

The Waste Equation

How the UK food and drink industry could provide a billion meals to people in need





Contents

| | |
|---|----|
| Executive summary A food waste win-win | 3 |
| Introduction Using our resources for good (Tim Murray, Partner, Newton) | 6 |
| Top line research findings The Waste Equation | 8 |
| Scene setting Manufacturing as the industry focus | 12 |
| — Part 1. Reduce Innovatively reducing manufacturing food waste | 14 |
| — Part 2. Recover Recovering food systematically and with certainty | 23 |
| — Part 3. Reinvest Reinvesting resources to make the greatest collective impact | 33 |
| Conclusion More food, more consistently will transform communities (Charlotte Hill OBE, CEO, The Felix Project and FareShare) | 40 |
| Connect | 42 |
| About Research, Newton, The Felix Project and FareShare, and Alliance Food Sourcing | 44 |



EXECUTIVE SUMMARY

A food waste win-win

Reducing and recovering food waste and surplus, and reinvesting savings to help with food insecurity



At the Coronation Food Project, we are determined to drive systemic change, from surplus to sustainable. That's why we welcome this report – a clear guide for how the food industry can waste less and help feed more families and communities.



Dame Martina Milburn DCVO CBE
Executive Chair
Coronation Food Project

If everyone across the supply chain makes a contribution – whether that is food, fridges, fleet or funding – this initiative can save substantially more surplus food and change more lives.”



Even if we only achieve a small proportion of what is suggested in this report, we can feed millions more people who don't have access to affordable or nutritious food. It is worth repeating: we can have a huge impact, and often easily.”

Tim Murray, Partner, Newton

The Waste Equation reveals how food and drink manufacturers could **reduce** waste, **recover** what surplus remains and **reinvest** savings and other resources, to provide a billion meals a year to people in need.

Developed by Newton, The Felix Project and FareShare, and IGD's Alliance Food Sourcing (AFS), it acknowledges that the causes of food insecurity cannot be solved by increasing food supply. However, often simple changes could significantly help reduce food insecurity in communities, and encourage people to access further support addressing the root causes of poverty.

The report shows the size of the opportunity – how many meals is there the potential to send to frontline charities if manufacturing food waste was **reduced**, unpreventable surplus was **recovered** and savings were **reinvested** into making new food?

It then outlines how we can achieve this enduring change together. Every organisation can be involved – even those with no waste or surplus – by contributing expertise, fridge space, factory lines, logistics and beyond.

Data findings

UK retailers sell 18.5 million tonnes of UK manufactured food and drink each year. In the process of creating that food, we have found around 550k tonnes is wasted – equivalent to **3% of sales**. There is the potential to:



Altogether, we could provide **one billion (1,017 million) meals** to people who need them.

That is seven times as much as The Felix Project and FareShare currently recover each year as it helps the millions of adults and families in the UK facing food insecurity.

A meaningful difference

To recover this incredible amount of surplus, this report focuses on unlocking these three key areas, providing frameworks, advice and real-world examples to drive change.

In line with UK government, WRAP and the Coronation Food Project recommendations, the first step to feeding more people sustainably is to **reduce** waste, then **recover** surplus that remains. The final additional step – **reinvest** – is a data-backed, evidence-based idea to use savings and donations with the greatest impact.

The report covers:



The research shaped The Felix Project and FareShare's Policy Memo to the UK government asking it to incentivise and offset losses of revenue generated from sending surplus to animal feed and anaerobic digestion, and prevent surplus food from going to other lower value destinations like landfill.



We all want a thriving, prosperous United Kingdom. And, more importantly, if food is available, there is a moral obligation for all of us to make sure it makes it to the table of families in need. If everybody gets involved in a meaningful way, we can genuinely make a step change in 2026.”

Charlotte Hill OBE, CEO, The Felix Project and FareShare



INTRODUCTION

Using our resources for good



I was volunteering in one of The Felix Project's depots when two pallets of carrots arrived. By chance, they were from the regular redistribution of surplus root vegetables that the Newton team had helped set up at Morrisons' Flaxby manufacturing site¹. Seeing the volunteers excited to send out fresh produce brought to life how important it is that we continue to recover good food.

It really hit home as well: we could have sent out so much more. The Felix Project and FareShare don't receive enough food to keep up with demand and with food insecurity expected to continue to rise, the gap between needs and availability will widen.

I came away invigorated and sure that we can do more, as an organisation and an industry. It got me thinking: how can Newton help best? Our strong suit is getting into the details of an issue and developing innovative, practical solutions which create real momentum.

So, that's the approach we took to developing this report. By analysing millions of tonnes of food manufactured in the UK, along with our partners at The Felix Project and FareShare, we created a Manufacturing Waste Map to provide visibility on where waste is greatest. In line with the UK Government and WRAP's food and drink waste hierarchy, we have then shared practical solutions to reduce food waste and recover unpreventable surplus.

¹ For more on this work click here

Financing the good fight

Our premise – how to provide a billion meals to people in need – is wildly aspirational. But even if we only achieve a small proportion of what is suggested in this report, we can feed millions more people who don't have access to affordable or nutritious food. It is worth repeating: we can have a huge impact, and often easily.

The easy option operationally, and financially, is often to send unsaleable but edible food to become animal feed, or for use in anaerobic digestion. For organisations to be able to act at the scale required, we need to be onto a win-win, balancing making a positive impact with profitability.

Here's my suggestion. Again, let's think about the resources available to us. If we work to reduce waste and reinvest some of those savings into producing more food at cost price using stranded labour, lines and other spare resources, I believe there's a chance to do the right thing for the world, but also the right thing for each business.

Cross-industry collaboration

Nobody has to solve this issue alone: it is through collaborating, sharing costs, resources and expertise that we have impact.

The food and drink industry plays a pivotal role in feeding millions of people a year who don't have access to affordable food. I'm proud of all the food recovered so far during our partnership with The Felix Project and FareShare, Alliance Food Sourcing and the Coronation Food Project. The Felix Project and FareShare already provide many millions of meals each year to people across the country. The question now is, how do we go even further?

A sincere thank you to everyone who is involved in rescuing food and everyone who gets involved with 'The Waste Equation'."



Tim Murray
Partner, Newton



TOP LINE RESEARCH FINDINGS

The Waste Equation: Reduce, recover, reinvest

Together, we have the potential to provide a billion meals to people facing food insecurity.

Traditionally, retail has been the biggest supplier of recovered, edible surplus to the charity sector. But, at the same time as demand for food support grows, retail surplus has been reducing because grocery supply chains are improving. Could manufacturing be a new focus area for recovering surplus for the end-to-end supply chain?

Our research shows food and drink manufacturing can collectively make a significant contribution not only to reducing levels of food waste but also using the associated cost savings to help reduce food insecurity.

UK retailers sell 18.5 million tonnes of UK manufactured food and drink each year. In the process of creating that food, we have found around 550k tonnes is wasted – equivalent to **3% of sales**. There is the potential to:



The size of food waste in UK manufacturing



Reduce

Almost a quarter (**23%**) of the **550k tonnes** of waste in food manufacturing could be prevented with innovation, technology and industry expertise. This would save **128k tonnes** of food waste, making savings of nearly **£326 million** across UK food manufacturing.



Recover

After reducing waste, **16%** of surplus is fit for human consumption and recoverable without significant financial investment. By putting in place usually simple measures (for instance, collecting food into dolavs and leaving them in the same place each week for volunteers to collect), this **89k tonnes**, equivalent to **212 million extra meals**, could be sent to community organisations through The Felix Project and FareShare every year.



Reinvest

What if we all come together to invest in producing food specifically for charities – making best use of finance, resources, buying power and skills? For every **10% reinvested** into creating balanced plate meals at the lowest marginal manufacturing price, **66 million meals** of good food would be generated for charities, or **657 million meals** if all those savings were reinvested.

