

Development of a Food Recall Prevention Platform

Research programme [Food allergy and intolerance research --](#)

Study duration December 2019 to November 2021

Project code FS301087

Conducted by University of Cambridge

Background

The majority of UK food recalls are due to allergen mislabelling, misleading allergen claims and/or the unintentional presence of allergens – representing a significant food safety risk and cost to industry. Labelling legislation must be followed to ensure food is safe and what it says it is, and this requires good allergen management and accurate allergen information communication down the supply chain. Distilling this information accurately, to inform labelling and/or communication of allergen information, can be particularly challenging for small to medium food businesses due to the low adoption of advanced labelling technology.

In November 2018, a joint FSA/EIT (European Institute of Innovation & Technology) workshop discussed potential solutions to tackling the increase in food allergen mislabelling incidents. It was concluded that the situation could be improved by developing accessible and affordable tools for food businesses, to aid in the automation of food data collection, validation and management.

As a result, the FSA are funding this initial development project that aims to develop an online system targeted at small and medium-sized food businesses, to help reduce the number of product recalls due to allergen mislabelling. The tool is also predicted to support more reliable knowledge transfer and incident tracking when things do go wrong.

Objectives and Approach

The project's main objective is to:

- develop an online software to help Food Business Operators (FBO) collect ingredient and food allergen data from their suppliers, provide tools to validate ingredient data, and enable consistent and accurate transfer of food allergen labelling data along the supply chain

This will aim to:

- reduce the number of mislabelling errors
- improve the accuracy and efficiency of food data collection and food traceability

The foundation of this project is based on analysis of [food allergy alerts published on food.gov.uk](#) between 2016-2019. This analysis will provide insights into the pattern and causes of food allergen related product recall alerts in the UK, to inform priority areas.

Once major causes of mislabelling are identified, advanced business value mapping tools will be

used to develop a strategic framework to eliminate food recalls, cost-effectively. The framework will map out value exchanges among various food safety stakeholders (e.g. food labelling software developers, food companies and nutritional data scientists) in reducing food allergen recalls and identify their incentives to help food companies improve food allergen management.

Next, a food allergen labelling database will be designed to help food businesses collect food information and ensure the correct declaration of food allergens. This work will focus on improving the accuracy and completeness of food allergen data for food labelling. The proposed approach will enable better food allergen communication along the supply chain through reinforcing business-to-business communications. This will be achieved via the use of an aggregated database which will provide transparent food allergen information for food products along the supply chain.

The project approach is designed for applying to the wider food industry to improve the accuracy of allergen information across FBOs but in particular for Small and Medium Enterprises (SMEs), where advanced labelling techniques may not be so widely adopted or accessible. The focus of this work is to address food mislabelling, packaging errors, and reduce accidental human and software errors in the process.