



Food waste quantification:

**- A few key
learnings from
the UK**

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Drink; WRAP**

- Background
- Some general observations
- Illustrating our approach – and learnings relevant to the FUSIONS Manual
- Overall picture for the UK
- What happens next

Final report – Summary

Quantification of food surplus, waste and related materials in the grocery supply chain



Project code: CSC103-001
Research date: April 2015 to January 2016

ISBN: 978-1-84405-473-2
Date: May 2016

UK focus on food waste measurement and prevention for >10 years



Design → Production → Retail → Consumption

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**LOVE
FOOD
hate waste**

Progress



wrap

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Hospitality and Food Service Agreement 2 years on progress note

3.6% reduction in waste 'footprint' (2012 – 2014)



Design → Production → Retail → Consumption

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75% increase in food redistributed (2012 – 2014)

>10% reduction in food waste (2009 – 2014)

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- Measuring food waste is incredibly challenging!
- Definitions can be confusing (e.g. total vs edible, food surplus to animal feed)
- Estimates for only a small percentage of food waste can be easily extracted from national statistics (<10%)
- Estimates of food waste in the UK have been published by WRAP, based on a combination of data from its voluntary agreements, bespoke research projects and syntheses / analysis of data from a variety of other sources

- Excluding non-food waste can be difficult (garden waste, packaging, by-products, soil, process water etc.)
- Approach needs to be tailored to the sector and waste stream
- Need to balance robustness and comparability over time, with cost and complexity – and agreeing what the 'appropriate' balance is
- In-depth studies for priority sectors every 4-5 years, 'light-touch' approach for intervening periods and lower priority sectors