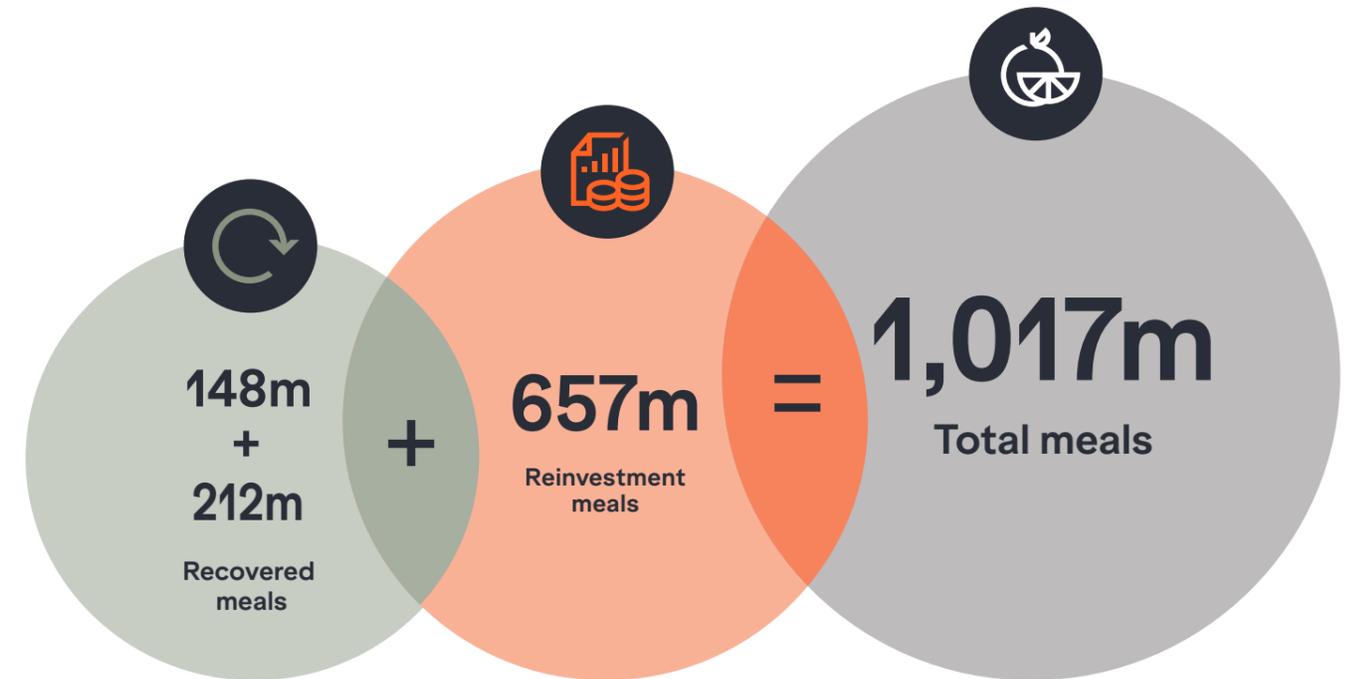
Definitions

- **Surplus** – Extra food suitable for human consumption which can't be sold because it is not packaged or labelled or does not fit within retailer specifications.
- **Food waste** – Food which is not recovered to charities but disposed of through waste programmes, anaerobic digestion or made into animal feed.
- **Food insecurity** – Where the household reduces the quality, variety, and desirability of their diets, or members sometimes disrupt their eating patterns or reduce their food intake because they lack money or other resources for food².
- **Reduce, recover, reinvest** – WRAP, the UK Government and the Coronation Food Project recommend that the best approach to surplus recovery is to first reduce waste then recover what can't be prevented. We have added a third additional step: reinvest.

² House of Commons Library

The Waste Equation

In an ideal world where, end-to-end as an industry, we are focusing on waste reduction, recovery and reinvestment, the research shows that there is the potential to provide a billion meals, when added to the 148 million meals already delivered by The Felix Project and FareShare.



About the data

- **Data set** – The analysis is based on the IRI 2023 dataset of UK retail sales volumes, disaggregated by food category and so covers food and drink products manufactured in the UK and sold through UK retail channels. Products supplied to the hospitality and food service sectors, as well as those produced primarily for export, are excluded from the data scope, as is fresh produce.
- **Tonnes to meals** – To convert tonnes to meal equivalents, we have used the WRAP recommendation of 420g as an 'average' meal size³.
- **Lowest marginal manufacturing price** – This is the manufacturer price with labour cost removed to account for meals created during planned downtime or where stranded labour cannot otherwise be redistributed.
- **Balanced plate** – The reinvestment data is based on using the Eatwell NHS balanced plate definition.

³ WRAP, Reporting on the amounts of food surplus redistributed, 2025



SCENE SETTING

Manufacturing as the industry focus

With EU members working towards a 10% food waste reduction in food processing and manufacturing by 2030⁴, this is the time for focus as an industry. Even if only half of what is outlined in the report happens, we would get close to achieving this same progress. It can only be the right thing to do as food insecurity remains consistently high in the UK⁵, with millions of adults and families facing food insecurity every month.

⁴ European Commission, Food waste reduction targets, 2025

⁵ The Food Foundation, 2025

“

The numbers in this report are so large that they could be easy to hide behind as individual organisations. And it's true: none of us can achieve these transformative figures alone – it is as a whole connected industry that we make inroads.

Collaboration at this scale may sound ambitious but it is actually surprisingly simple, even for competing organisations, to come together when the rewards are so meaningful to the communities we all serve. Every time surplus can be saved or generated, Alliance Food Sourcing has the relationships to bring the right mix of retailers, manufacturers, consultants and producers together so everyone brings their best to the table – whether that is finance, fridges or experience on how to recover surplus cost effectively.”

Nicola Robinson, Alliance Food Sourcing, Director

If we see the food and drink supply chain as being made up of households, primary producers, manufacturing, hospitality and food services and retail – where is our biggest opportunity to recover edible food?

Focus has often been on retail as food is already packaged and easy to share. But as grocery supply chains improve and create less surplus, contributions are likely to fall.

More edible food goes to waste in manufacturing than retail (0.8 vs. 0.3 million tonnes a year⁶). Surplus is also easier to recover from factories than by visiting restaurants, farms or homes. Manufacturing offers a potential area of focus for the whole industry.

Edible food surplus (million tonnes a year)



⁶ WRAP



PART 1

Reduce Innovatively reducing manufacturing food waste

Most organisations already have a focus on reducing waste, so the question is, how is it possible to go further? We have found nearly a quarter (23%) of UK food manufacturing waste could be prevented each year, and to unlock that requires a combination of adjusting specifications so they still meet customer needs, tighter operational control, innovation and technology.

The amount of UK food manufacturing waste that could be prevented each year

23%



I know we've been focusing on reduction for many years now so it can feel like there are diminishing returns. But there's more waste and money to be saved. Waste isn't a part of the P&L that you have to swallow each year. That's especially true with today's technology. The sophistication and granularity of supply chain and consumer data we have at our fingertips is incredible and increasing."

Tim Murray, Partner, Newton

Industry examples



A leading convenience food manufacturer **reduced fresh food waste by 15% and saved £20 million pounds a year** by hiring a raft of new people to drive performance using diagnostics, new structures and processes.

At a famous biscuit factory, the size and shape of products varied, leading to unnecessary waste. Putting in place a data-driven system to spot opportunities to correct issues and

improve ongoing operational efficiency achieved a **£2.3 million increase** in projected annual revenue.

At a large baking firm, three separate systems were joined to create a single view from point of manufacture to delivery to the warehouse, resulting in a **20% improvement in line efficiency and £3 million reduction in distribution costs.**



How to reduce waste as an organisation

Change is driven by true collaboration between everyone from the boardroom to the factory floor including purchasing, finance, brand, internal communications and HR. From here, there are five key steps.

