

## Can research give us a plastic-free society?

Every year, 400 million tons of plastic are produced. 12 million tons of the plastic end up in the sea. Orkla and NHH's research project shows how research can give us less plastic, a cleaner environment and at the same time create new jobs.

The research project SustainX explored how they could create Zalo-like products without plastic and how they could design away the waste. (Photo: På(fill))

According to a report from 2020, 97 percent of the resources consumed in this country are not circulated back into the cycle. Norway is far behind many European countries in this area. At the same time, plastic production is increasing every year.

Research and innovation are important for solving today's societal challenges. An example of this is the research project SustainX led by NHH, in collaboration with Orkla Home and Personal Care, Inland Norway University of Applied Sciences and the company Carrot. The goal was to find smart ways to take care of the environment, such as producing less plastic and becoming better at handling garbage.

The project ran from 2019 to 2022 and has received NOK 9.5 million in funding from the Research Council of Norway.

"We can change behaviour in the kitchen, but that's not where we create a sustainable society. To create a sustainable society, we depend on companies to find new and innovative solutions that can help consumers live more sustainable lives. It has to happen big, scaled, in companies – on a large scale! Such solutions are needed across all product and service categories", says Lars Jacob Tynes Pedersen, professor at NHH and project manager for SustainX.

### Making green choices attractive and easy

Orkla, a leading business actor in the Nordic market, initiated the collaboration with a research team to explore opportunities to reduce the use of plastic in its products. This initiative was driven by a vision to make Orkla plastic-free, or at least reduce the use of plastic.

"We explored how we could create Zalo-like products without plastic and how we could design away the waste. At the same time, we worked with consumer habits. Many people want to live greener, but few are ready for a major lifestyle change, such as refilling soap bottles or using carrying nets. It's about simplifying green choices and making them more appealing, just like with electric cars. Making sustainability accessible, attractive and simple is the key to greener choices," says Tynes.

### Experimental approach to finding answers

A core element of the project was to run a series of experiments. Among them were testing of refill stations for cleaning agents at the Coop store in Bislett and the home care service in Asker and Bærum, where the home help filled up with soap, and the customers paid for the amount. This was a practical approach to reducing plastic use and waste.

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Forsker som bruker hårføner til å tørke ketsjup på papptallerkener, som del av forskningsprosjekt.

Conducting the field experiment on green customer behavior required the researchers to smear ketchup on hundreds of plates and let it dry, before the participants in the experiment had to try to wash it away with either sustainable or regular dish soap. (Photo: På(fill))

"The project explored how research and business needs can be combined. Some results were directly useful to the companies, while others were more interesting in terms of research. It was a collection of different experiments that together led to a common innovation journey, despite different starting points," says Tynes.

### Refills – Orkla's response to the plastic challenge

Orkla's På(Fyll) service is a direct result of the research project and an extension of the experiments they conducted in SustainX. På(fyll) is a service that delivers soap in reusable containers straight to your door, and when you need more, they refill them.

"Single-use plastic, especially single-use packaging, leads to major societal challenges. This contributes to both today's waste problems and greenhouse gas emissions associated with plastic production. På(fyll) offers a solution to this problem. By delivering groceries home in reusable containers, we reduce plastic consumption and simplify everyday life for households," says Bård Bringsrud Svensen, CEO of På(fyll).

The company På(fyll), which was established in 2021, springs from Orkla Home and Personal Care and is a good example of how research can give rise to new, sustainable business models. Not least, it shows how large companies can take the lead in environmentally friendly changes.

"The SustainX project has been a catalyst for our competence increase in experimentation with circular business models, a critical tool to tackle today's extensive sustainability challenges. We have had to challenge ourselves and see the current business model from a radically new perspective. The expertise built up in this project has not only been important – it has been crucial in setting us on this transformative journey," explains Svensen.

### Efficient waste management

In the SustainX project, the partners have also worked with waste management, especially in shopping malls and at large events. In collaboration with Thon Gruppen and Carrot, they developed digital waste systems that were tested at Vestkanten Storsenter in Bergen, Sandvika Storsenter and Ski Storsenter.

The system improved waste sorting and recycling rates. At the same time, it contributed to increased environmental awareness among the employees at the shopping centres. With digital devices that accurately track the amount and type of waste, shopping malls were able to quickly improve waste management.

"For example, they could see exactly how much plastic was thrown away from a certain store at a certain time. This can lead to smarter waste strategies and lower rental costs for stores that sort well, as the Thon Group pays for waste management costs. If everyone sorts great, the total cost of Thon will be lower," explains Tynes.

### Research that has positive ripple effects

Another important result from the project is a number of studies related to the use of recycled packaging for cleaning products. These studies were published in reputable journals and demonstrated the importance of sustainable product development.

The SustainX project has also contributed to spreading knowledge through seminars, workshops, networking and lectures for the business community related to how to succeed with circular business models. On the business front, Orkla's På(fyll) has inspired large chains such as Coop and Rema 1000 to take similar environmental measures, and demonstrates the project's ability to create positive ripple effects throughout the industry.