Our collective ambition

is to cut the amount of
resource needed to provide
our food & drink by

**one fifth in
ten years**

Targets

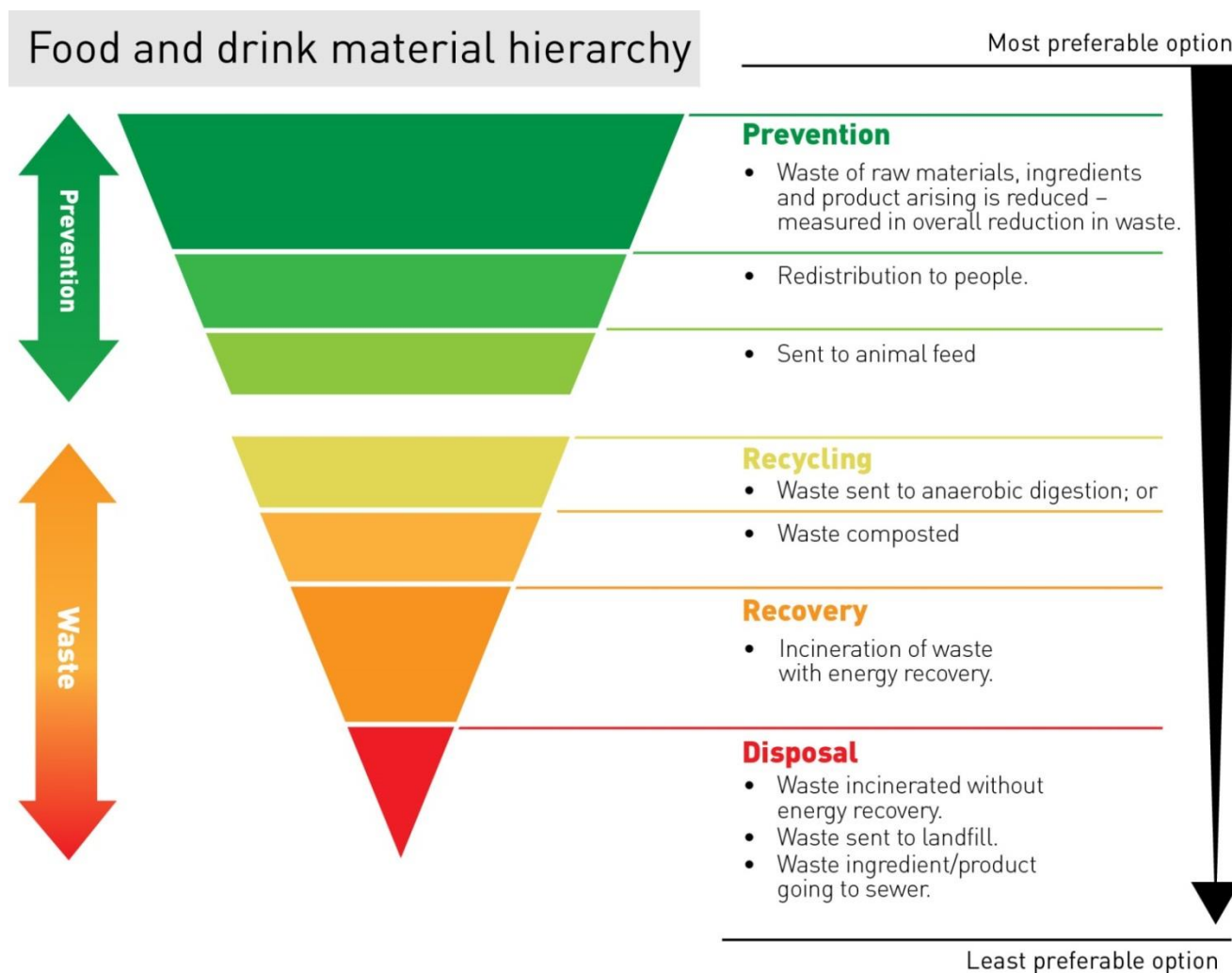
20%
reduction in
food and drink
waste

20%
reduction
in GHG



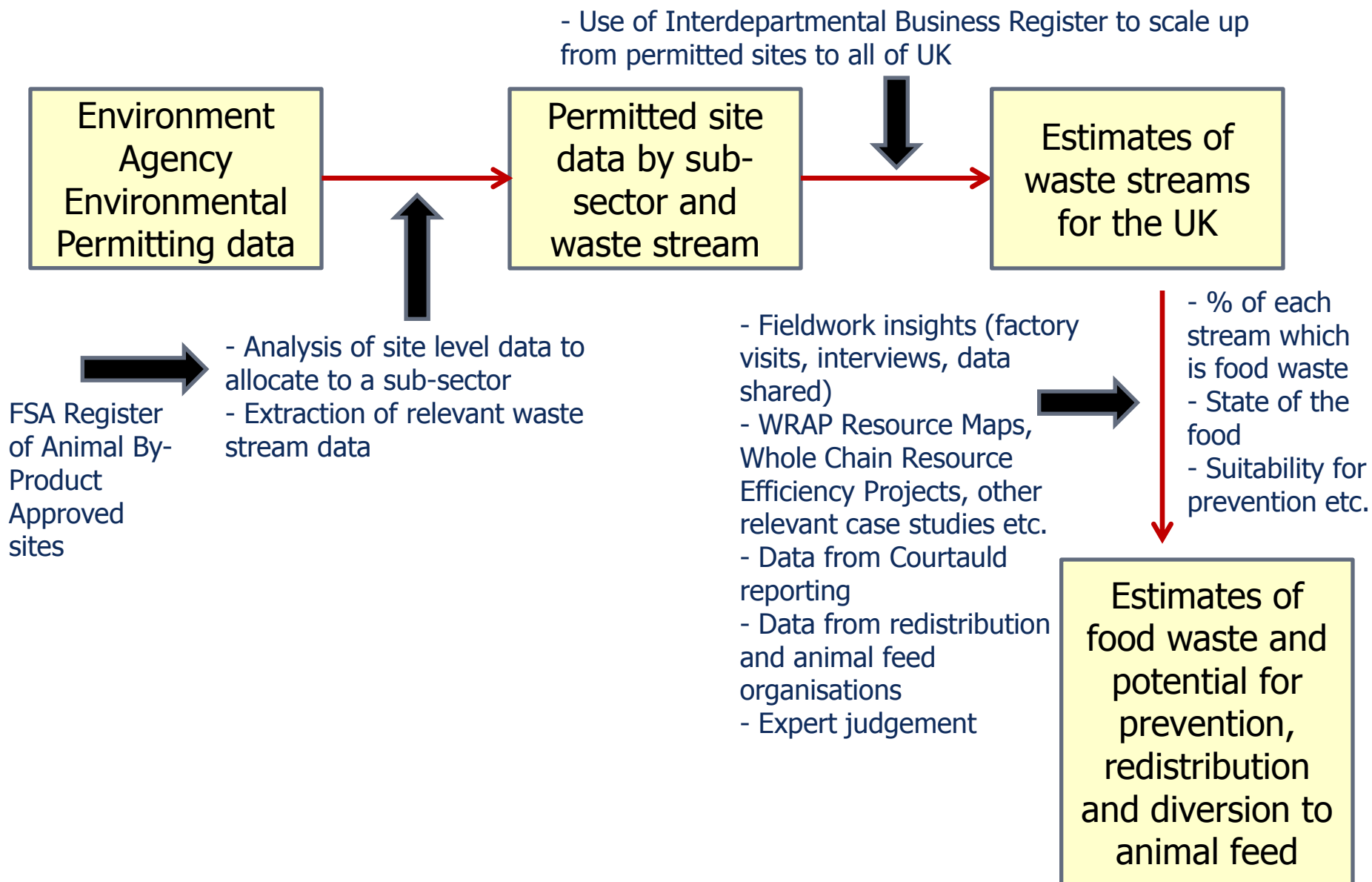
- Relatively poor evidence base on food surplus and waste at manufacturing (and retail)
 - Only overall estimates for total food waste, and destinations
- Initiated new research project early 2015