Deep dive

Spot the opportunities to reduce waste at every possible moment, even in places where it's traditionally been seen as unavoidable.

- **Expertise** – People across silos will have ideas on what is and isn't working, and why: what is being overlooked as it happens so often? Are specifications being set too high meaning saleable products are wasted?
- **Evidence** – It's essential to have a granular, quantified understanding of the root cause of all waste: where, why and when is it happening? This is complex, requiring the knitting together of existing data with new data feeds, but this is now possible with the latest advancements in IoT and AI.

Only by having a complete intolerance to waste and measuring loss to 'perfect' does it become clear what waste can be innovatively reduced.

01

Think wide

Challenge current systematic issues and processes about what is and isn't possible.

Based on your initial theories, carry out factory walks. Take a step back and ask unconstrained questions:

1. If we were designing a new factory, how would it run?
2. For a new process, what would the steps be?
3. Where are we today, what are the gaps and how do we reduce them?

With the mindset that all waste can be reduced, constraints aren't blockers but challenges to overcome.

02

Prioritise

Create clear next steps from this complex set of variables, based on a combination of ease and value.

The reality is that most of the easy opportunities will already have been solved. By definition, there is a highest value opportunity remaining. Start there and be relentless in pursuit of improving it. Solve for the next highest priority, and so on.

03

Analyse

Make the case for change based on data and facts, not emotion.

Run a small test. Work out the financial implications so you can make a financially compelling case for change. Project the ongoing financial impact and present to stakeholders to gain alignment.

04

Operationalise

Momentum is created by enabled, empowered teams with problem solving capability, and access to both root cause analysis and real-time data that provides visibility of issues.

To make change a reality technically, engage the hearts and minds of employees. Put in place technology to enable real-time decision making. Regularly deep dive with new people and partners to keep spotting opportunities.

05

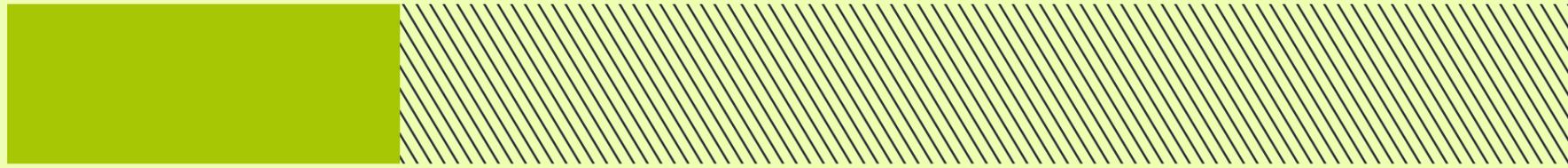
Where to look

To help manufacturers pinpoint their reducible waste, our Manufacturing Waste Map⁷ finds that there are six key moments when food waste occurs.

 Waste
  That could be recovered

1. Largest opportunity: Preparation

When there is excess due to the preparation method, for instance cut offs from pastry.



37% of waste

25% of that could be recovered

2. Operations

Losses or discarded materials caused by routine production inefficiencies or errors in equipment operation, handling or process execution.



39% of waste

20% of that could be recovered

3. Quality control

When waste is superficially flawed (such as misshapen biscuits or carrots that are too wonky) but perfectly safe for consumption.



13% of waste

30% of that could be recovered

4. Giveaway

Excess product included beyond the declared or required weight/volume due to overfilling.



4% of waste

25% of that could be recovered

5. Changeover

Product loss generated when switching between different products, recipes or packaging formats, including flushing, cleaning and recalibrating production lines.



4% of waste

10% of that could be recovered

6. Planning

Losses caused by scheduling errors, poor forecasting, or incorrect documentation that leads to overproduction, wrong product runs or idle production capacity, e.g. having cooked too much rice to go with the amount of chicken available to make a curry.



3% of waste

10% of that could be recovered

5%

15%

25%

35%

45%

⁷ See 'About the research' to find out more about how the Manufacturing Waste Map was developed.

Overcoming common barriers

The root cause of most of these issues is one or a combination of failures around product and packaging design, process and system design or operational control and conversion. Each of these root causes can be significantly reduced with a set of fairly simple actions.

WASTE REASON

Product and packaging design

Example: Waste caused by inefficiently designed product or packaging specifications.

Found in: Quality Control, Preparation, Planning, Operations.

Issue: Innovation without understanding factory constraints can lead to specifications that effectively build repeated waste. Often product development is carried out in a test kitchen disconnected from operational teams.

Designers may not realise that, at scale, certain standards add a level of unnecessary complexity and waste. As a result, manufacturers may agree specifications with retailers that are not operationally ideal. Agreements can get close to the boundaries of what is practically possible.

SOLUTION

Connection and conversation

Manufacturers

- Are product development teams connected to operations so they have clarity on the constraints of the business, knowing which features are likely to cause surplus or waste issues?
- Can you have data-led, open discussions with retailers when setting specifications?

Retailers

- Are you asking questions of manufacturers about which features add cost and drive product into the bin?
- Do customers care which way up a pepper is placed? Do sausage rolls need to be an exact width and length to the millimetre? Is the colour range agreed on loaves of bread unnecessarily tight? Use data to get clear on what customers notice and appreciate, so you can challenge assumptions about specifications.
- Do long-term agreements with suppliers, set thoughtful targets for waste reduction and agree how to invest to reduce waste, for instance by updating machinery?

WASTE REASON

Process and system design

Example: Systematic waste due to processes and supply chain designs that lack agility and are held back by batch requirements or outdated planning systems.

Found in: Quality Control, Preparation, Giveaway, Planning, Operations, Changeover.

Issue: When making complex products, waste is inevitable if systems and processes are not fully understood and constantly monitored. Look at ready meals. If five components make up a chicken curry, as soon as the first element runs out, there is no use for the other four ingredients.

If the shelf life is short, manufacturers end up throwing them all away. This shortfall could be the result of any one of a multitude of assumptions being inaccurate – what yield will be achieved after the chicken is prepared, and then cooked, and then cooled, for instance.

SOLUTION

Non-stop issue spotting and correction

Given the number of items in the supply chain of a typical manufacturing process and the frequency at which those change, it is impossible to manually interrogate data and get to root causes fast. Reducing waste is rarely about finding a 20% gain every three months: it's 100 smaller changes that create a cumulative incremental impact. There might be a theme to them, such as an incorrect piece of data that means all the yields throughout the process are out. But even then, multiple changes will be required.

High frequency data analytics and AI can help spot and track exceptions, providing ongoing visibility of where loss is occurring and what needs to be solved. On one production line for instance, an AI solution identified additional edible food surplus that could be sold for human consumption over animal feed, resulting in a 15-fold increase in revenue from surplus⁸. Manufacturers should be confident their data is accurate, churn through actions to spot issues, build consensus and remedy rather than simply report when it's too late.

Even if a factory was to hit on the perfect ratio, there would be some waste as most manufacturers build in a production surplus rather than risk undersupplying. Retailers can play their part in reducing waste by discussing levels of planned surplus and agreeing a plan of what to do with it.

⁸ Scaling AI-led food waste and surplus visibility, reduction and redistribution, Sustainable Ventures, 2026

WASTE REASON

Operational control and conversion

Example: Inconsistently setup machine specifications, behavioural management and functional factory operation.

Found in: Quality Control, Preparation, Giveaway, Planning, Operations, Changeover.

Issue: Motivated people improving operational performance reduce waste. Managers on the floor are often responsible for many areas – some of which they have little control over such as waste levels or whether a line breaks down – with no real prioritisation and no clarity of what really drives performance.

SOLUTION

Simple KPIs

Establish good improvement cycles and agree accountability. Identify the visibility of key metrics of waste and the leading cause, making sure to include clear targets and an accountable owner who can make a difference. Prioritise, helping managers do fewer things incredibly well, for instance setting KPIs for pack weight and line speed. Make sure they know the importance of managing these and what they need to do to make a difference. Put in place reviews as part of daily or weekly management processes and build everything into rewards and recognitions to make it really matter to people.

