



Multi-actor design of low-waste food value chains through the demonstration of innovative solutions to reduce food loss and waste



## PRACTICE ABSTRACT No 3 (English)

### Reduce food waste, save money by AI

KITRO is aimed at large kitchens in canteens, hotels or restaurants and enables food waste to be reduced with the help of artificial intelligence, thus saving costs. The innovation consists of a scale and a camera that are installed under and above the waste bin and automatically identify and record discarded food and determine waste quantities. The system is easy to set up and can be adapted to all kitchen waste bins. Measurements are taken automatically with KITRO, eliminating the need for additional labour to operate the device. The collected data, in the form of photos and weights, is then visible via a personalized analytics dashboard. They provide the basis for setting measurable goals and taking action. This allows decisions to be made based on artificial intelligence and processes to be optimized precisely for each property. Throughout the entire period of use of KITRO, the respective kitchens are supported in the installation, application, and data evaluation.

In LOWINFOOD, KITRO is tested in WP5 in one Swiss, two German, and two Greek food services in the field of hotel and business catering. So far, a feasibility assessment of a new market entry could be conducted with Greece opening as a new trial location. New insights into our consumer's operational behaviour and drivers feed the advancements in the reporting and analytics tool. Limited reduction performance metrics could be determined due to covid related delays.

<https://www.kitro.ch/>

#### Author(s)

Simon Zurbuchen (KITRO)  
Christina Strotmann  
(iSuN)\*  
\*christina.strotmann@fh-  
muenster.de

#### Coordinator

Clara Cicatiello  
cicatiello@unitus.it

#### Country/region

Germany, Switzerland,  
Greece

#### In a nutshell

Type: technological  
innovation  
Effect: supply chain  
efficiency  
Users: canteens,  
restaurants



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### Additional information

#### Food waste in the European food service sector

The European food service sector's contribution to food waste equals 12 % of the total amount of food being wasted, i.e., 11 million out of 88 million tonnes are caused by this sector.

All Practice Abstracts prepared by LOWINFOOD can be found [here!](https://www.lowinfood.eu)



[lowinfood.eu](https://www.lowinfood.eu)



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### ABOUT LOWINFOOD

The LOWINFOOD project, launched in 2020 and coordinated by the University of Tuscia, Italy, is working to deploy and improve a set of 14 innovative solutions to the food waste problem, by demonstrating their effectiveness and market potential. The core activities of the project are all focused on the evaluation of the efficacy of these innovations in reducing food losses and waste, in terms of the amount of food waste avoided as well as their environmental and socio-economic impact.

### CONSORTIUM



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## PRACTICE ABSTRACT No 3 (Deutsch)

### Die einfache Art Lebensmittelabfälle in der Gastronomie zu retten

KITRO richtet sich insbesondere an Großküchen in Kantinen, Hotels oder Restaurants und ermöglicht es, Lebensmittelabfälle mithilfe künstlicher Intelligenz zu reduzieren und somit Kosten einzusparen. Die Innovation besteht aus einer Waage sowie einer Kamera, die unter bzw. über dem Behälter für Lebensmittelabfälle installiert werden und weggeworfene Lebensmittel automatisch identifizieren und Abfallmengen bestimmen. Das System ist einfach einzurichten und lässt sich an alle Küchenabfallbehälter anpassen. Gemessen wird mit KITRO automatisch, wodurch kein zusätzlicher Arbeitsaufwand für das Bedienen des Gerätes erforderlich ist. Die gesammelten Daten, in Form von Fotos und Gewichten, lassen sich über ein Dashboard in Echtzeit einsehen. Sie stellen die Basis dar, um messbare Ziele zu setzen und Maßnahmen zu ergreifen. Somit lassen Entscheidungen auf Basis von künstlicher Intelligenz treffen treffen und Abläufe passgenau für jede Küche optimieren. Während der gesamten Nutzungszeit von KITRO werden die jeweiligen Betriebe bei der Installation, der Anwendung und Datenauswertung unterstützt.

Im Rahmen von LOWINFOOD wird KITRO in einem Schweizer, zwei Deutschen und zwei Griechischen Gastronomiebetrieben im Bereich der Hotel- und Betriebsverpflegung getestet. Bislang konnte eine Machbarkeitsstudie für einen neuen Markteintritt durchgeführt werden, wobei Griechenland als neuer Teststandort eröffnet wurde. Neue Einblicke in das operative Verhalten unserer Kunden und deren Einflussfaktoren fließen in die Weiterentwicklung des Analysetools ein. Aufgrund von Verzögerungen im Zusammenhang mit Covid-19 konnten nur begrenzte Kennzahlen für Food Waste Reduktionen ermittelt werden.



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