

# ► Project *brief*

Thünen Institute of Market Analysis

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## Efficient reduction of Food Waste in the Food Service Sector

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- **Measuring food waste increases awareness of the problem among kitchen staff and leads to a change in behaviour.**
- **A thorough sustainability evaluation (economic, environmental, social) is necessary to identify measures that are both effective and efficient in reducing food waste.**
- **Three recommendations for courses of action for companies with self-service buffet and/or food-serving counter could be set up: monitor food waste, encourage service and kitchen staff, optimise guest areas.**

### Background and aims

Natural resources such as water and land are used to produce our food. In addition, greenhouse gases accumulate along the value chain. If our food becomes food waste, the associated resources are also wasted. By lowering food waste, environmental impacts can be reduced, and a sustainable use of valuable resources is promoted.

Global, European and national policies therefore aim at reducing food waste. In this context, the German Federal Ministry of Food and Agriculture launched the National Strategy for Food Waste Reduction in 2019. In the project ELoFoS, we aimed at a more sustainable use of resources in the food service sector and at reducing food waste. The food service sector is one of five big sectors along the food value chain; the others are: primary production, processing, wholesale and retail trade and private households.

### Methodological approach

In hotels and rehabilitation hospitals we monitored food waste with our waste tracking tool and implemented reduction measures.

Using literature research, we identified which methods are used to evaluate reduction measures (Goossens et al., 2019) and developed an evaluation method (Goossens et al., 2021) based on the framework of the EU Joint Research Center (JRC). The method encompasses the three sustainability dimensions (economic, environmental and social).

Next, interviews, group discussions as well as questionnaire were executed to investigate the transferability of measures to other companies in the food service sector. Furthermore, this approach allowed us to develop recommendations for practitioners.

### Results

Measuring food waste on its own already increased the kitchen staff's awareness of the problem and led to a change in behaviour. As a result, the kitchens reduced their breakfast buffet returns by up to 64% (Leverenz et al., 2020).

With our practice partners we continuously developed our waste tracking tool over the course of the project. Now it is possible to manage several kitchens centrally. Our waste tracking tool is available as an app (Google Play Store, 2022) and can be operated via touch display.

Our evaluation method was used to evaluate two case studies. In the first case study we investigated the use of different convenience grades of salmon (whole salmon, filleted and portioned salmon) in hotel kitchens. The central processing of salmon by the supplier has proven to be advantageous compared to portioning in hotels (Goossens et al., 2020). In the second case study we evaluated the sustainability of using our waste tracking tool (Goossens et al., in preparation). The saving potentials are shown in figure 1.

The transferability of the reduction measures to other companies in the service sector is basically possible and the kitchen managers interviewed were open to new ideas. Nevertheless, measures have to be adapted company-specific.

We could establish three recommendations for action for food services with a self-service buffet and/or a food-serving counter: implementation of waste monitoring, encouragement of kitchen and service staff, and optimisation of the guest area (Kuntscher et al., 2020, 2022a).

From the overall project results we derived policy options for reducing food waste. These options include recommendations

to support companies of the service sector as well as to raise awareness of the topic food waste reduction in society (Kuntscher et al., 2022b). The recommended policy options include, for example: encourage waste monitoring in companies, develop instructions for in-company evaluation of measures, create guidelines for guest communication, incorporate food waste reduction together with health promoting diet in school curricula.

### References

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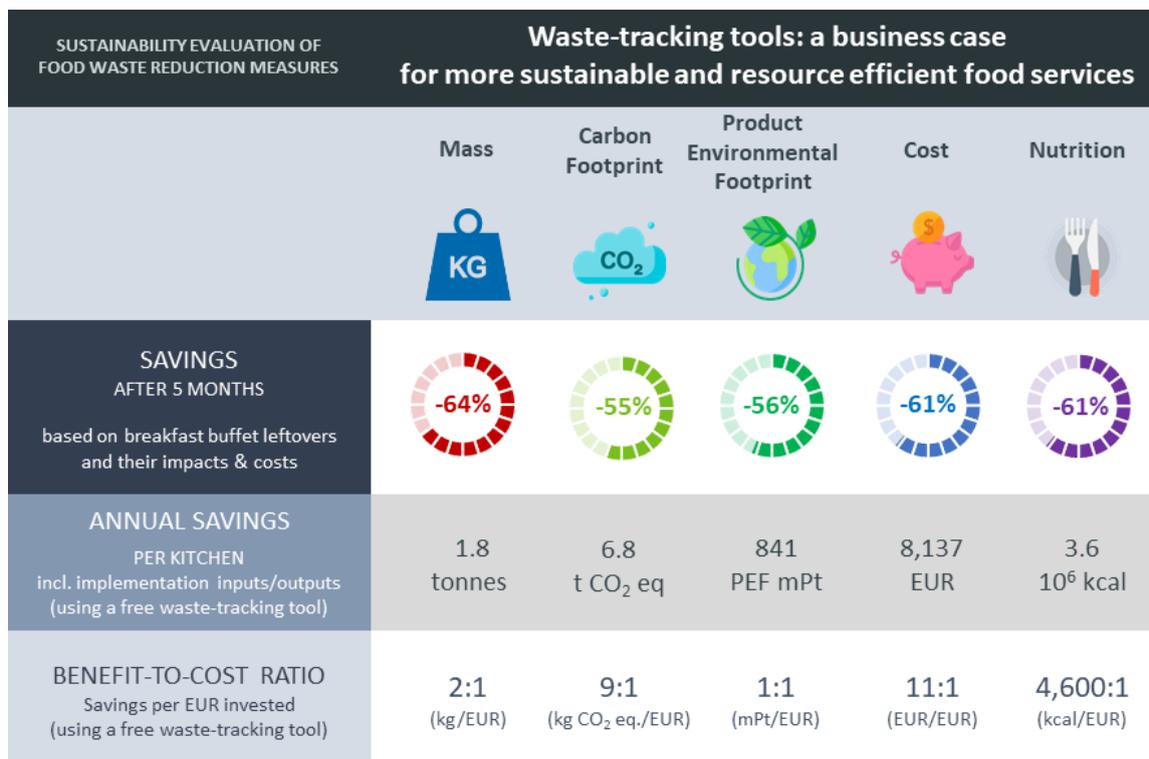
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### Further information

<https://www.thuenen.de/en/ma/projects/reduce-food-waste-in-commercial-kitchens-elofos>

Figure 1: Results of the case study 2: Using a waste tracking tool



Source: Goossens et al. (in preparation)

### Further Information

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