Of the
3%
of food waste in
UK manufacturing

23%
of it is avoidable

Tackling that may require one-off investments – in improving data collection, analysis and training, or updates to machinery. But in many cases, waste can be reduced without significant capital expenditure, for instance by agreeing reduced specifications that still more than meet customer requirements.

The answer to the right action lies in having the data-backed insights to make important decisions about the opportunities to pursue.



PART 2

Recover Recovering food systematically and with certainty

From the Manufacturing Waste Map which shapes this report, we can see that even after reducing waste as outlined in 'Part 1. Reduce', 89k tonnes of good food could be recovered into charities each year. How is this best achieved – setting up consistent, ongoing supplies that volunteers can distribute to help the most people?

Additional food that
could be recovered
into charities each year

**89k
tonnes**



The Felix Project and FareShare's four approaches to food recovery



Redirect

In the simplest cases, food items such as unpacked fresh fruit are collected (usually in bulk bags) and moved to The Felix Project and FareShare depots and labelled to ensure traceability.



Relabel

Some food items need labelling to ensure compliance and traceability. They could have the wrong (or no) label for many reasons – the weight or ingredients list could be incorrect, they may have come from a ready meal so were never meant to be sold to the public, or they could have been produced for a country with different labelling rules.



Repack

If food was never intended for sale so is not packaged or a brand does not want imperfect items out in the public, surplus can be repacked into a format The Felix Project and FareShare can use.



Repurpose

This method combines surplus ingredients into new food items altogether. This can be achieved within charities' kitchens if they receive regular food from the same suppliers, for example, pastry offcuts from one manufacturer and chicken from another could be made into a pie. Suppliers could also repurpose on their own site with their own ingredients, such as making a soup out of vegetable offcuts.



Every food surplus recovery programme within every factory is unique so the examples included in this section are honestly just a handful of ways food can be recovered. But I've seen first-hand that there is nearly always a way to get food to us – and simply too. We're always developing new approaches and even bring in consultants from Newton in more complex cases. We do everything we can to get your food to the families and people in crisis who really need it."

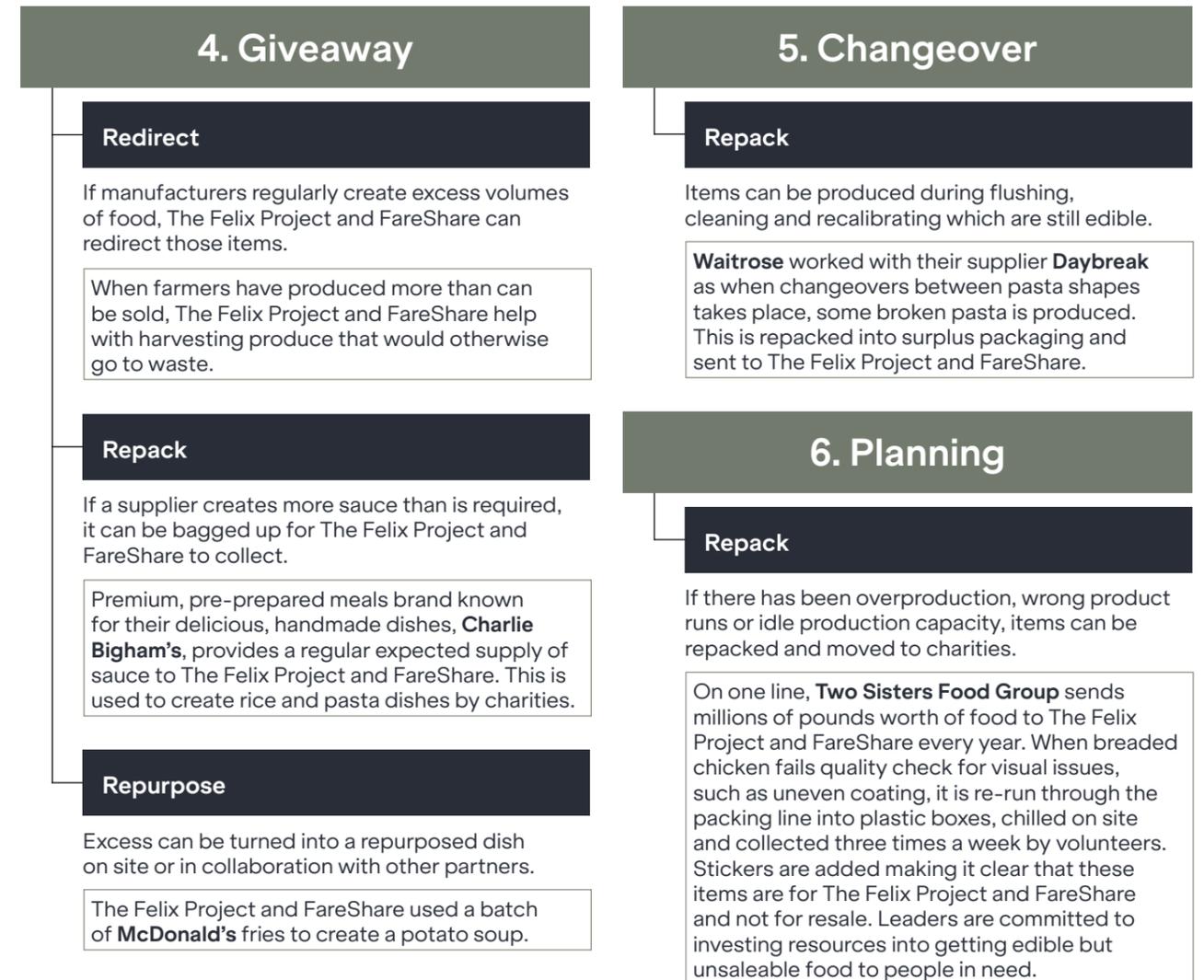
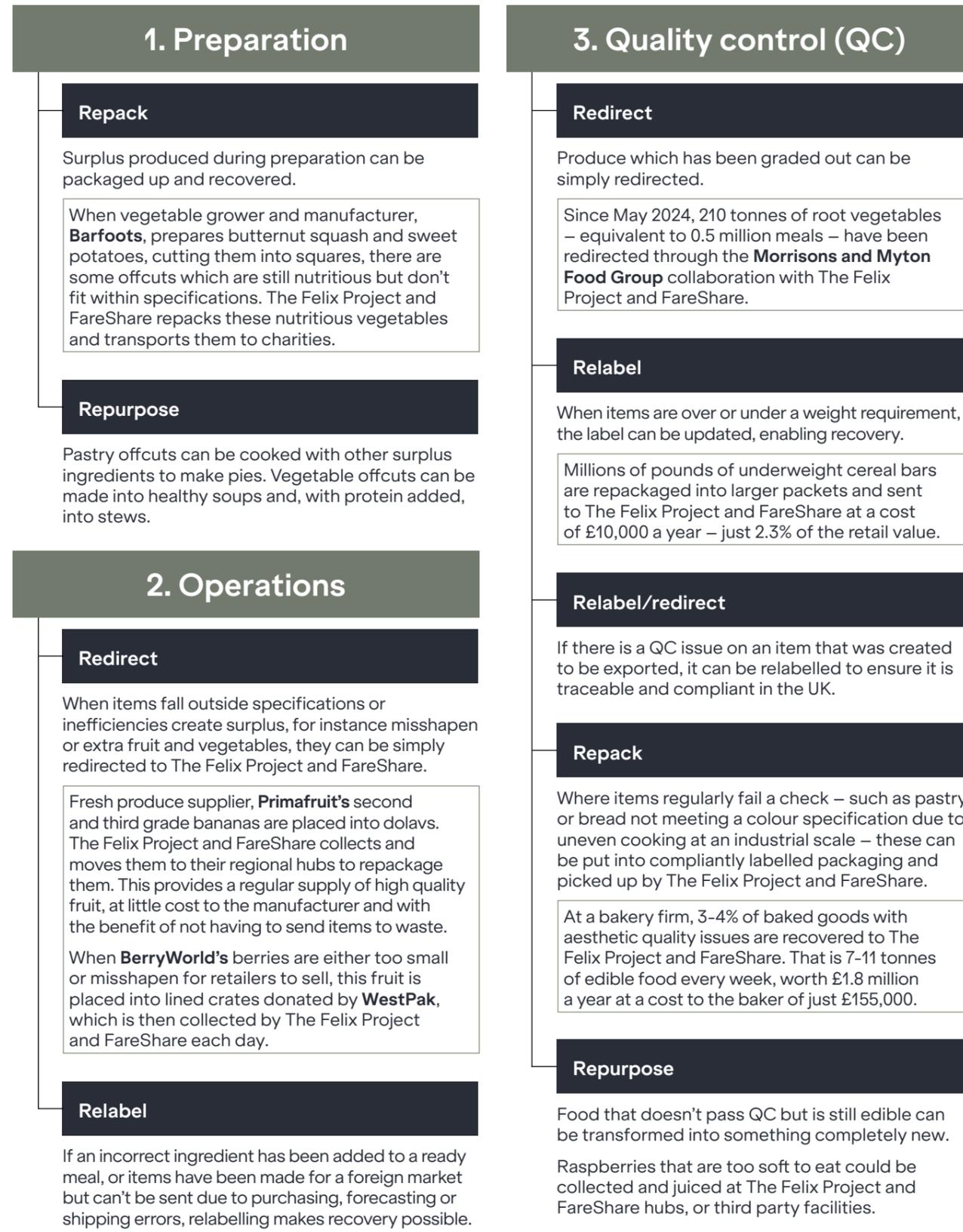
Joshua Wheeler
Senior Programme Manager – Innovation and Development, The Felix Project and FareShare

