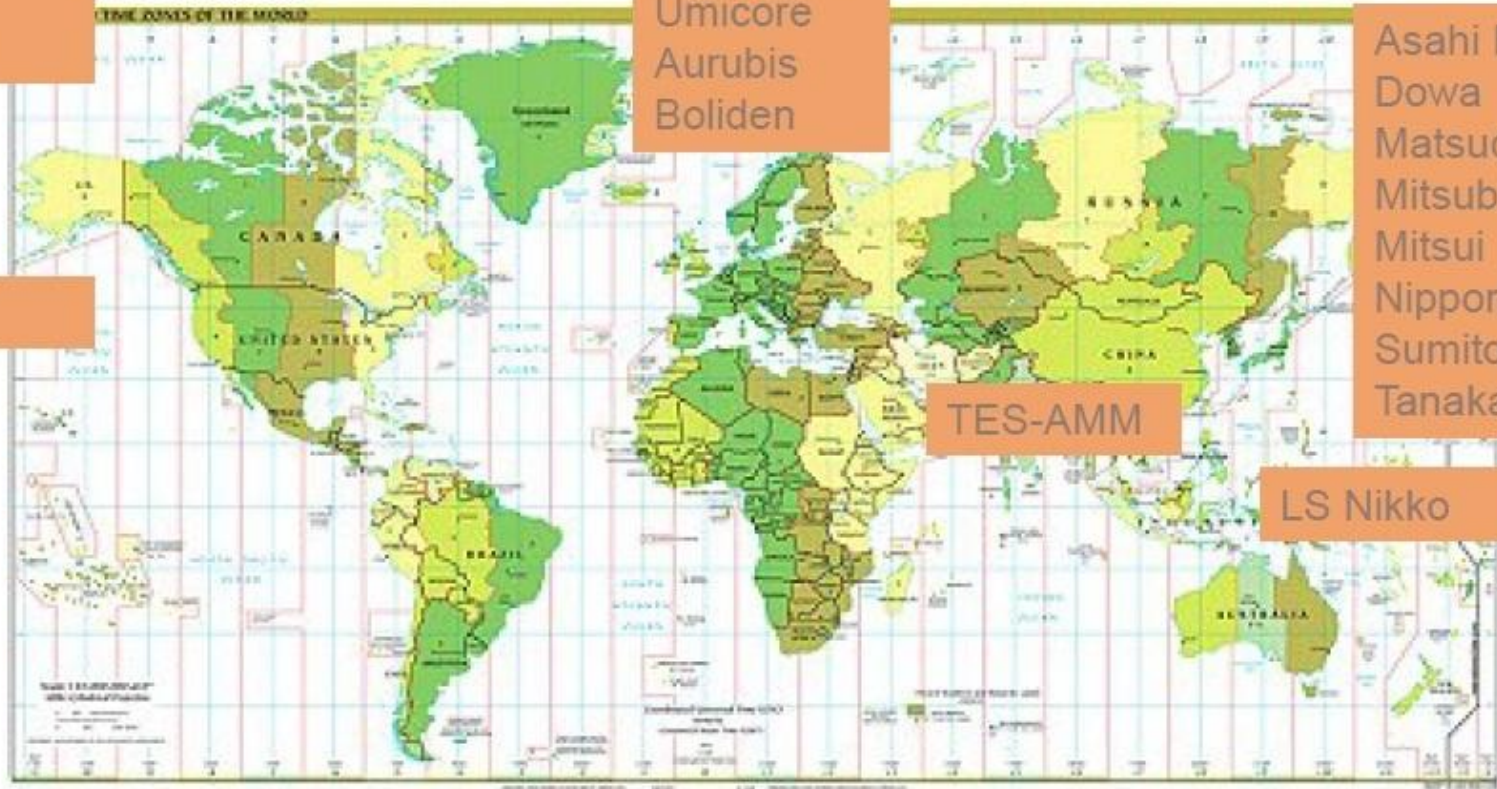


Teck
Xtrata

Terranova
Umicore
Aurubis
Boliden

Asahi Pretech
Dowa
Matsuda
Mitsubishi
Mitsui
Nippon JX
Sumitomo
Tanaka

Sipi



POTENTIAL FOR RECYCLING CRITICAL METALS – RARE EARTH ELEMENTS



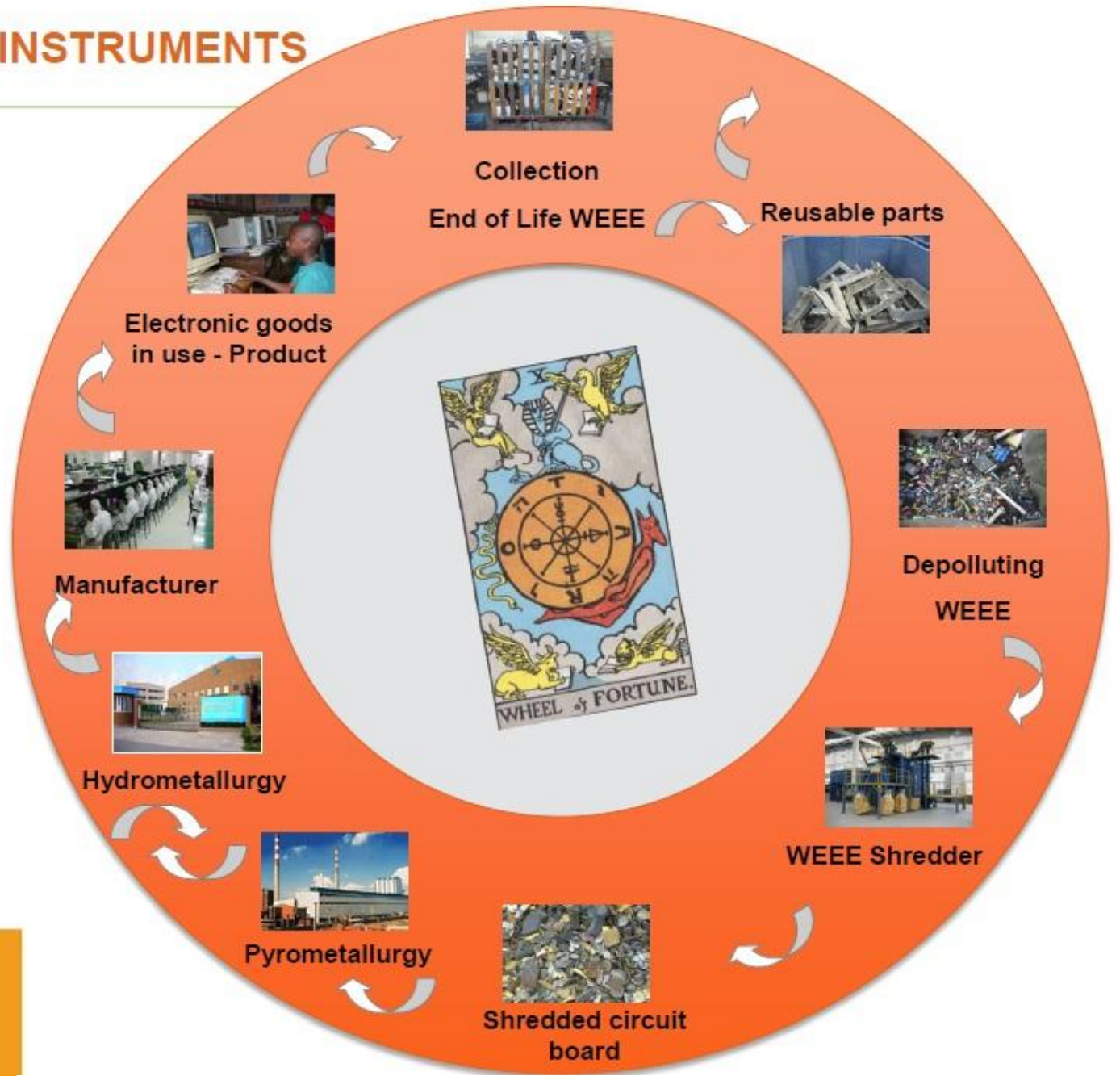
1 H																	2 He
3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne
11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
55 Cs	56 Ba	*	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn
87 Fr	88 Ra	**	104 Rf	105 Db	106 Sg	107 Bh	108 Hs	109 Mt	110 Ds	111 Rg	112 Uub	113 Uut	114 Uuq	115 Uup	116 Uuh	(117) (Uus)	118 Uuo

* Lanthanides	57 La	58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu
** Actinides	89 Ac	90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr

■ <1%
 ■ 1-10%
 ■ >10-25%
 ■ >25-50%
 ■ >50%

Source : International Panel on Sustainable Resource Management of UNEP, 2010

ECONOMIC INSTRUMENTS



CONCLUSION

THE WIPO PATENT LANDSCAPE REPORT ON E-WASTE RECYCLING TECHNOLOGIES IS A VALUABLE RESOURCE FOR POLICY MAKERS TO IDENTIFY SOLUTIONS TO THE ENVIRONMENTALLY SOUND MANAGEMENT OF E-WASTE.

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