

food manager

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reducing household food waste by applying food management theory



background

A cross-platform meal planner that helps households minimise food waste, by implementing features that encourage positive food management behaviours, identified through research

16% (95kg per person) of UK household food is wasted per year. Waste is often an afterthought, an unintended consequence of unpredictable lives and having less time to plan meals.

Could I help to reduce waste with an app that applied my own ideas, and those found in research studies?

method

Food waste data was collected for 4 weeks (via a google form)

The app was implemented, tested, adjusted based on feedback, and populated with recipes

Food waste data collected when using the application for 2 weeks

features

User	Admin
Flutter (web, Android, & iOS)	node.js Express
Firestore	CSRF & Puppeteer
Google sign-in OAuth 2.0	Firestore
Deployed using Firebase Hosting	Google sign-in
	Docker container deployed to Google Cloud Run



- secure login, data & app in UK
- filter by cook time, cal or keyword
- allocate & scale portions
- buy only what's needed
- see your progress
- find recipes that use up leftover ingredients, while you are meal planning (before you shop)
- + waste logging
- + update stock
- + manage stock
- admin app
 - + secure sign in
 - + manage users, ingredients & recipes
 - + data cleaning tools
 - + pack size web scraping

testing & results

Functional, user acceptance, performance & security testing performed and evaluated against specification

232 meal portions were cooked in the trial. Waste per portion reduced by 8.75% (vs baseline data). All users performed better than the UK average of 16% food waste (vs food bought)

During this small trial, household food waste per portion reduced by 8.75%. Implementing this app did reduce food waste. The next step is to conduct a larger study to prove generalisability

plus ☆ add supermarkets ☆ add recipes ☆ add price scraping to show costs during planning (and supermarket differences)

conclusion