■ Used the food waste definition developed by FUSIONS



- No single source of data can provide estimates for food surplus or food waste
- This research synthesised data and insights from:
 - Relevant national statistics
 - Trade association surveys
 - A range of site visits and interviews
 - Confidential company data
 - Related WRAP and other research
 - Company Shop, FareShare and UK Former Foodstuffs Processing Association (UKFFPA)

Synthesis of multiple data sources



- Food manufacturing and retail in the UK is highly efficient, with <5% surplus and waste
- Food surplus and waste at retail amounted to 240,000 tonnes, or the equivalent of 0.7% of UK sales
- In manufacture there were 2.4 million tonnes of food surplus and waste, the equivalent of 4.2% of UK production

	Total food waste (t)	Total food surplus (t)	Total food surplus and waste (t)	% surplus and waste of production/sales
Manufacture	1,700,000	680,000	2,400,000	4.2%
Retail	210,000	32,000	240,000	0.7%
Total	1,900,000	710,000	2,600,000	

Manufacture material flows (2014/15)

Manufacture and
associated logistics



Retail (RDC
and stores)



Consumers

By-products /
ABPs

2.8 Mt

Food surplus

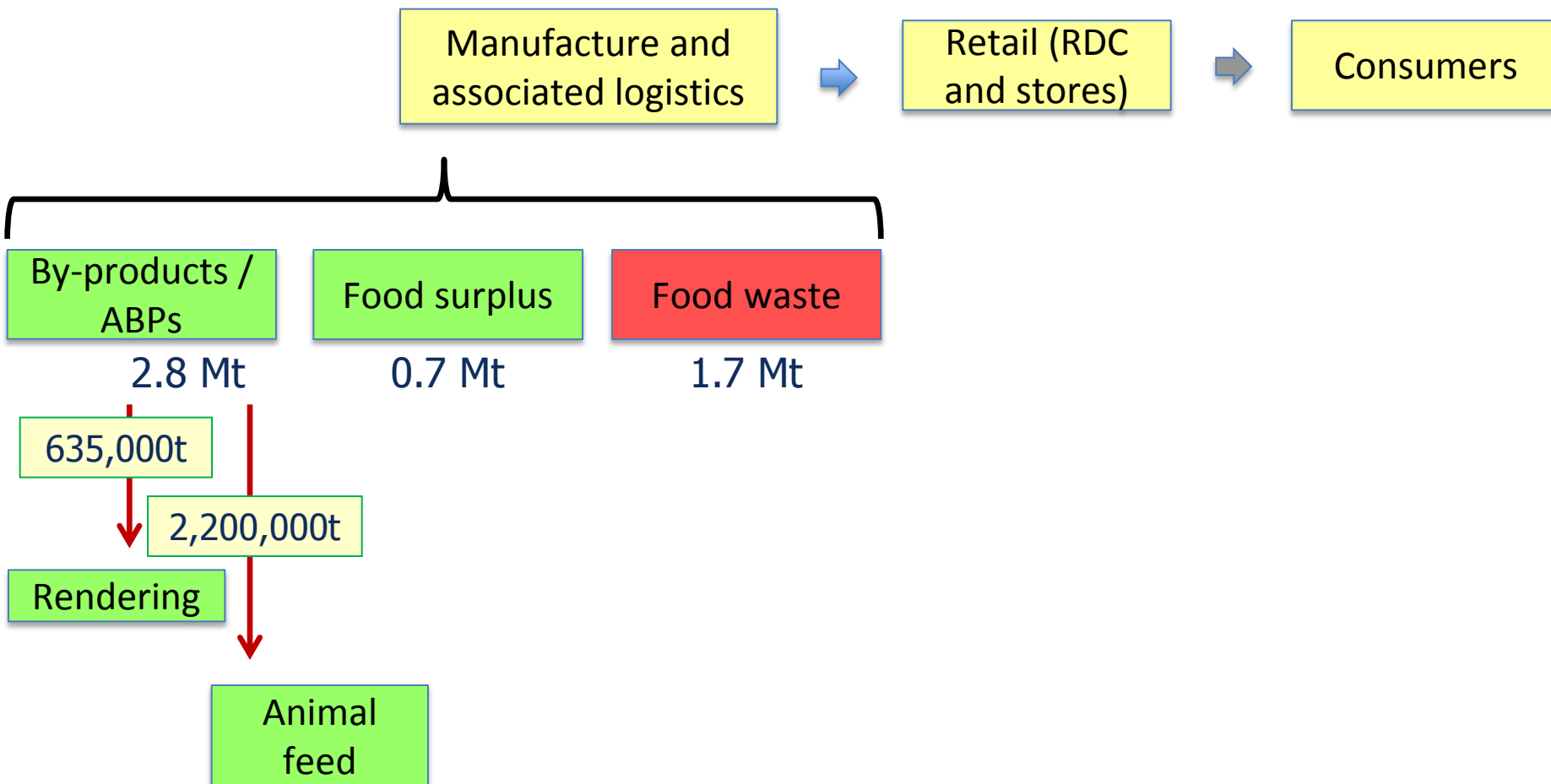
0.7 Mt

Food waste

1.7 Mt



Manufacture material flows (2014/15)



Manufacture material flows (2014/15)

