

# Rethinking the ordinary manual toothbrush by developing a reusable handle.

**To this day, every toothbrush ever created still exists. They are found in our wide oceans, in our increasing landfills and other parts of our beautiful nature. For every year passing by, a lot of people have become more aware of how their individual behavior has a direct impact on the environment and the strive to do better has grown. By developing an alternative design of the ordinary manual toothbrush, the options on the market that enables these people to make sustainable choices are broadened.**

A huge problem in today's society is that we don't have the infrastructure to recycle all the plastics that we use. To help minimise this problem, two different concept solutions of a toothbrush with less amount of plastic has now been developed. Both solutions only use plastic in parts that are believed necessary to sustain the same hygienic standard compared to a toothbrush made completely out of plastic. The rest is replaced with the renewable raw material wood, more specifically beech.



**The two concept solutions.**

Using beech, that is a strong and common tree in Sweden, for the handle of the toothbrush while having the toothbrush head made of green plastic, the total amount of plastic used is drastically minimised and it also results in a toothbrush solely consisting of renewable raw materials. The interface created between the plastic and the wood is designed to enable replacement of the toothbrush head, which further contributes to the environmental thinking as the handle can be reused multiple times.



**Assembled final prototypes.**

In the beginning of the project, when establishing the customer needs, it was found that a replaceable toothbrush head and a sustainable toothbrush were two highly desired features from future customers. Taking this into account when discussing the prospects of the future for the toothbrush developed, these findings clearly speak in favour of a product well received on the market.