How to recover good food from factories

Getting surplus to charities in a food-safe, practical and cost-efficient way varies by product and site, but The Felix Project and FareShare do it every day. The first step is to get in touch with them to spot common sense opportunities and talk through which of the four key methods for recovery may be appropriate for your situation.

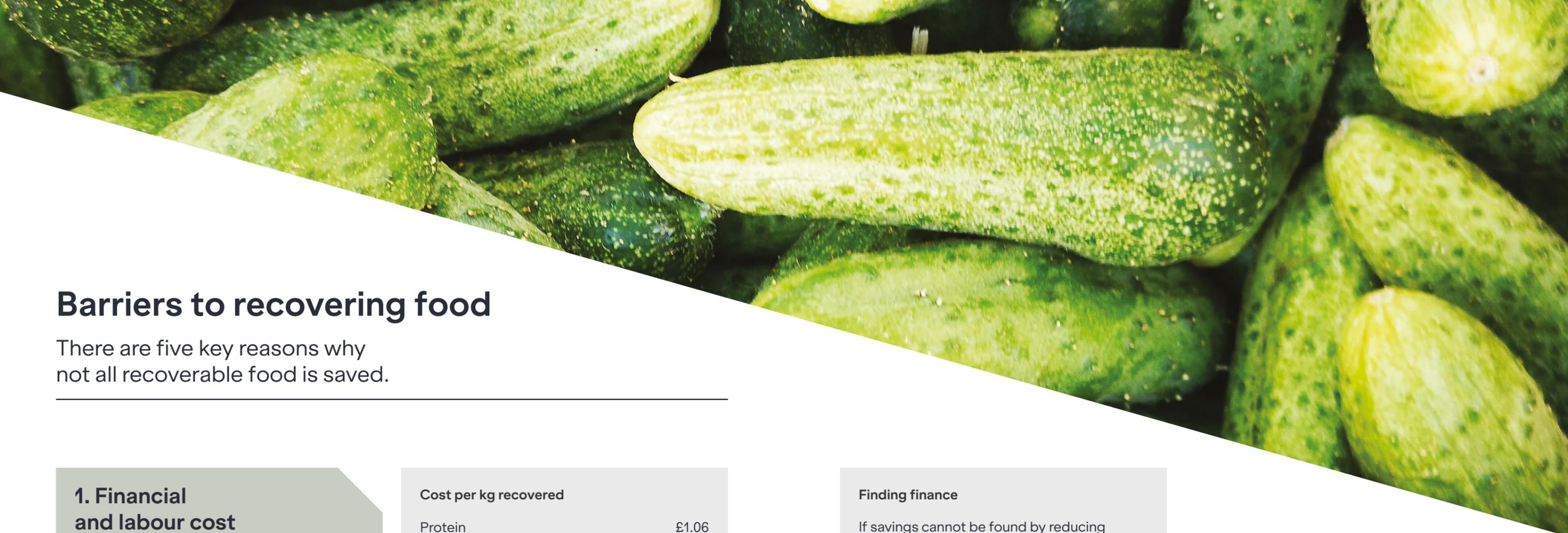
How to recover each type of surplus in food manufacturing

■ Surplus type ■ Approach



“There is so much that we do to help. We're not asking anyone to set up new packing stations on their site. We have volunteers and a processing line at Oakland International that can prepare products to go to charities. In the case of Two Sisters' breaded chicken, the food that fails QC is set to one side. Then when there is capacity, it is run back down the line for repacking. It's such an easy but innovative way to use existing resources to do good.”

Joshua Wheeler
Senior Programme Manager – Innovation and Development, The Felix Project and FareShare



Barriers to recovering food

There are five key reasons why not all recoverable food is saved.

1. Financial and labour cost

Companies can be wary of the ongoing costs and commitments. In particular, where KPIs are measured in detail, there can be concerns about adding extra processes to already stretched teams.

To recover food, there is almost always an investment required in people resources, requiring leadership agreement and in-depth understanding of down time and resourcing. But there is not always a huge cost.

Research enabled by our AI-powered cost modelling software finds fruit and vegetables and cupboard staples have a relatively low cost to recover as they do not need to be chilled or packaged. Other categories, in particular proteins, are more expensive due to the operational complexity – but even then there are processes to ensure that this can be achieved at a relatively low cost.

Cost per kg recovered

| | |
|------------------------|-------|
| Protein | £1.06 |
| Sweets and snacks | 92p |
| Dairy and alternatives | 58p |
| Cupboard staples | 35p |
| Fruit and vegetables | 31p |
| Frozen food | 28p |
| Starch | 26p |
| Drinks | 17p |

In fact, our calculations show that the cost to recover one meal is on average 17p. This is a third of what the same plate would cost to manufacture from scratch (50p).

The difference in cost is because for the recovered food, there is no retailer or manufacturer margin, and money has already been spent preparing the food regardless of whether it is recovered or not. This offsets the additional labour or packaging required for extraction and distribution.

Finding finance

If savings cannot be found by reducing waste as outlined in 'Part 1. Reduce', and there are no relevant ESG initiatives available to fund recovery, there are still a number of alternative funding options:

- **Sainsbury's and Greencore** spotted the opportunity to use some surplus manufacturing capacity to create additional food at as low cost as possible. They then generated the funds to pay to make and redirect the food with an on-pack promotion which generated enough to produce one million ready meals.
- Multiple retailers, including **Tesco, Morrisons, Sainsbury's and Waitrose** have participated in the 'Let's make a meal of it' fundraising campaign, in which money is raised at the till to spend on sourcing and redistributing meals from surplus food.



FAQ: Are there any items The Felix Project and FareShare won't take?

Apart from alcohol, there are no blanket bans and The Felix Project and FareShare explore the merits of each potential donation.



2. Brand reputation

Organisations can be concerned about consumers seeing imperfect products featuring their brand.

