
UNEP Asia Pacific Food Waste Working Group 2023

Workshop 2: Consumer Behaviour Change Programmes

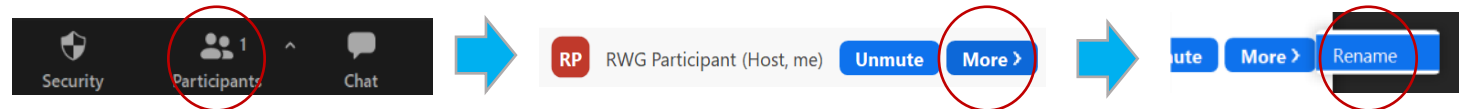
30/08/2023

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WRAP

HOUSEKEEPING

- Please mute microphone when somebody else is presenting or speaking. Please unmute your microphone for discussions and questions!
- Please change your name on Zoom to include your **country** (e.g. Joe Bloggs – United Kingdom)
- We are recording
- If you are having technical difficulties, please contact **Project Admin Team**



Agenda

Section
Introduction & housekeeping
Introduction to Food Waste Strategy Homework + COP28
Step 1: Establish context
Step 2: Identify opportunities
Poll + Discussion
Step 3: Intervene
Guest Speaker
Step 3 continued (Food service)
Step 4: Scale
Final questions and wrap up



National Food Waste Strategy Task

National Strategy and Action Plan to Combat Food Waste

Version in accordance with the Resolution of the Council of Ministers No. 46/201 published in the Portuguese Official Journal (*Diário da República*), 1st series, no. April 27, 2018



REPÚBLICA PORTUGUESA

CNCDA | Comissão Nacional de Combate ao Desperdício Alimentar
CNCDA | National Commission for Combating Food Waste



A Food Loss and Waste Strategy for Canada

NATIONAL ZERO WASTE COUNCIL



zeroWASTE
NATIONAL ZERO WASTE COUNCIL
An Initiative of Policy Innovation



Australian Government

NATIONAL FOOD WASTE STRATEGY

HALVING AUSTRALIA'S FOOD WASTE BY 2030

November 2017





Rialtas na hÉireann
Government of Ireland

Ireland's National Food Waste Prevention Roadmap 2023-2025





Federal Ministry of Food and Agriculture

National Strategy for Food Waste Reduction

bmel.de



National Food Waste Strategy Task



National Food Waste Reduction Strategy Template

Following on from the first series of Regional Working Groups that aimed to support nations to create actionable plans to for food waste measurement to report against SDG 12.3.1, the present series focuses on delivering food waste reductions.

To fully benefit from participating in the workshop series, participants are invited to complete the following document, with the aim to guide participants in developing a National Food Waste Strategy.

Please follow the template below. The questions presented show key information you want to capture. If you do not have data which could inform this in your country, expert judgement between Regional Working Group participants will be sufficient to start, though you should think about how evidence gaps can be filled. For additional guidance, including prompts for each section relevant to the workshop series, please see 'National Food Waste Reduction Strategy Outline Guidance Document'.

Context and background

- What is known about food waste in your country?
- What political objectives or targets exist around food waste?
- How does FLW prevention and waste management contribute to other social, economic and environmental objectives?
- What has been done so far? See [Germany's Food Waste strategy](#) 'Ongoing work' (page 9)

Session 1: Public Private Partnerships

Reducing retail and Supply chain waste:

- What role can a Public Private Partnership have – is it appropriate in your context?
- Are there any public private partnerships in place that connect manufacturers, suppliers and retailers in the food industry? What about existing trade associations who help coordinate businesses?
- Who are the main supply chain actors to target for future PPPs? Which sectors are vertically integrated?
- What role do you envisage government playing in a PPP? Can government facilitate action?
- What role might regulation play? Can it help facilitate industry action?

Reducing food service waste

- Think about the food service sector in your country, who are the big actors? How can they be engaged? Is a PPP a suitable approach?
- Are there any trade associations that could be engaged in a PPP? Particularly relevant for small, independent organisations.
- Is there an opportunity for best practice in public procurement? (Food served in schools, hospitals, government offices etc.)

Reducing consumer/household waste:

- How is household food waste impacted by retailer/manufacturer practices? Could a PPP be used to tackle these waste generating practices?
- Think about labelling, packaging size etc. as examples of where business actions could be impacting consumer food waste.

Effectively managing the wastes which do arise:

- Could a PPP allow the food waste hierarchy to be embedded into manufacturer/retailer practices?
- How could a PPP support redistribution of surpluses? Can collaboration be used to overcome barriers to food waste redistribution?
- Could a PPP support/fund waste treatment?



