

## TD on waste

This assignment is to be done in groups, the aim is that you discuss among yourselves the different solutions proposed in the waste collage.

1. What is a waste?
2. What is the waste management hierarchy? What is it for?

<b>Buying in bulk</b>	<i>Buying in bulk represents 109 kg/year less packaging waste (according to ADEME 2019) and 150 kg/year less food waste per person person (according to the Zero Waste Collective)</i>	<b>Do It Yourself</b>	<i>DIY refers to making a product yourself that you can product that can be bought ready-made in the shops.</i>
<b>Container-deposit</b>	<i>80% less CO2 emissions compared to the single-use bottle under the 300 km distance and 65% recycling rate. Washing a returnable bottle uses 4 times less energy than recycling it.</i>	<b>Rental / Sharing</b>	<i>Among the ten objects that sleep in our wardrobes, we have electronic devices such as a raclette machine, a waffle iron or a drill. (ZWF survey, 2018). "The average duration of use of a drill over its entire life is twelve minutes," says Benoît Akkaoui, director of the Ressourcerie des Biscottes.</i>
<b>Return to land</b>	<i>All food waste can be composted. By 2023, every citizen in France should have a solution for sorting their food waste. Indeed, 40 to 60% of the volume of our residual household waste bin is made up of organic waste and 30% in terms of mass.</i>	<b>Economy of functionality</b>	<i>The functionality economy is the offering or selling of the use of a good or service rather than the good itself. The aim is to reduce the use of natural resources and to establish a new relationship between supply and demand.</i>
<b>Repair - Reuse</b>	<i>Since 1 January 2021, a reparability index has been placed on consumer electronic products (smartphones, laptops, washing machines, televisions, etc.), in order to limit waste, move away from ultra-consumerism and encourage repair. The aim is to achieve a 60% repair rate for electrical and electronic products within five years, whereas only 40% of breakdowns are currently repaired in France, according to a study by Ademe.</i>  <i>By 2024, France plans to replace its Repairability Index with a Durability Index, whereby manufacturers will disclose not only how repairable their goods are but also describe the full lifecycle for each product.</i>	<b>Reduce waste first, recycle as a last resort</b>	<i>The recycling movement began as a worthwhile campaign for us to be more aware of the amount of waste we were producing and the amount of resources we were using to do so. Though the general concept of recycling still has great value today, this approach is an antiquated solution to humanity's ever-growing over-consumption problem.</i>
<b>Anti-food waste</b>	<i>Food waste is responsible for 10% of the waste in our waste in our bins. For the consumption phase, this represents 30 kg per person per year of loss and waste in the home (including 7 kg of uneaten food waste still packaged), to which must be added the loss and waste generated in collective or commercial catering. Added to this is the loss and waste generated in collective or commercial catering.</i>	<b>Eco-design and Obsolescence</b>	<i>80% of the CO2 emissions of a product's life cycle are determined during its design. The aim of eco-design is to limit the environmental impact of the product over its entire life cycle and to extend its lifespan, thus combating psychological and programmed obsolescence. According to ADEME, "The notion of programmed obsolescence denounces a strategy whereby a good's normative life is deliberately reduced at the design stage, thus limiting its duration of use for economic model reasons".</i>

3. Choose two solutions proposed by the waste collage (see the table above) and answer the following questions:
- What do you think of this solution?
  - Is it a solution that you already apply in your daily life? If yes or no, why?
4. Which of the proposed solutions would strongly reduce the environmental impact of your technical system? Why ?