

# **Innovation as an Intervention: How Being Involved in Innovations Against Food Waste Changes the Individuals' Awareness, Attitude, and Behaviours Towards Food Waste?**

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## **Abstract**

Food loss and waste imply the waste of significant amounts of resources used to grow, process and prepare food, with serious environmental and climate consequences especially when the food is landfilled. Individual awareness must increase to improve attitudes and behaviours with regards to food waste. Passive interventions such as campaigns, in which participants are provided information, have proved to have little to no effect in promoting pro-environmental awareness, attitudes, and behaviour. On the other hand, experiences entailing the implementation of concrete tasks have been found to promote change in attitudes and awareness and thus effectively modify behaviours in the anticipated direction. While previous research has demonstrated the role of personal experiences and active involvement in raising awareness and promoting change in attitudes and behaviour, it remains to be investigated whether being involved in the implementation of innovations (either in the workplace or at home) may act in a way similar to an active intervention. Answering this question would help proper accounting of the additional social value created by public investments to support and test innovations that target pro-environmental outcomes, such as circular use of materials and productive use of resource. To contribute to filling this gap, we hypothesise that taking an active part in the implementation of innovations acts as an active intervention by increasing awareness and improving the attitude and behaviour of participants towards wasting food. We test this hypothesis in the framework of a Horizon 2020 Innovation Action project aimed at demonstrating innovations to combat food waste in three supply chains characterised by perishability as well as in the household and catering sectors. We implement surveys among the employees of organisations (businesses and schools) and the members of households involved in the testing of innovations. Our theoretical framework is based on the Theory of Planned Behaviour. The participants are asked to rate the same statements of a multi-item Likert scale both before (to establish a baseline) and after the implementation of the innovations. This approach allows us to assess the changes resulting from involvement in the

demonstration while reducing the possible desirability bias that could emerge if asking direct questions. The research participants in the workplace innovations are company employees aged 16 and above. For households, the innovations concern instead daily routines related to food. Data collection is ongoing. We will examine how the rating of various statements differs depending on whether they come from a participant implementing a workplace-based or a household-based innovation, and how changes in responses between the baseline and the post-implementation phase compare across different levels of involvement, demographics, and innovation types (e.g., technological, organisational, or social). We expect an increase in awareness of the food waste problem, including the levels of food waste generated in the workplace or at home, and a change towards attitudes less favourable to food waste. The design and results of the research will provide useful insights about active participation's role in triggering positive behavioural change and increasing the social impact of the public funding to sustainable innovation.

**Keywords:** food loss and waste, innovation action, Theory of Planned Behaviour, multi-country survey, social impact

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