COP28: Who is going?

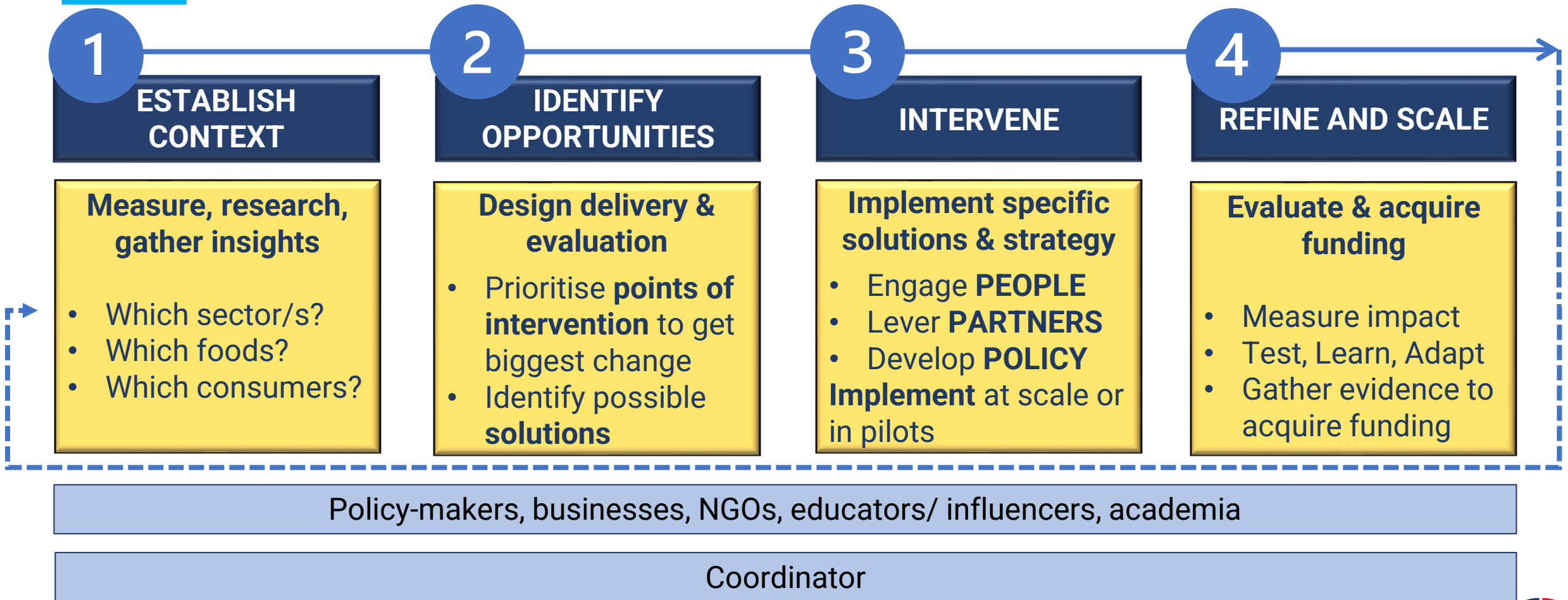


COP²⁸
UAE

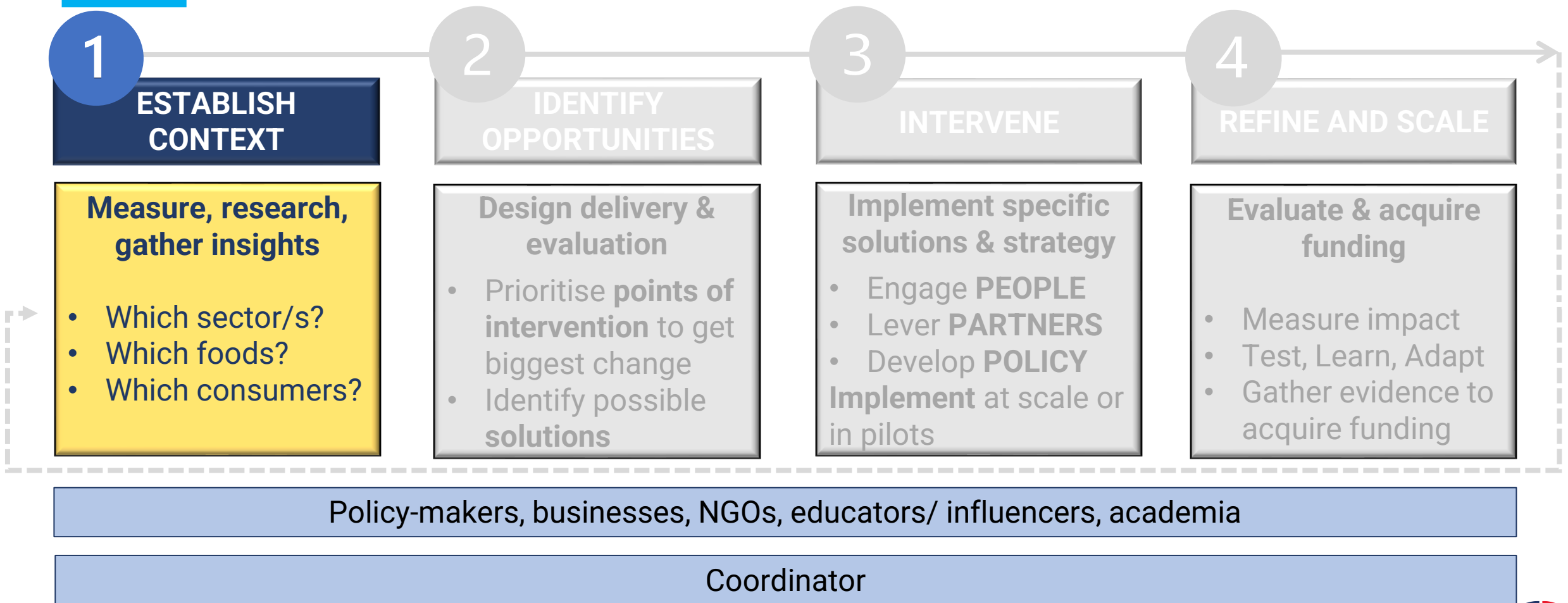


**Consumer behaviour
change:
The process...**

Developing a consumer behaviour change programme



Step 1: Establish context



Measure, research, gather insights



Cleaner Waste Systems
Volume 6, December 2023, 100105

ELSEVIER

Identifying determinants of household food waste behavior in urban India

Aakanksha Bhatia¹, Seema Sharma

Resources, Conservation and Recycling
Volume 192, May 2023, 106901

ELSEVIER