Manufacture and
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Consumers

By-products /
ABPs

2.8 Mt

Food surplus

0.7 Mt

Food waste

1.7 Mt

635,000t

635,000t

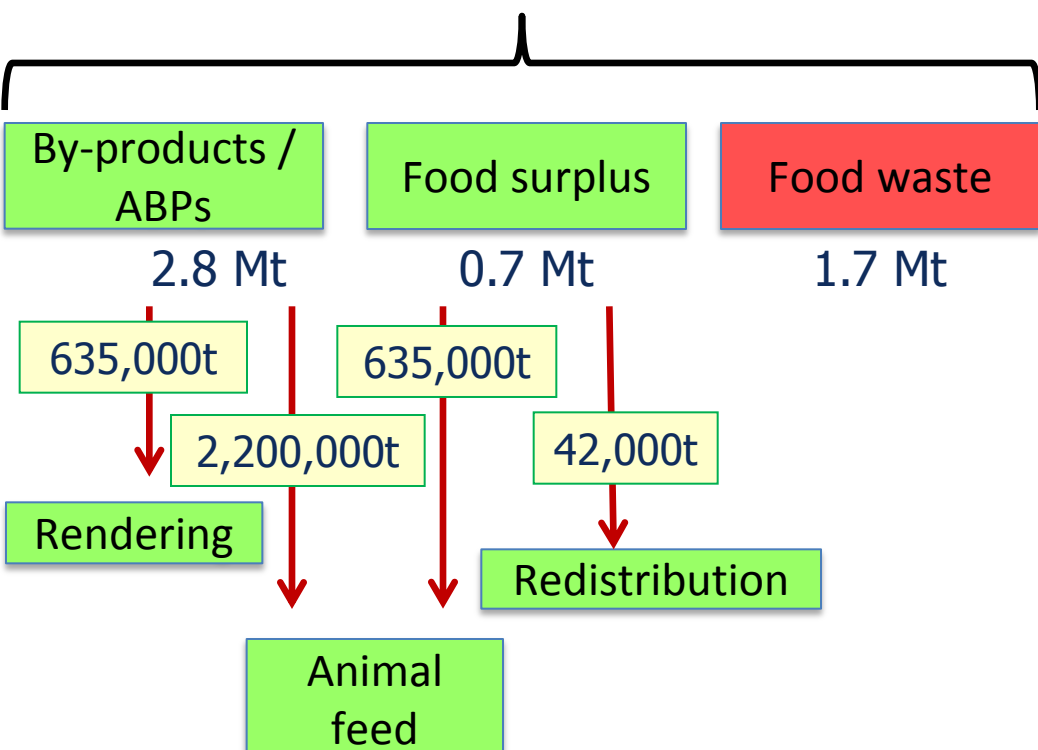
42,000t

2,200,000t

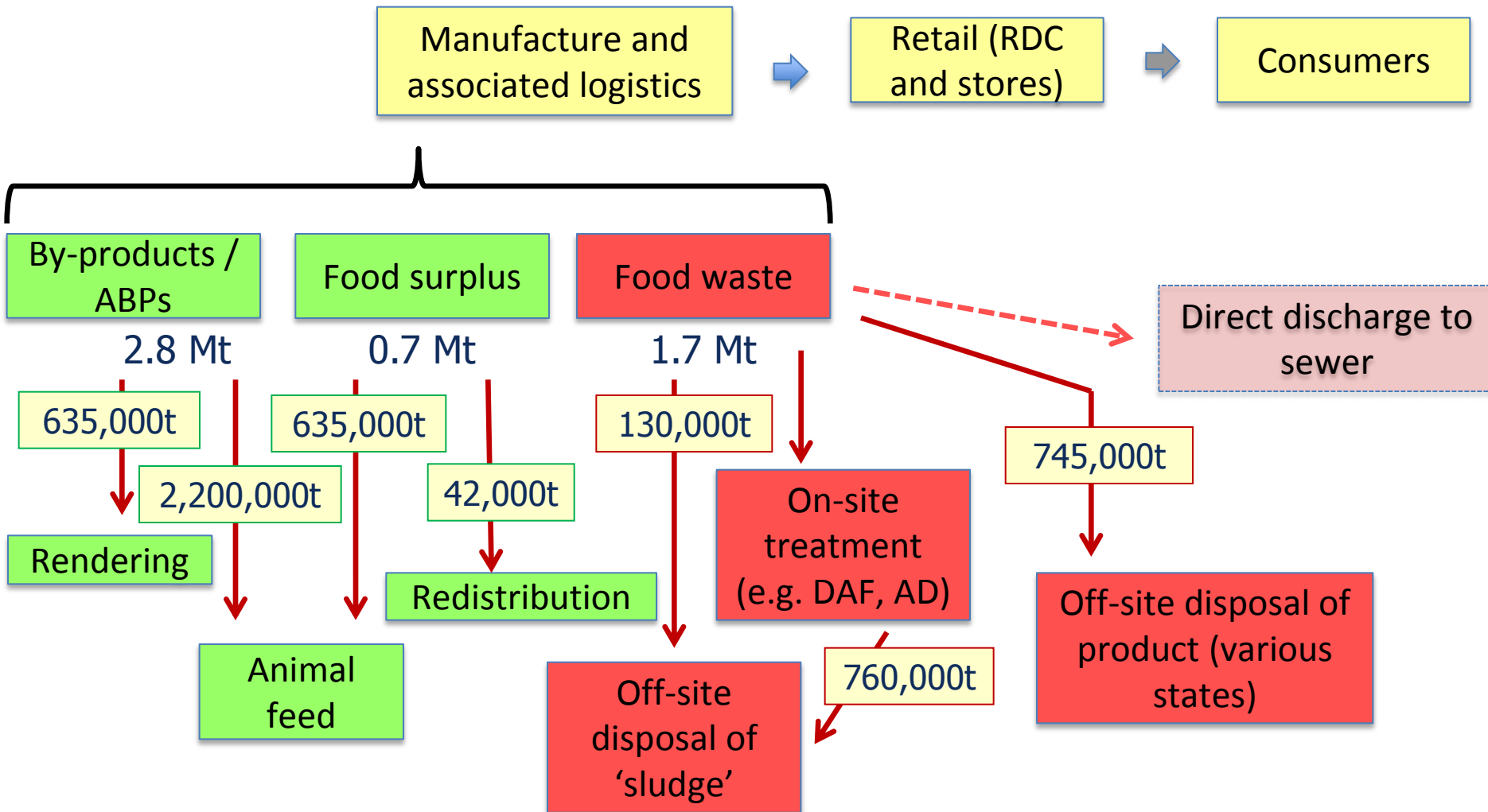
Rendering

Redistribution

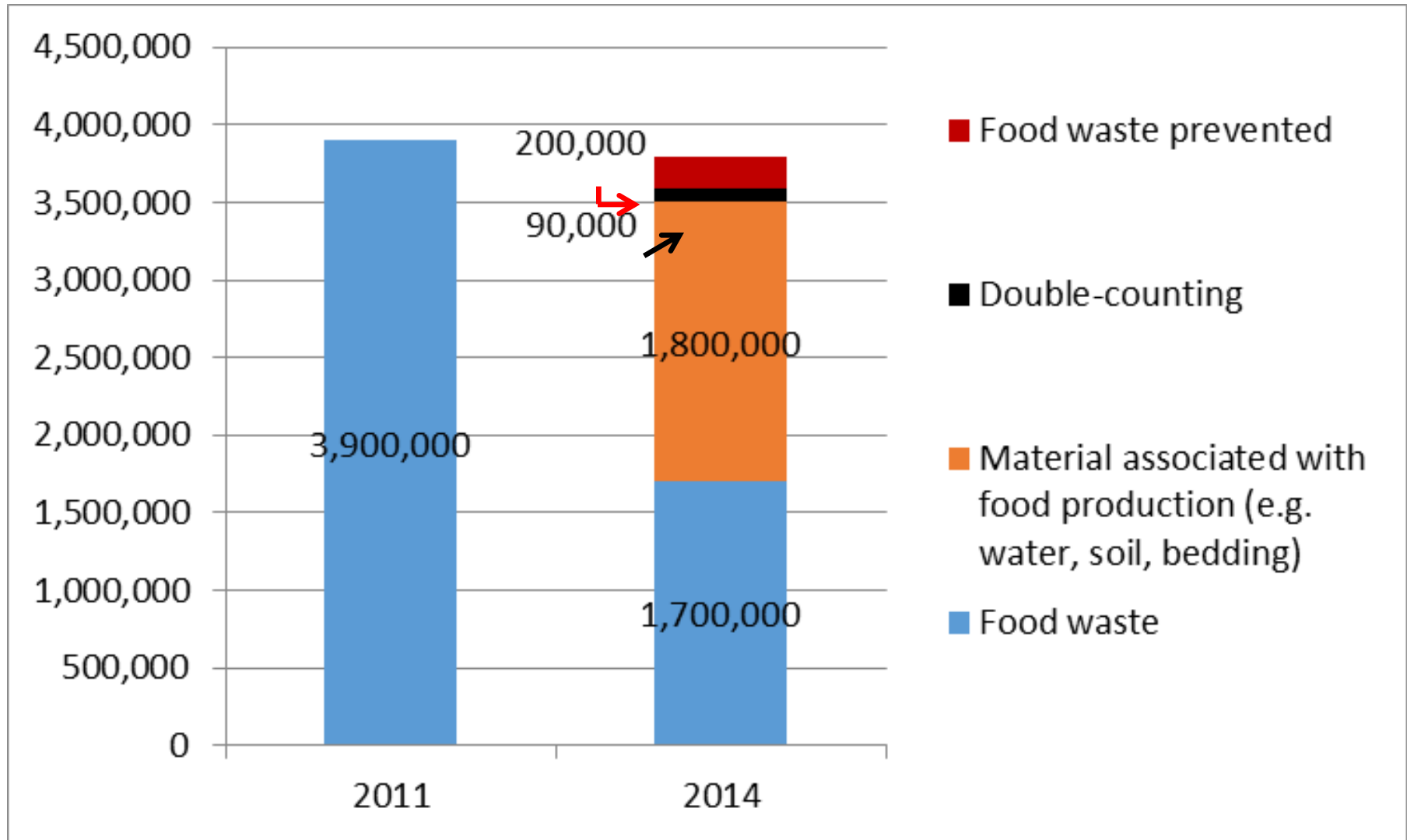
