

A more sustainable material use, actions needed

- 1 "Sooner or later everything becomes waste"
- 2 "Zero does not exist"
- 3 Risk = Hazard * Exposure



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Material resource efficiency can improve

- **< 5 % of value left, Product -> Waste**
- **< 1 % of a products lifetime, it is used**
- **Someone always pay for low-cost products;
Environment, H&S and/or government subsidies**



STENA METALL GROUP

7

THE GROUP HAS
SEVEN BUSINESS AREAS

190

WE ARE LOCATED AT MORE
THAN 190 PLACES

27 391

NET SALES SEK MILLION

3 500

TOGETHER WE ARE APPROX.
3 500 EMPLOYEES

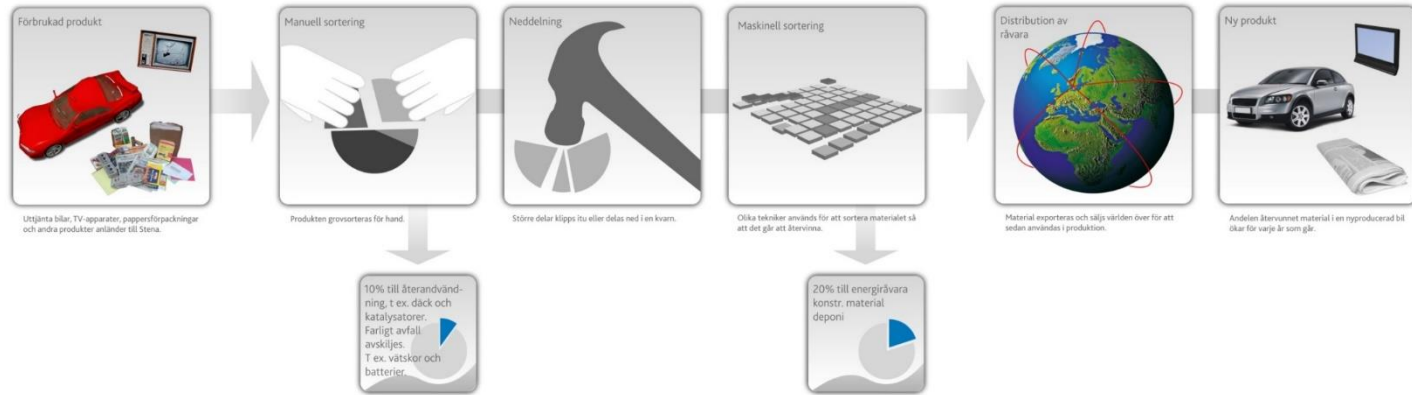
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WE OPERATE IN
TEN COUNTRIES

SIX MILLION TONS
OF RECYCLED WASTE

6

The Recycling Process



SIS, Separate – Identify - Sort

”Everything sooner or later becomes waste”

EU definition

‘waste’ means any substance or object which the holder discards or intends or is required to discard

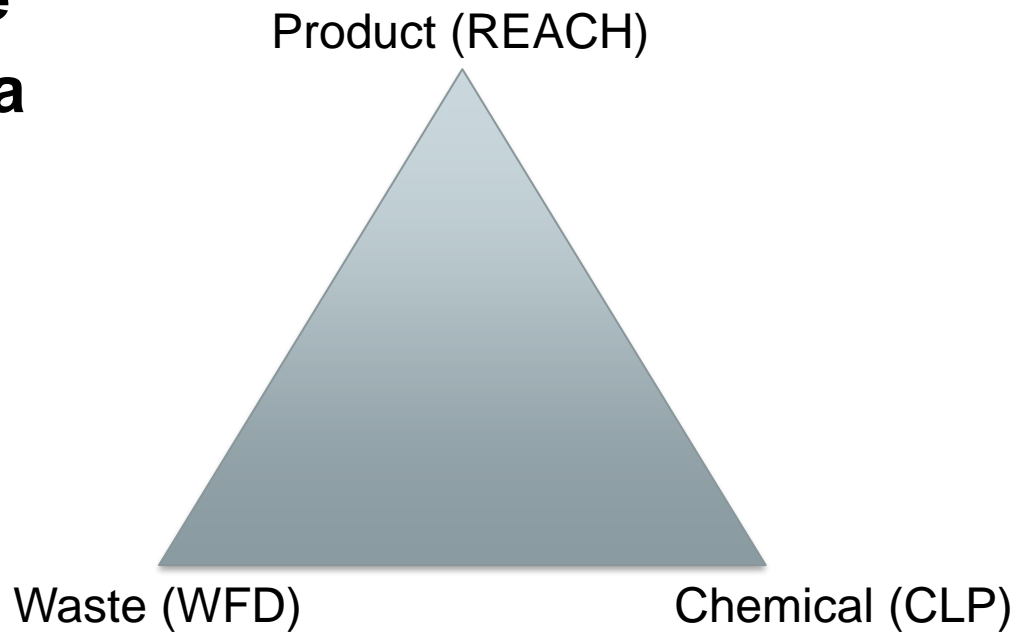
The Waste Framework Directive. It requires that waste be managed:

1. without endangering human health and harming the environment
2. without risk to water, air, soil, plants or animals
3. without causing a nuisance through noise or odours
4. and without adversely affecting the countryside or places of special interest

The precautionary principle

**Legislation for resource
efficient material use – a
gray area**

**End of waste criteria,
lacking**



**Second law of thermodynamics= "Nature
strives for maximum disorder"**

+

**> 1000000000000000000000000 atoms in one
gram of material**

+

**Analytical instrument can detect very low
concentrations**

=

~~Does not contain, Free from, etc.~~

DecaBDE (BFR)

1. Year 2008, 15 w% in heat exposed EEE plastics
2. Assume 20 % of recyclable WEEE plastics contain 15 w% decaBDE today.
3. To reach < 10 ppm decaBDE in a recyclable fraction sorting accuracy needs to be > 99.97 %. Best technologies about 95 % accuracy today

decaBDE

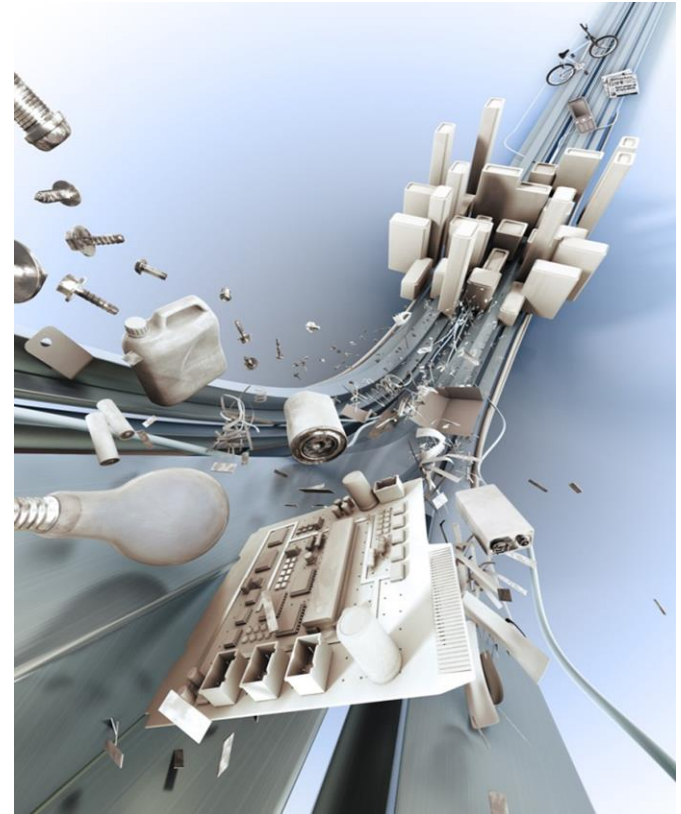
- Insoluble in water
- A solid at room temperature
- Melting temperature higher than the plastic



Take aways:

Sooner or later;

- 1 Everything becomes waste
- 2 Many presently “safe chemicals” will be classified
- 3 Society needs to accept impurities, “zero does not exist”



Questions or Comments ?

IT STARTS HERE.