Products can be repacked and relabelled making it clear that they are for The Felix Project and FareShare distribution and not for resale.

Many organisations use their food waste reduction and surplus recovery programmes as a way to boost brand reputation by demonstrating how they care for their communities and the environment. The many examples in this report evidence exactly that.



FAQ: Isn't it a risk to talk about the food waste created in our processes?

Surplus is inevitable in food production because we are dealing with unpredictable natural products – and yet still only 3% of it currently goes to waste.

Doing the best that we can to prevent that waste and recover what we can is what charities such as WRAP, as well as the government and His Majesty King Charles III, consider to be the best industry approach.

3. Traceability

Products need to be traceable in case they are recalled.

Every item that is sent to The Felix Project and FareShare is logged in an online database. Volunteers record every time an item is moved through the network to a new warehouse or to a charity so that The Felix Project and FareShare knows where it came from, where it has been, where it went and how long it has been in the system.

As a food business, The Felix Project and FareShare has a documented food safety management system which lists everything that needs to be done to keep food safe – how it is delivered to the warehouse, stored, picked and dispatched.

The Felix Project and FareShare depots are audited at least twice a year, once internally and once by an industry-leading third-party who make sure all required standards are met and documented.

4. Labelling

Ingredients must be listed correctly to prevent allergy issues.

If an item is labelled with the wrong ingredients, is written in a different language, for a different legal jurisdiction, or has not got all the allergens highlighted:

- When it is allocated to a charity, The Felix Project and FareShare's online database will automatically generate a dispatch note including the spec sheet sent by the manufacturer.
- If it is going to be given or sold to an individual, it will be relabelled or overlabelled with the accurate information, for instance a sticker could be added by volunteers at the depot stating that the product contains milk if this has not been highlighted in the allergens list.

The Felix Project and FareShare work closely with every manufacturer it partners with to make sure that they are comfortable with the end-to-end solution.

They are experts in developing options based on the practical unique situation but in the rare cases where they are in new territory, they have consultants on hand to help if there are any questions about formatting or legalities and the approach will also be checked with the primary authority, The Royal Borough of Greenwich.



FAQ: Could our brand be damaged if people see imperfect products?

The Felix Project and FareShare will work with you to ensure that any food which is recovered is labelled and packaged appropriately.

5. Silos

Due to competing demands, some teams may be more committed to reducing waste than others.

Operations, commercial and ESG teams need to all have the ambition to reduce waste together. This alignment is often the result of inspiring and enabling leadership, and the understanding that getting involved holds advantages for everybody – helping ESG teams meet their targets and commercial teams to build relationships with retailers.

Simple steps to a significant impact

Even small percentages of regular surplus add up over time. Any amount is worth talking to the The Felix Project and FareShare team about, who are hands on in coming up with bespoke solutions for each organisation. Some companies fill a dolav with food each week for volunteers to pick up, where others have pick-ups every day in larger quantities.



Businesses can worry about damage to their brand reputation caused by imperfect products being in the public domain, or food not being kept at the right temperature. But we have robust supply chains in place with carefully managed temperature-controlled environments, and ways to relabel or repackage products to maintain brand reputation. It really is easier than it might seem.”

David Stokes
Head of Strategic Sourcing
Alliance Food Sourcing



There is a perception that manufacturers need to save large amounts of surplus for it to be worthwhile but that is not the case. Regular surplus that can be simply extracted is available on far more sites than people realise. Look for repeatable instances of surplus, then get in touch with The Felix Project and FareShare who can work out how to get that particular type of food to the right partners, in the right packaging with the right storage and transportation options.”

Matthew Knox
Director, Newton



PART 3

Reinvest

Reinvesting resources to make the greatest collective impact

In line with the UK government, WRAP and the Coronation Food Project recommendations, this report has revealed how to reduce waste, then recover surplus that remains. This final additional section outlines ideas on how to collaborate in reinvesting for the greatest impact.

Meals generated if savings from reducing waste are reinvested to manufacture additional food to donate

657m

Creating the greatest impact

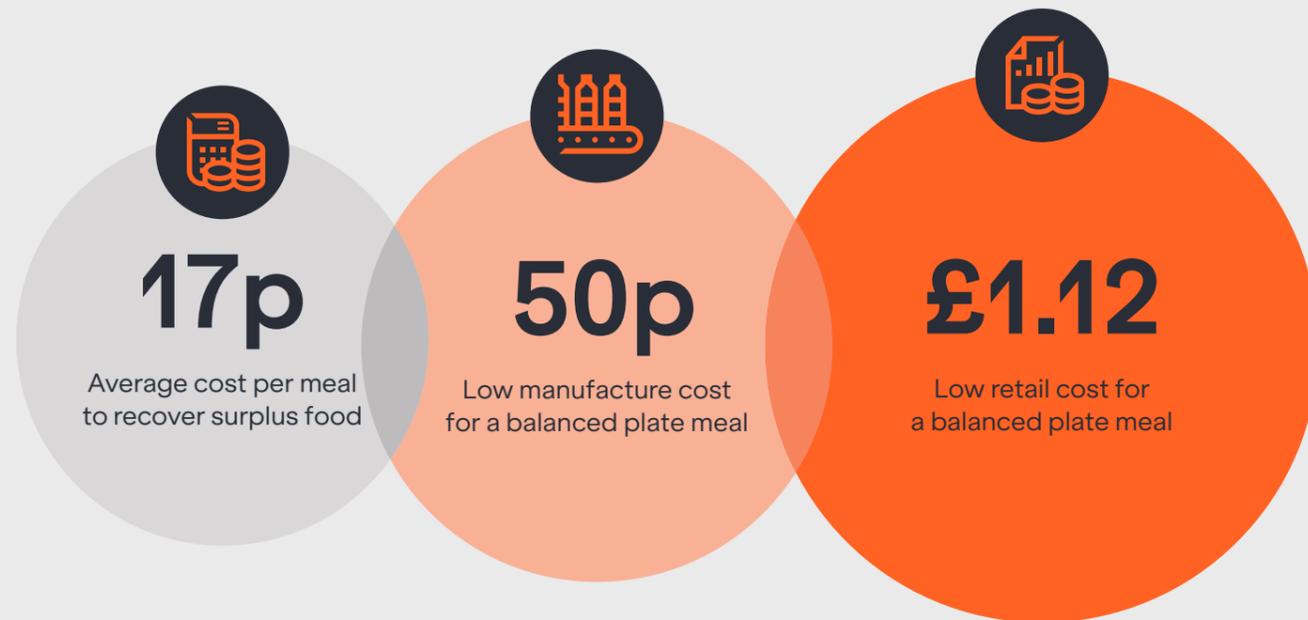
Where are the best places for us to focus as an industry to get food to people who need it? At just 17p per meal, recovering surplus food is incredibly cost effective, so it is right that this is the initial focus to help the most people. But where next? And what if your category already has a low or no surplus?

What if we were to all come together to produce more food specifically for charities? What if at the same time, all the incredible resources of retailers and manufacturers were brought together – finance from ESG and marketing initiatives, factory lines, fridges, vans, buying power and innovative skills in recovering food?

With £326 million worth of potential savings created by reducing waste plus extensive retail corporate social responsibility initiatives to tap into, the impact of this innovative approach would be significant.

Our research finds that a low retail cost for a balanced plate meal is £1.12, whereas the low cost to manufacture a balanced plate meal is 50p.

If all of that **£326 million was reinvested** into creating balanced plate meals at the lowest marginal manufacturing price, it would **create 657 million meals a year to donate**. That's over twice as many meals provided for vulnerable people than if we spent the same money in a retailer.



We are all commercial organisations, so even if all those savings were not used, **for every 10% reinvested, 66 million meals of good food would be generated for charities.**

This is not a pie-in-the-sky idea: leading retailers, manufacturers and providers are already reinvesting in exactly this way and truly collaborating to make best use of resources across the supply chain.

