



1. What is e-waste?

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WHAT IS E-WASTE?

E-waste is a term used to cover all items of electrical and electronic equipment (EEE) and its parts that have been discarded by its owner as waste without the intent of re-use (Step Initiative 2014). It is also referred to as WEEE (Waste Electrical and Electronic Equipment), electronic waste or e-scrap in different regions. E-waste includes a wide range of products, – almost any household or business item with circuitry or electrical components with power or battery supply.

Basically, EEE can be classified into the following six categories and therefore also e-waste:

- Temperature exchange equipment. Also more commonly referred to as, cooling and freezing equipment. Typical equipment is refrigerators,

freezers, air conditioners, heat pumps.

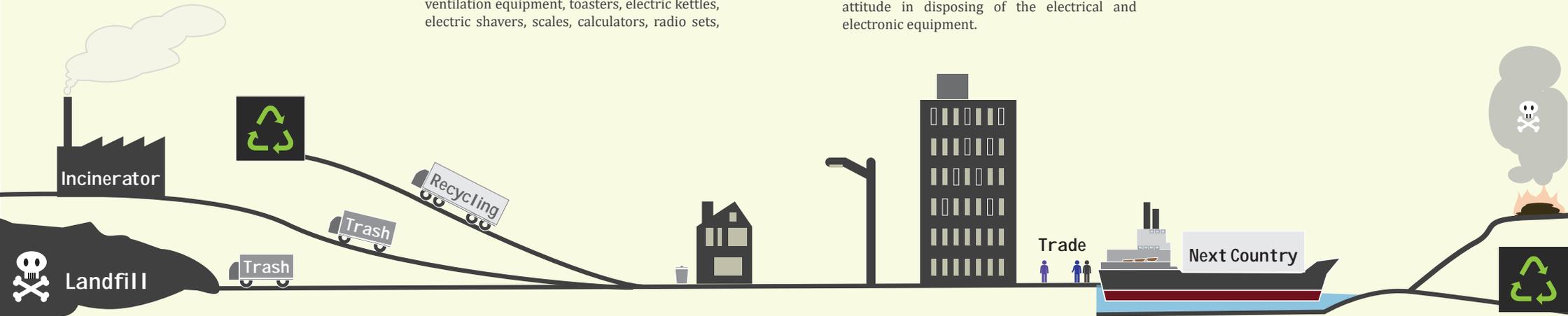
- Screens, monitors. Typical equipment comprises televisions, monitors, laptops, notebooks, and tablets.
- Lamps. Typical equipment comprises straight fluorescent lamps, compact fluorescent lamps, fluorescent lamps, high intensity discharge lamps and LED lamps).
- Large equipment. Typical equipment comprises washing machines, clothes dryers, dish washing machines, electric stoves, large printing machines, copying equipment and photovoltaic panels.
- Small equipment. Typical equipment comprises vacuum cleaners, microwaves, ventilation equipment, toasters, electric kettles, electric shavers, scales, calculators, radio sets,

video cameras, electrical and electronic toys, small electrical and electronic tools, small medical devices, small monitoring and control instruments).

- Small IT and telecommunication equipment. Typical equipment comprises mobile phones, GPS, pocket calculators, routers, personal computers, printers, telephones).

For each category, its original function, weight, size, material composition differ. These end-of-life attributes determine that each category has different waste quantities, economic values, as well as potential environmental and health impacts through inappropriate recycling. Consequently, the collection and logistic means and recycling technology are different for each category in the same way as the consumers' attitude in disposing of the electrical and electronic equipment.

The environmental issues associated with e-waste arise from the low collection rates, because the final owner either stores equipment in drawers, cabinets, cellars, attics etc. or disposes those off through the normal household bins, finally ending up in incineration or land-filling. Another dimension of improper disposal is where waste ends up in the undesirable channels and destinations, such as substandard treatment in developing countries. In an ideal case, optimum resource efficiency and low environmental impacts can be reached when e-waste is collected and treated in the state-of-the-art facilities. However, imperfect disposal scenarios existed and still exist, and cause the e-waste problems nowadays.



Temp. Exchange eq.

Screens

Lamps

Large Equipment

Small Equipment

Small IT