

FOCUS GROUP: MATERIALS EFFICIENCY OF THE ELECTRONICS SUPPLY CHAIN

A. KEY SECTOR TRENDS

1. Due to electronics market penetration, product innovation and reduced product lifespan, the amount of E – Waste (Waste from electronic devices) is the fastest growing waste stream in the world: the 45 Million tonnes in 2016 valued at €55 bn is estimated to reach 52,2 Million tons by 2021.
2. Appropriate waste management is crucial not only because it mitigates environmental impacts but also because it provides savings of critical materials - WEE scrap metal content can be higher than ore - and because it reduces price volatility of these same critical materials.
3. Revenues of waste recycling are moderate due to the (still) low recycling rate of electronic wastes (still in the 2 to 3% globally) and to the (now) reducing content in expensive metals (be gold, silver. or cobalt and rare earths).
4. Costs of waste recycling are high due to (still) inefficient collecting schemes and (now) stricter and ever changing environmental compliance regulations.
5. Scrap processing is not always seen as an opportunity by public authorities even if the integration of the informal sector has proven to be very effective through higher collection rates also for the formal recyclers (examples of India or Ghana).

B. MATERIALS EFFICIENCY SOLUTIONS AND GOALS

1. «Practical solutions » for the roadmap towards « Smarter, Less and Longer» have emerged from the discussion:

Smarter:

- Higher energy efficiency: with the same battery capacity (4000mAH), the energy consuming of the new Huawei smartphone (mate 20) is decreased for 30% compare to the old version(mate 10), so that means the battery autonomy is increased for 30%.
- Regionalization of supply chains to make them cost and energy effective (project SRI in Africa)

Less:

- Reduced usage of critical materials thanks to recycling of e waste (example of Wisetek recycling 314,730 servers and recovering 78T of metals of which 71T of steel, 5,2T of aluminium and 1,5T of copper).
- On going research at Apple, Samsung and Huawei to design new smartphone and make them both thinner and easier to disassemble with a limited number of raw materials used
- Reuse of refurbished parts for manufacturing of new products.

2. Goals of Materials Efficiency shared by Focus Group speakers

- Less and Longer in 2035 (used ICT): collect and recycle or reuse 80% of used ICT as soon as stakeholders (International organizations such as EEC, Big Cities, OEMs..) are creating framework conditions allowing a sustainable recycling industry to grow - see EEC funded project SRI in Africa or Chinese strategy to increase copper content of imported electronic and electric wastes.

SPEAKERS

Greg Mulholland - CEO Citrine Informatics (USA) - WMF Grand Prix 2017 - Chair
 Shi Weiliang - General Director Huawei France (China) -
 Harry Lehmann - Deputy MD, German Environment Agency (Germany)
 Bas de Leeuw - MD, World Resources Forum (Switzerland)
 Rebecca Gordon - Head of Non Ferrous Metals CRU (UK)
 Zack Boorstein - Senior VP Wisetek (USA)

Moderator: Jean-Bernard Guerrée, Partner Eurogroup