

Basic information on e-waste, materials and recycling

Elina Pohjalainen (VTT)
Katri Grenman (VTT)



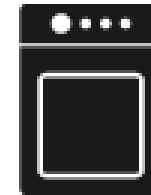
This activity has received funding from the European Institute of Innovation and Technology (EIT), a body of the European Union, under the Horizon 2020, the EU Framework Programme for Research and Innovation



AWARE 
educating for e-waste recycling

Electrical and electronic equipment are devices that function with electric current – in other words, they have a power cord or a battery.

- How many electronic devices have you used today?



What is included in electronics?

For example a smart phone can contain over 60 different elements from the periodic table!



Metals



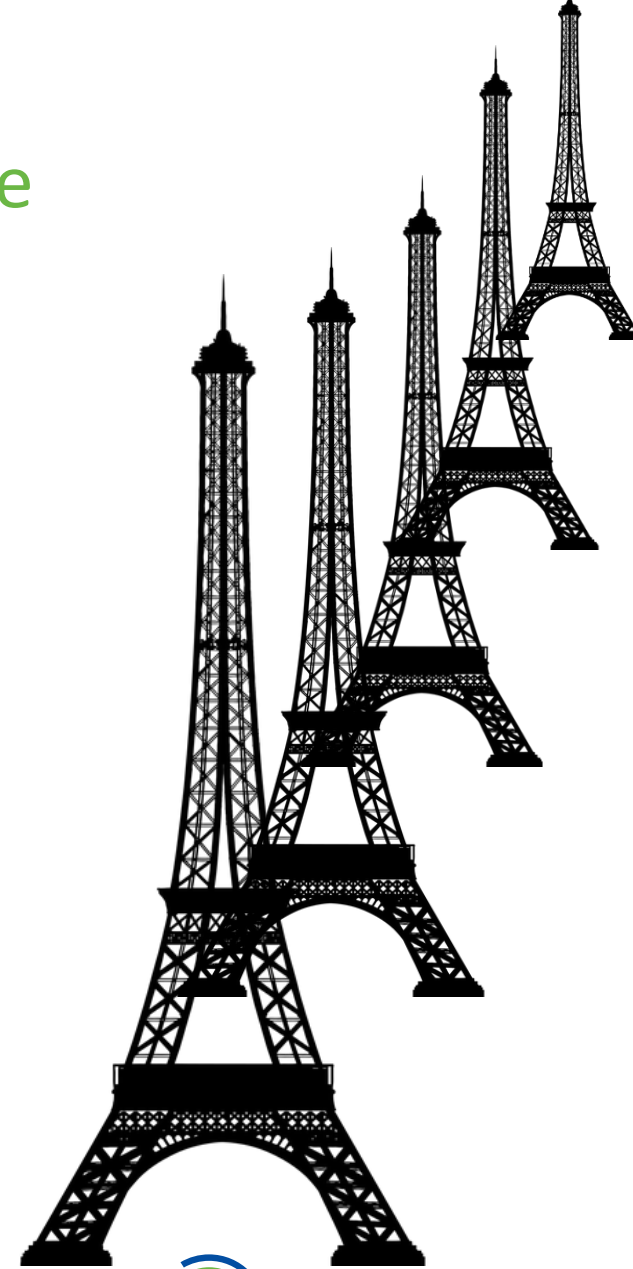
Plastics



Glass and
ceramics

When electronic device is discarded, it becomes e-waste

- The amount of e-waste generated in one year is more than the amount of 5000 Eiffel towers!
 - This means 7.3 kg of e-waste per person each year.
 - In Europe, 16.2 of e-waste is generated per person each year.



Where e-waste ends up?

- Only 20 % of e-waste is recycled globally.
- In Europe, less than 50 % of e-waste is recycled.

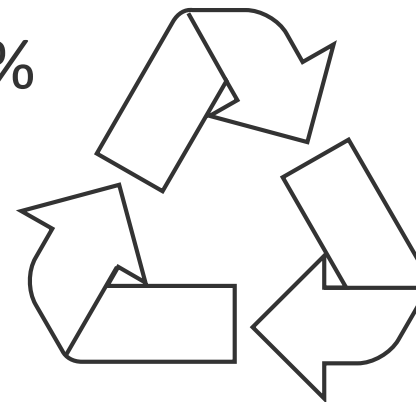
53 %



Destiny unknown



47 %



Properly recycled

The result: loss of valuable resources

- Many materials in electronics are
 - valuable
 - scarce
- Are there enough materials in the future if we throw them away?
- Gold contained in 100 smart phones is enough to produce a ring.



Electronics in everyday life

Each European household contains on average 72 electronic devices, of which 11 are broken or no longer in use.

Do you have old discarded electronics stored in your home?



Recycling of e-waste is important → valuable resources back to use!

- Do you know where is your closest e-waste collection point?



To discuss in class:

- Are there discarded cell phones or other electronics in your homes?
- Have you brought old electronics to recycling, or do you know where to take them?
- Have you ever accidentally broken your cell phone or other device? Did you buy a new one, or repair the broken device?

Supported by:



RawMaterials
Connecting matters



This activity has received funding from the European Institute of Innovation and Technology (EIT), a body of the European Union, under the Horizon 2020, the EU Framework Programme for Research and Innovation