

Tracking Post-Consumption of Restaurant Food and Leftovers: Innovative Digital Solution and Preliminary Outcomes from H2020 LOWINFOOD and REGUSTO

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Abstract

Reducing food loss and waste (FLW) is essential to create a more sustainable food system, which is why its halving has been included in the UN Sustainable Development Goals. A significant amount of FLW occurs at the household, retail levels, and food service, with the latter being the third-largest source of FW in Europe. This study, in accordance with the goal of Task 5.6 included in the H2020 LOWINFOOD project, aims at monitoring and quantifying the FW generated out-of-home and taken away from the restaurant using a Regusto bag. Using a QR code affixed to the bag given to consumers by the restaurants, it has been possible to track the FW deriving, whether it is a complete meal to be consumed at home (take-away) or meal leftovers brought home. This allowed us to understand the effectiveness of these tools for sustainable and optimal food management. The Regusto app and Regusto bag have been used to evaluate their potential to contribute to the FW problem in out-of-home consumption. In addition, two surveys were carried out for restaurants and customers respectively. Firstly, the questionnaire for restaurants aimed at examining whether the use of the Regusto innovation could contribute to changes in awareness, attitudes, and behaviours towards FW including its decrease and cost optimization. Secondly, the customer survey had the objective of tracking the unconsumed food through the Regusto bag. The results reveal that approximately 89.8% of users packed 400 to 500 grams of food in a Regusto bag. Moreover, the study found that the use of the Regusto bag innovation has proved to be positively helpful in terms of reducing FW. Indeed, over 73% of customers leaving the restaurant with a Regusto bag reported that all food packed in the bag was finished. However, the preliminary results suggest that the efficiency in the consumption of the food taken away depends on a person's dining scenario, demographic, and socioeconomic factors.

Keywords: Food waste, Digital innovation; Doggy bag