Animal
feed



Manufacture material flows (2014/15)



Manufacture – much lower food waste estimate



First estimate for how much is avoidable/edible

Total food waste – 1.9 Mt



[Includes both avoidable or edible food, and the inedible or unavoidable portion of food, for example skin, peelings, shell etc.]

Of which 56% is:

Edible / avoidable food waste – 1.1 Mt



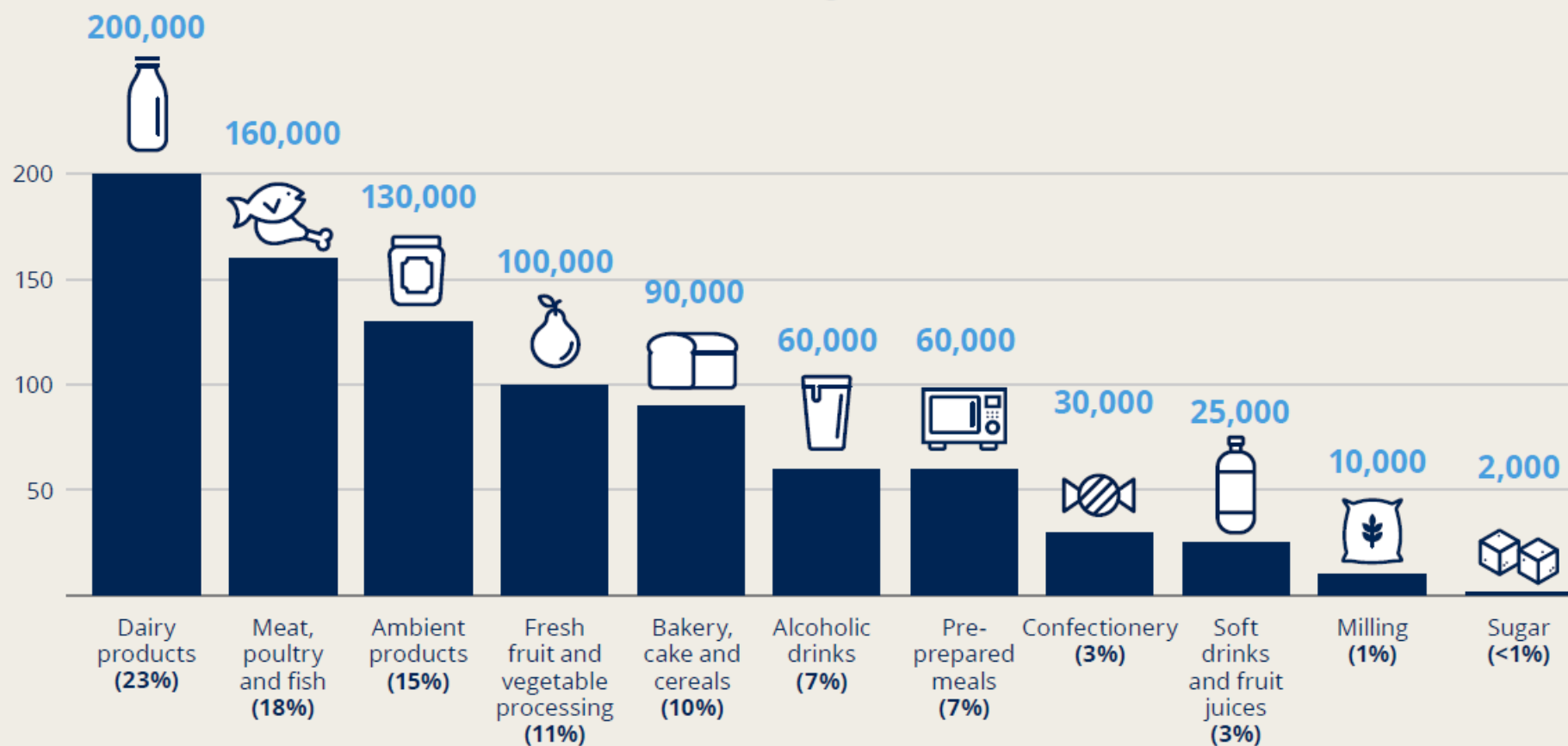
[Includes only the portion of food wasted that was intended for consumption, with or without further processing, for example ingredients or product lost during changeover/cleaning, QA rejects, damaged final product etc.]