Industry example



Manufacturers Two Sisters, Bakkavor, Greencore and Samworth Brothers all work to identify quiet moments in production to produce huge amounts of food for The Felix Project and FareShare, including cottage pies, pizzas, soups and pasta dishes. These, often one-off or ad hoc runs provide such a large volume of food that it cannot all be sent to charities at once, so cold storage provider **Magnavale** provides large storage spaces in freezer facilities across the country. This allows The Felix Project and FareShare to distribute the incredible amounts of food as and when required across the network, helping overcome peaks and troughs in both need and supply.

Producing more good food

How can organisations work out where it is best to reinvest? There are two key opportunities to look for:

Opportunity 1 Reactive, yet regular

What are the opportunities to produce non-branded items within your daily/ weekly excess capacity?

Each time it becomes clear that there is going to be stranded labour in a shift, could a line be run for minimal marginal cost? This might be driven by daily or weekly order fluctuations from retailers causing an oversupply of labour, or through fixed shift patterns that don't allow full flexibility.

Through regular communication with The Felix Project and FareShare teams, even a small

amount of line time could go a long way to providing a significant increase in food availability.

One of the most significant resources required for this idea is people's time. But there's a real pride in manufacturing teams: they want to create great products for people so this is an opportunity to engage workforces by enabling them to do the right thing during any moments of down time.

Opportunity 2 Planned

What are the opportunities to produce non-branded items during seasonal or expected downtime?

Can you regularly produce extra surplus for The Felix Project and FareShare – perhaps on a quarterly or annual basis?

Collaborating for a thriving industry

Transformation doesn't just sit on the shoulders of manufacturers. Real momentum to reduce food insecurity requires a united, aligned industry.

Everyone across the end-to-end of the food chain – from farms to factories to packaging and logistics – all of us have our part to play in finding ways to save money, reinvest and work together in the most cost efficient ways.

Every organisation has unique resources to offer, even those producing no waste can identify surplus factory space, capacity, people and buying power to source food charities need. Resources required to fight food insecurity include:

- **Buying power** – Procurement can use their influence to procure ingredients and raw materials at a good cost.
- **Logistics** – There may be opportunities to help move items in and around the network when transportation is empty such as returning to the depot.
- **Space** – Some factories allow The Felix Project and FareShare to use spare factory capacity, for instance when seasonality means lines are inactive. Others provide freezer space storage which helps to address peaks and troughs of supply due to seasonality.
- **Retired assets** – Spare packaging and redundant equipment are incredibly useful and save The Felix Project and FareShare one-off costs.
- **Expertise** – You are the experts of the industry. Suppliers might not have any surplus products, but they may have an amazing marketing department that could help The Felix Project and FareShare for a few hours a month. Legal expertise, technical, technology and IT advice are also valuable resources.
- **Collaboration** – We can all share best practice with other similar organisations, including competitors, through Alliance Food Sourcing.



Industry example

The Felix Project and FareShare is working with food group **Princes** and supermarket **Waitrose**, aiming to create the best value tin of baked beans in the country. Princes is using its economies of scale to procure the best cost ingredients and packaging and is reviewing how to use seasonal fluctuations in factory capacity to manufacture the beans, while Waitrose is providing funding for the project.



FAQ: There is no surplus in our factory. Can I still get involved in the industry mission to feed more people in need?

Yes, absolutely. There are many other valuable resources you could contribute – from line time to freezer space to buying power to marketing and legal expertise.

If you would like to get involved, please look at the 'Connect' section of this report to see who you could work with to identify your best opportunities to contribute.

FAQ: As a retailer, how can I help with the industry mission to feed more people in need?

Your investment and influence will be key to us achieving real momentum as an industry on food surplus. From agreeing long-term contracts with suppliers where the specifications align with customer needs and don't go beyond to create unnecessary waste, to investing in updating machinery and using your buying power to source food charities need. To get involved, please check the 'Connect' section of this report to find who can help you identify the best ways to help.



Championing the industry

The government also has a role to play and has indicated its willingness to do so. Building on Defra's successful 'Tackling Food Surplus at the Farm Gate' scheme, the government should bring businesses, charities and departments together to redistribute more surplus food.



There are scalable, robust proofs of concept in progress that organisations can be involved in if they want to lead the charge. As well as getting more good food to people in need, these projects will provide the evidence we need to support our asks of government and create the future we all want."

Nicola Robinson, Director, Alliance Food Sourcing

The Felix Project and FareShare's Policy Memo to the government uses this report's data to show the scale of food waste in manufacturing. It outlines six steps towards building a sustainable food redistribution sector:

01

Restructure the Corporation Tax regime to incentivise redistributing surplus food to charities over anaerobic digestion and animal feed.

02

Add charitable redistribution to the Environmental Land Management Schemes.

03

Embed surplus food redistribution in the Circular Economy and Food Strategies.

04

Introduce mandatory food waste reporting.

05

Establish a Manufacturing and Hospitality Surplus Redistribution Innovation Fund.

06

Publish official guidance on liability for food that is donated.



Farmers and manufacturers are incentivised to dispose of food waste through anaerobic digestion and animal feed – even though wasting food is the last thing they want to do.

We're calling for all donations of food surplus to be incentivised through the tax system, removing a significant financial barrier for everyone.

To overcome the marginal costs of recovery, we're asking the government to incentivise food waste donations – as is done very successfully in other countries.

We're also looking into how to set up a fund for one-off investments in machinery and technology to reduce waste.

By supporting us with incentives and subsidies and introducing waste reporting to provide the public with visibility, every part of the food industry could and would get food to us more easily and cost effectively."

Charlotte Hill OBE, CEO, The Felix Project and FareShare



CONCLUSION

More food, more consistently will transform communities



We have never seen so much demand for food.

It used to be people in crisis – those suffering domestic violence, homelessness or long-term illness – who came to frontline community charities for food. That still happens but as the cost of living rises, more and more people who work one or even two jobs are struggling at the end of each week or month to afford food.

To give you a real example, there's a nurse who visits one of our London hubs. During the pandemic, she was one of the key workers keeping people alive. But her partner lost his job and they got into debt. Each month, if the family household is struggling, she comes in and pays a small fraction of what she would pay at retail – around a twentieth – to get what she needs for her family. She has the dignity of choice but also access to so much more through the community centre. Her husband, for instance, has built IT skills to support him to get into a job.

Their family is being transformed.

This is the power of food. It honestly happens all around the country, all the time. 90% of the community organisations who receive food from The Felix Project and FareShare also provide advice on issues like employability, debt, health, immigration, housing and domestic violence. A recent study carried out for us by the University of Hertfordshire shows that every £1 invested in surplus food redistribution generates almost £13 in social value for the UK⁹. **Food is the hook to get people through the door so superheroes in the community can address some of the underlying causes of food insecurity.**

But our charities are asking us for more to keep up with demand, and we have massive waiting lists to join the network right across the country. The problem is that at the moment, surplus is seasonal. Need has traditionally been highest in the winter months as people are paying for more energy to heat their living space.

After the harvest, there is a drop in supply so at that time of the year, there's not enough food to provide what even our existing charities require. But more food is essential year-round as circumstances today change fast, like last year, we saw an unexpected peak in demand in the school holidays as children weren't receiving their usual free meals. **If we were able to provide more food, more consistently, it would be game changing for our poorest communities.**

And it is surprisingly straightforward for retailers and manufacturers to help. We have models and maps and best practice to learn from. Please get involved and listen to the people who are doing it already – like Marks & Spencer and Two Sisters – about how easy it is and what an impact it makes on people, communities and workforces.

I would love this to just be business as usual. It makes sense commercially: we all want a thriving, prosperous United Kingdom. And, more importantly, if food is available, there is a moral obligation for all of us to make sure it makes it to the table of families in need.

