

Data collection and modelling for food business compliance indicators

Area of research interest: [Innovative regulator](#)

Project status: Completed

Conducted by: decisionLab

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Background

Segmentation, a workstream launched as part of the Regulating our Future programme, looked at how we could move away from the one size fits all approach to regulating food businesses to a more sophisticated and data driven method for segmenting food businesses, moving towards a more proportionate, risk-based approach to the frequency, nature and intensity of intervention.

This research was commissioned to see if food business data held by local authorities could be collected and used to build models that predict food business compliance, particularly for new premises. The research achieved its goal to demonstrate the proof of concept that we can forecast how compliant a food business with particular characteristics is likely to be with food safety requirements.

Data for 8,700 establishments across 13 local authorities was collected. The establishment data comes from data collected by local authorities as part of the establishment inspection process. 4 local authority datasets were from app-based inspections, the others were from data manually captured from paper-based inspection forms.

Objectives

The purpose of this project was to collect a detailed level of data on the food related activities of a large sample of food establishments and to use this data to develop models to forecast how compliant establishments with particular characteristics are likely to be with food safety law. The focus for this work was to establish the framework for prediction models for new establishments who have yet to have a food safety inspection and who do not have any enforcement history.

The research has two core elements:

- Data collection - The first objective of the project was to gather a large data set relating to the business activities of a range of food establishments, including assessments of legal compliance with food law by the relevant inspecting local authority.
- Analysis of data and development of prediction models - The second objective of the project was to use this data to develop a concept model for a risk engine that will segment new food establishments so that the most effective and proportionate initial intervention can be determined.

Research report

England, Northern Ireland and Wales

PDF

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