Avoidable (edible) food waste - £1.2 billion

For the first time we have estimates for how much avoidable food and drink waste occurs by manufacturing sub-sector

(tonnes of avoidable food waste)

(% of the total manufacturing avoidable food waste)



What does this mean for Courtauld 2025?

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Targets

20%
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20%
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in GHG

- Less food waste than we thought
- Significant potential to do more
- Confirms that it will be challenging
- Gives a clear focus for action

Ways to avoid waste

450,000t of food and drink waste is practically avoidable in the timeframe of Courtauld 2025

This is possible through a combination of prevention of arisings, increased redistribution and diversion to animal feed

This represents a **23%** reduction in manufacturing and retail food waste (or a 42% reduction in the avoidable food waste)

Manufacturing

355,000t



155,000
tonnes of food waste prevented from arising



70,000
tonnes of additional redistribution



130,000
tonnes of additional surplus to animal feed

Retail

93,000t



30,000
tonnes of food waste prevented from arising



50,000
tonnes of additional redistribution



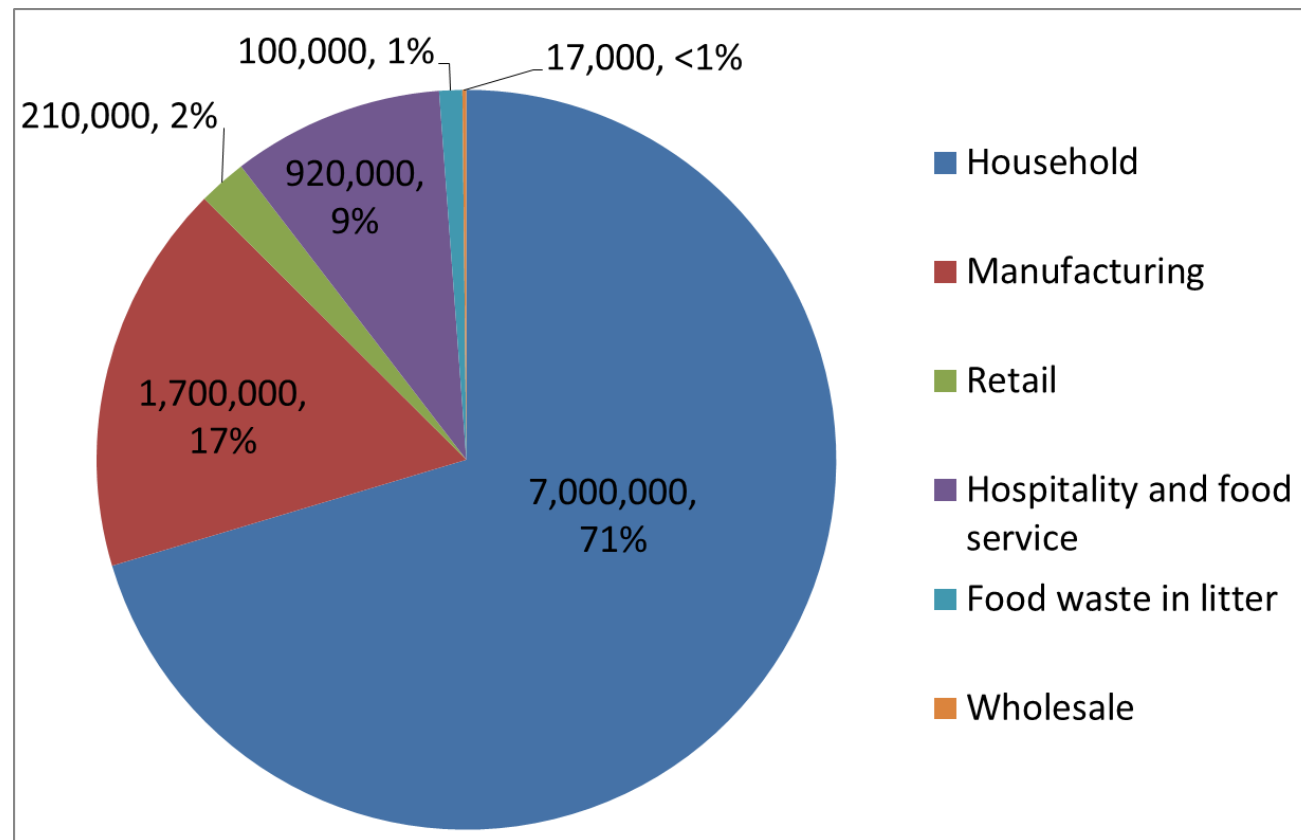
13,000
tonnes of additional surplus to animal feed