Household food-waste prevention behaviors in Beijing, Shanghai, and Wuhan in China compared with those in Tokyo and Bangkok

Yinglei Wu^a, Kiyo Kurisu^a, Sarunnoud Phuphisith^b, Kensuke Fukushi^{a,c}

Full length article

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comprehensive model to find antecedents of household economies.

OPEN ACCESS PEER REVIEWED

RESEARCH ARTICLE

Factors affecting food waste: A bibliometric review on the household behaviors

Vittoria Pilone^a, Naomi di Santo^a, Roberta Sisto^a

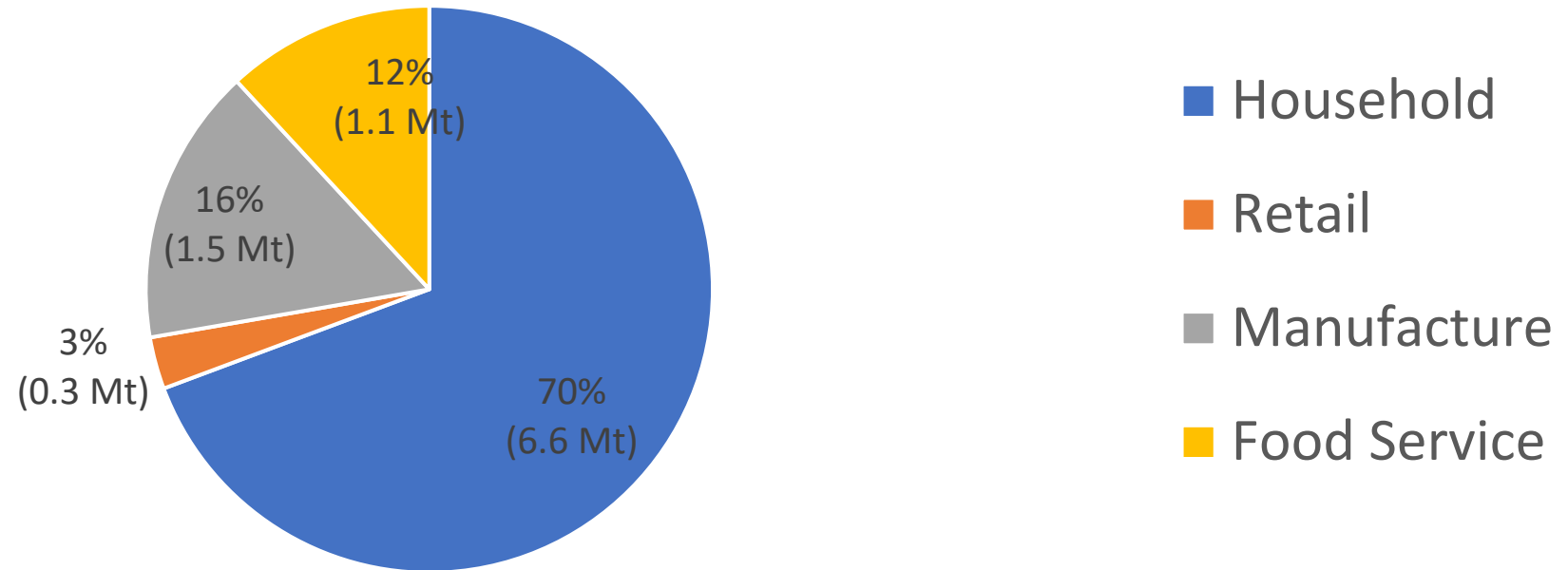
Published: July 28, 2023 • <https://doi.org/10.1371/journal.pone.0289323>

