

Store it in a Backie!

Reducing food waste in Dutch households

Food waste in the Netherlands

Food waste is one of the biggest and fastest growing problem in todays’ society. In Europe, over 40% of all food waste takes place in the consumer and retail stages of the food supply chain. In the Netherlands this results to 33,4 kg of food wasted per person per year. The most problematic consumers that contribute to food waste in the Netherlands are people in the age groups of 18-40 years of age. Especially single person households, smaller households and households with younger children show more food waste compared to other demographical groups.

The following findings in literature research and target group interviews showed an opportunity in stimulating the consumption of leftovers.

- Leftovers from meals contribute most to food waste in Dutch households.
- Leftovers are being saved up due to guilt of throwing food away
- Consumers fail to identify when to consume saved leftovers or forget about their existence until it is too late.
- Leftover meals are often consumed as lunch instead of dinnertime meals, but are deemed inconvenient to bring elsewhere and thus are consumed at home primarily.

Design statement

“Reduce food waste by giving consumers the tools and opportunity to make leftover meals more valuable and versatile to use on a daily basis, by making it more user-friendly and convenient to take leftovers with them to consume in more scenarios and environments.”

The resulting product is Backie. **Backie is the ultimate on-the-go food container which should solve food waste by stimulating and enabling consumers to use their leftovers on the go more easily.** Additionally, Backie helps to **track the production date and stimulates consumption** of the leftover.



Food safety on the go

Backie has a wide array of functions and possibilities integrated in the design to make it more capable in battling food waste than other food containers. Backie is not only the place to store leftovers and prolong their freshness for consumption, but also enables the user to consume their leftovers in a broader possibility of scenarios and makes it easier to use leftovers for lunch.

Backies’ multiple layered design creates a volume of air between the silicone bowl (dark grey) and the outer shell (white), which acts as a natural insulation layer.

Below the silicone bowl is space to place a cooling element, the so-called ‘Icepackie’ (green). Which should ensure refrigeration even when the Backie is not in a fridge. This helps to maintain a cool environment during transportation up until consumption during lunch, even when the workplace or university has no ammenities like a fridge to store the leftover in. These features improve food safety and reduce the amount of leftovers being discarded.

Easy preparation of the leftover

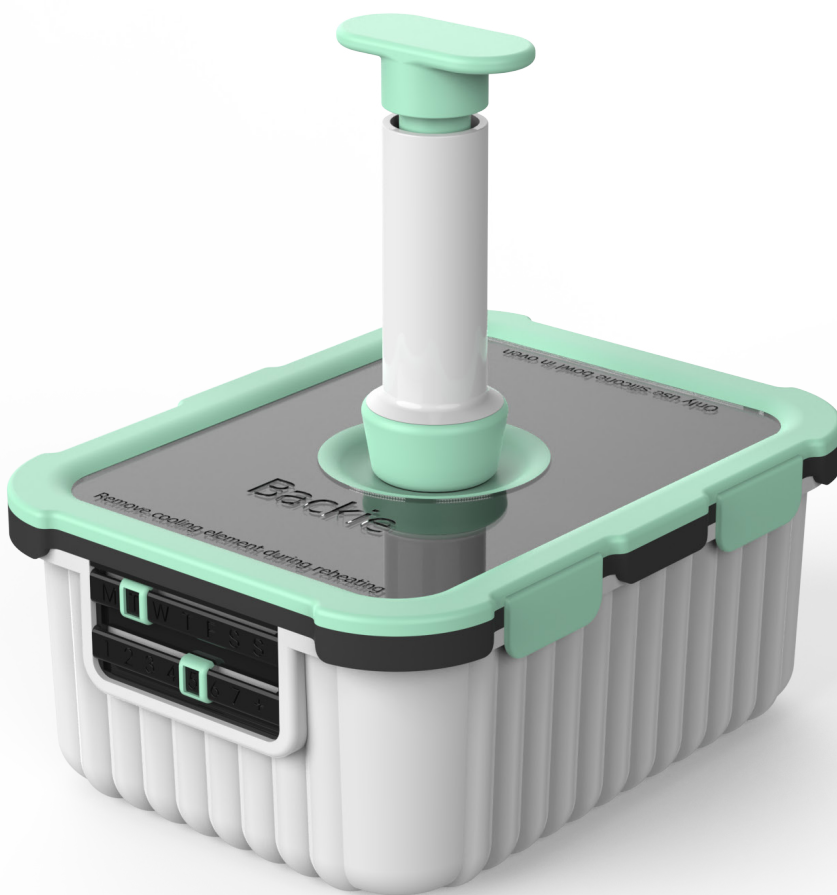
Backie is safe to use in the microwave after removal of the cooling element. The silicone bowl in which the leftover is stored can be used in the oven, making multiple reheating options possible to the preference of the user.

Additional to the reheating qualities of Backie, it includes cutlery in the bottom of the white shell for an all-in-one solution.



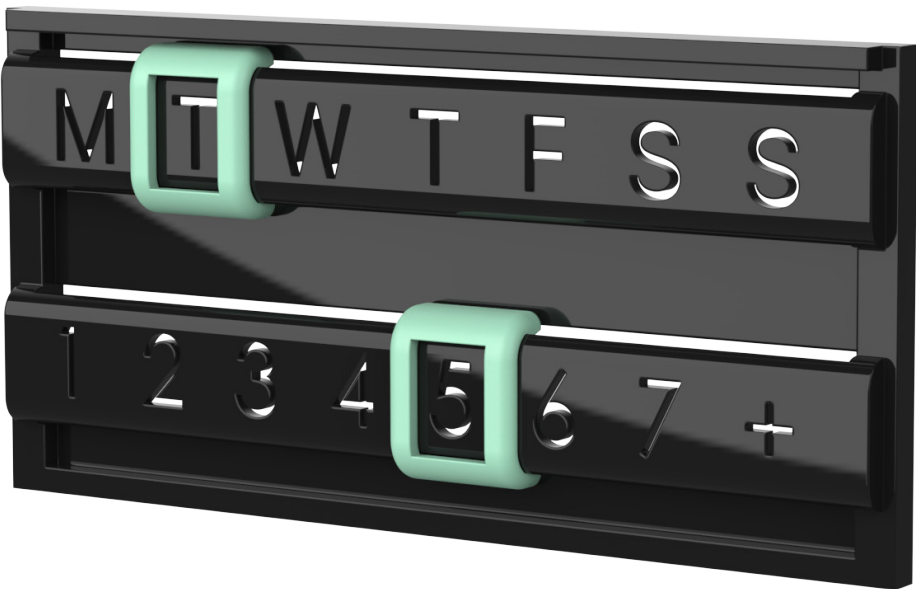
Prolonging leftover quality

Backie includes a vacuum function to preserve the leftover for longer. By removing oxygen from the food container, the amount of days the leftover is safe for consumption increases as growth of bacteria and fungi is reduced. As the leftover is safe for consumption for an extended amount of time, the amount of opportunities to eat the leftover increases and thus reduces the chance that leftovers get thrown out due to spoilage.



Tracking leftover freshness

The date tracker is integrated in the outer shell of Backie. Users can use the two sliders to mark the date on which the leftover was (originally) made and indicate the assumed amount of days for which it should be safe to eat. This feature has a high-contrast colour scheme to grab attention during storage in the fridge. The date slider should help to identify the freshness and resolves the problem of forgetting when the leftover was made.



Tom van Veldhuisen
Flexible cooking - Backie
16-08-2024
Integrated Product Design

Committee
H.N.J. Schifferstein (chair)
M.C. Haans (mentor)

Company
Wageningen University & Research