What does this mean for Courtauld 2025?



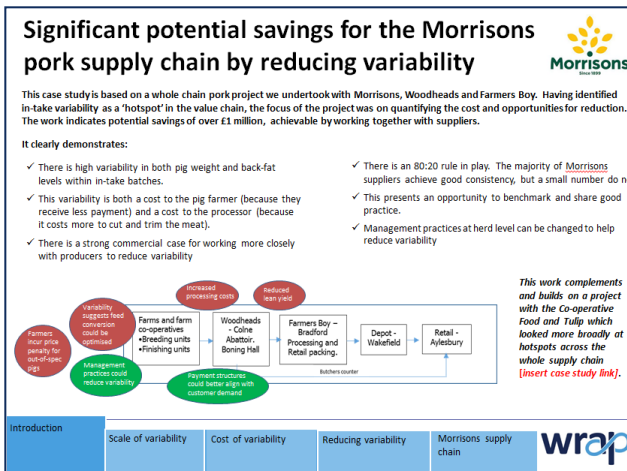
- Less food waste than we thought
- Significant potential to do more
- Confirms that it will be challenging
- Gives a clear focus for action
- Provides the basis for on-going measurement

- The amount of food being wasted post-farm gate in the UK is around 10 million tonnes, worth around £17 billion a year
- Commitment to obtain estimate for primary production by 2018



What happens next?

- New resources to aid action
- Courtauld 2025 Working Groups and projects
- Input to global, EU and UK Government discussions on food measurement and prevention
- Continue to learn!



Version 1.0

Framework for Effective Redistribution Partnerships



Draft

Guidance for Food and Drink Manufacturers and Retailers on the Use of Food Surplus as Animal Feed



This guidance provides key considerations for identifying, segregating and diverting suitable food surplus to animal feed in line with relevant legislation.

Creating value from surplus drink products: redistribution to charities and Animal Feed

Coca-Cola Enterprises (CCE) has successfully tackled the problem of surplus soft drink products, safely diverting them away from anaerobic digestion (AD), to redistribution and animal feed, in line with the food and drink utilisation hierarchy.

- CCE developed an end-to-end process to recover surplus drink products to redistribute to charity for human consumption or, failing that, as a valuable input to animal feed.
- In the first year of the scheme, 800 tonnes of surplus soft drink products were recovered and diverted to humans or animals away from AD.
- This was an integrated process that allowed CCE to review their production and to create efficiencies across the business, not only through diverting surpluses to people and animals but also through maximising the amount of product that could be sold. CCE work with FareShare as their chosen redistribution partner and Green Feeds as their chosen animal feed partner.

- This process has created net cost savings for product previously sent for destruction at AD and also helped food charities provide social value.
- This case study identifies the evolution of improvements to achieving an integrated drink waste optimisation process.

"The Coca-Cola Enterprises team has worked hard to achieve innovative resource efficiency aims by utilising products in the most sustainable means possible. The programme has exceeded expectations and will continue to be an integrated part of our production model. Colleagues across CCE's European businesses are now exploring similar opportunities, following our example."

Wayne Boden, GB Environment Manager, Coca-Cola Enterprises



Thank you

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