Article	Authors	Metrics	Comments	Media Coverage
Abstract	Abstract			
1. Introduction	Sustainability issues such as food insecurity, climate change, land degradation, economic development and food waste are the actual most important challenges at the global level. Among them, the food waste (FW) challenge has a great magnitude, emphasizing the importance of examining this issue. Specifically, there is a need to focus on the household level. Thus, this study aims to investigate and identify the main factors influencing FW household behaviors on which policymakers and stakeholders could act on specific and			
2. Methodology				
3. Results and discussion				
4. Concluding remarks				

Factors and food- conducted online Bangkok. We of people who the three Chinese disposal at the



Which sector/s?



Amounts of total food waste arising in the UK
by sector (total post-farm-gate = ca. 9.5 Mt)

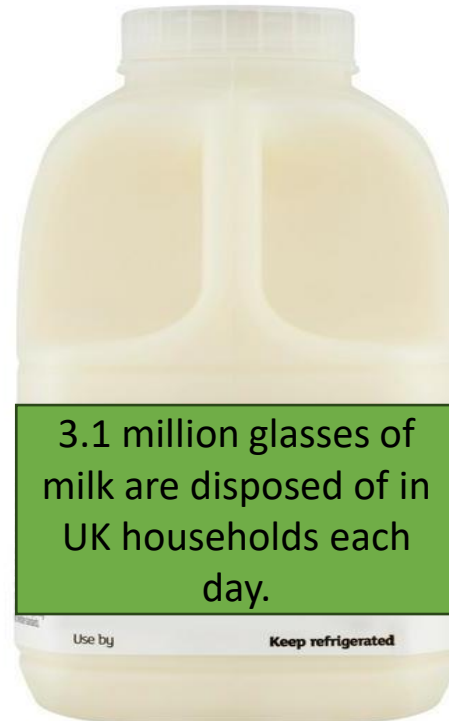


Which foods?

1. Potato (fresh)
2. Bread
3. Milk
4. Meals (home-made and pre-
5. Fizzy drinks
6. Fruit juice and smoothies
7. Pork / ham / bacon
8. Poultry (chicken, turkey, duck)
9. Carrots (fresh)
10. Potato (processed)