We need this to be a cross-sector movement. If everybody gets involved in a meaningful way, we can genuinely make a step change in 2026.”



Charlotte Hill OBE
CEO
The Felix Project and FareShare

⁹ FareShare's Contribution Amidst Challenging Times, 2025

Connect

Newton



John D'Arcy

Partner

Get in touch with me to discuss large-scale waste reduction across manufacturing operations.



Matthew Knox

Director

Get in touch with me to explore how we turn waste reduction into measurable, operational impact.



Tim Murray

Partner

Get in touch with me about how the food and drink industry is coming together.

Alliance Food Sourcing



David Stokes

Head of Strategic Sourcing

Get in touch with me about contributing resources and teaming up with others.



Nicola Robinson

Director

Get in touch with me about cross-industry collaboration and innovation for the future.

Felix | THE FELIX PROJECT + FareShare



Ali Gourley

Senior Public Affairs Manager

Get in touch with me to discuss policy recommendations.



Charlotte Hill OBE

CEO

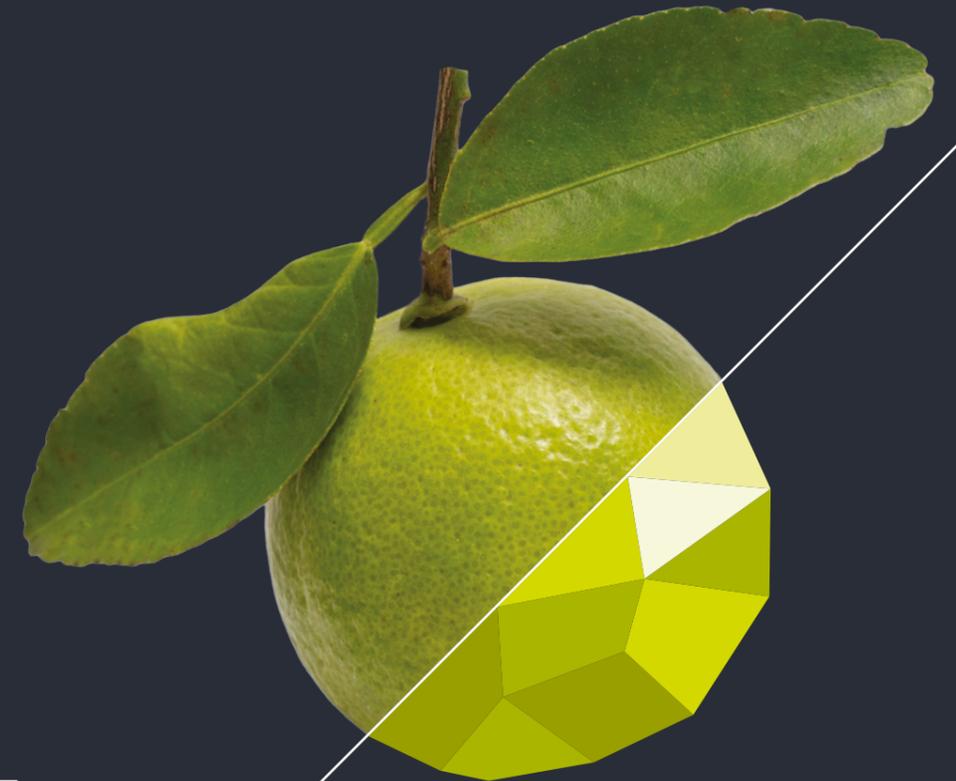
Get in touch with me about how we can work together to create momentum this year.



Joshua Wheeler

Senior Programme Manager

Get in touch with me to work out how to redirect your surplus.



About the research

Proprietary COGS tool quantifying the incremental cost of recovering waste and meals generated per £ reinvested.



Deep operational insight and benchmarking to estimate and locate waste across UK manufacturing.



Comprehensive, data-driven view of the UK's manufacturing waste landscape including:

- Total scale of sector waste.
- Where the recovery opportunities lie.
- 1. By food/drink category.
- 2. By location of waste i.e. where it is found and what causes it in the supply chain.
- What it would cost to recover.

About: Proprietary COGS tool quantifying the incremental cost of recovering waste and the meals generated through re-investment directly into manufacturing

To estimate the cost of recovering surplus food into the human supply chain, we used Newton's proprietary COGS (Cost of Goods Sold) tool to break down every constituent element of a manufacturing value chain, building a granular, bottom-up view of the costs associated with producing and recovering each unit of food.

It was used to model the incremental cost of intervening at different points in the manufacturing process to recover products that would otherwise become waste. By quantifying the specific inputs involved, it produced a transparent, data-driven estimate of the cost of recovery.

Additionally, we used this capability to estimate the total number of meals that could be generated through re-investment of the total savings through reducing waste in the supply chain.

About: Deep operational insight to estimate and locate waste across UK manufacturing

In parallel, a detailed and category-specific estimate of waste generated across UK food manufacturing was developed to create a category benchmark, drawing on:

- Over 25 years' operational experience in the sector.
- Work with 300+ manufacturers across the UK and Europe.
- Insight spanning 100+ food categories.

This insight base identifies with confidence where waste typically occurs along the manufacturing process for each category.

Comprehensive, data-driven view

Combining the operational evidence with the benchmarking data produced an anonymised, industry-representative view of:

- The expected volume of waste within each major food category.
- The points in the process where this waste is likely to arise.
- The degree to which different waste streams are accessible and recoverable into the human supply chain.

The result is a Manufacturing Waste Map that reflects real manufacturing practices and provides the granularity needed to identify actionable opportunities to reduce or recover waste.

About us

Newton

Newton partners with organisations worldwide in strategic delivery, unlocking complexity to create meaningful and lasting impact whether that's through resilient and efficient supply chains, better product and service experiences or step-changing organisational performance across the entire value chain.

Throughout its 25-year history, Newton has shaped and delivered programmes for leading businesses and major global organisations across retail, consumer goods, infrastructure, defence and public sectors.

This work includes partnering with a major retailer to increase profitability by 300%, as well as inspiring more customers to shop with them than ever before, over a billion pounds in savings on a major defence programme and over a billion in savings across public-service organisations while also improving outcomes for thousands of people.

The Felix Project and FareShare

The Felix Project and FareShare is the UK's leading food redistribution charity, made up of the two separate organisations. It was announced in 2025 that the two would come together to form a bigger and bolder organisation with greater reach and impact.

The charity continues to rescue good to eat surplus food, that cannot be sold and would otherwise go to waste, from across the food industry and get it to over 8,000 organisations across the UK who are helping to feed people experiencing food insecurity. It manages seven depots and works with 16 network partners that manage 35 depots across the UK.

FareShare was established over 30 years ago, born out of the belief that no good food should go to waste. In the last financial year, 2024-25,

FareShare redistributed 62,000 tonnes of food, or the equivalent of over 148 million meals, reaching people in every corner of the UK.

The Felix Project was started in 2016 by Justin and Jane Byam Shaw in memory of their son Felix, who passed away from meningitis in 2014 aged just 14. It became part of the FareShare network in 2020.

The new name and brand will be announced later in the year. For more information visit www.fareshare.org.uk and www.thefelixproject.org

Alliance Food Sourcing (AFS)

Part of the Institute of Grocery Distribution (IGD)

Alliance Food Sourcing (AFS) is a consortium of some of the UK's largest food retailers and manufacturers. It was inspired by the Coronation Food Project and convened by the Institute of Grocery Distribution (IGD), FareShare and The Felix Project in 2024.

AFS is focused on rescuing food from the UK supply chain. By working in partnership with the

sector, it aims to use innovation and collaboration to rescue edible surplus or repurpose it, so it can be redistributed to people experiencing food insecurity.

AFS's ambition is to rescue the equivalent of 30 million meals a year from the manufacturing sector by 2028. It has already rescued 13.5 million meals.