**20 million whole slices of bread
are thrown away every day in UK
homes.**



**3.1 million glasses of
milk are disposed of in
UK households each
day.**

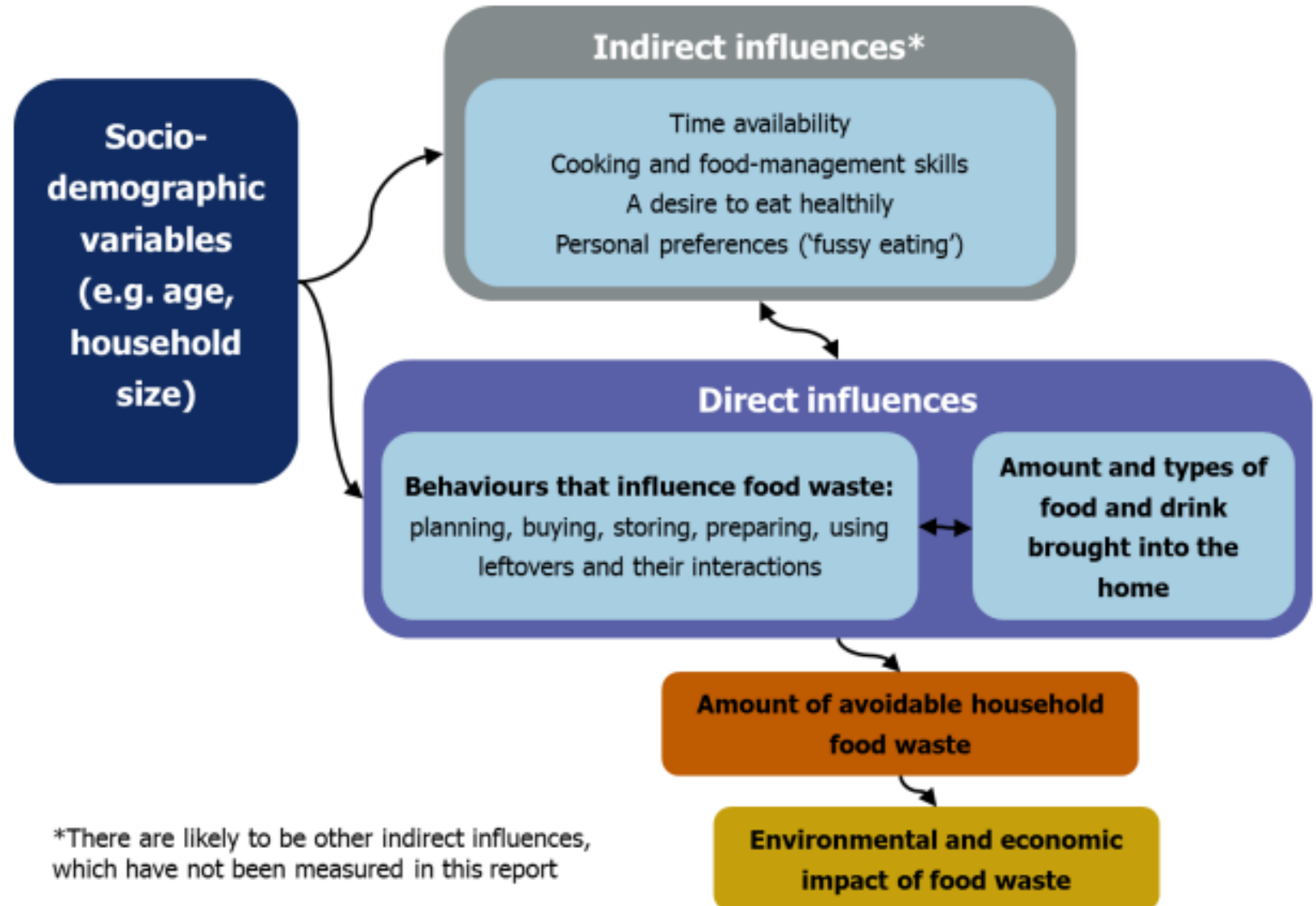


**Every day 4.4
million whole
potatoes are
thrown away in
the UK**



Complexity of consumer behaviour

Food waste is an outcome of several different behaviours. Behaviours are often habitual and emotional.



Which consumers?

Gather information on your consumers via...



Citizen Insights

- How do people shop? Where, how often?
- How do people store and interact with the food at home?
- What norms or values shape how people interact with food?
- How do these things differ between groups? (Regional, income, religious etc.)

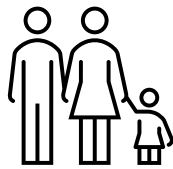


Food Waste

- Which foods? How much?
- Which sector(s)?
- Which consumers?



Segmentation



Consider **demographics**, **socio-economics** and **values**

- Urban / rural?
- Type/size of home? Flat, house, villa, farm, slum?
- Family home? Shared home? Single-occupancy?
- Number of occupants?
- Age(s) of occupants?
- Gender(s) of occupants?
- Meals eaten together or separately?
- Income group(s)?
- Thoughts and values? (Religion, political, environmental)

Values-based outlook



<https://i2insights.org/2022/05/10/schwarz-theory-of-basic-values/>

<https://doi.org/10.1016/j.resconrec.2022.106442>



Key Points: Step 1, Establish context

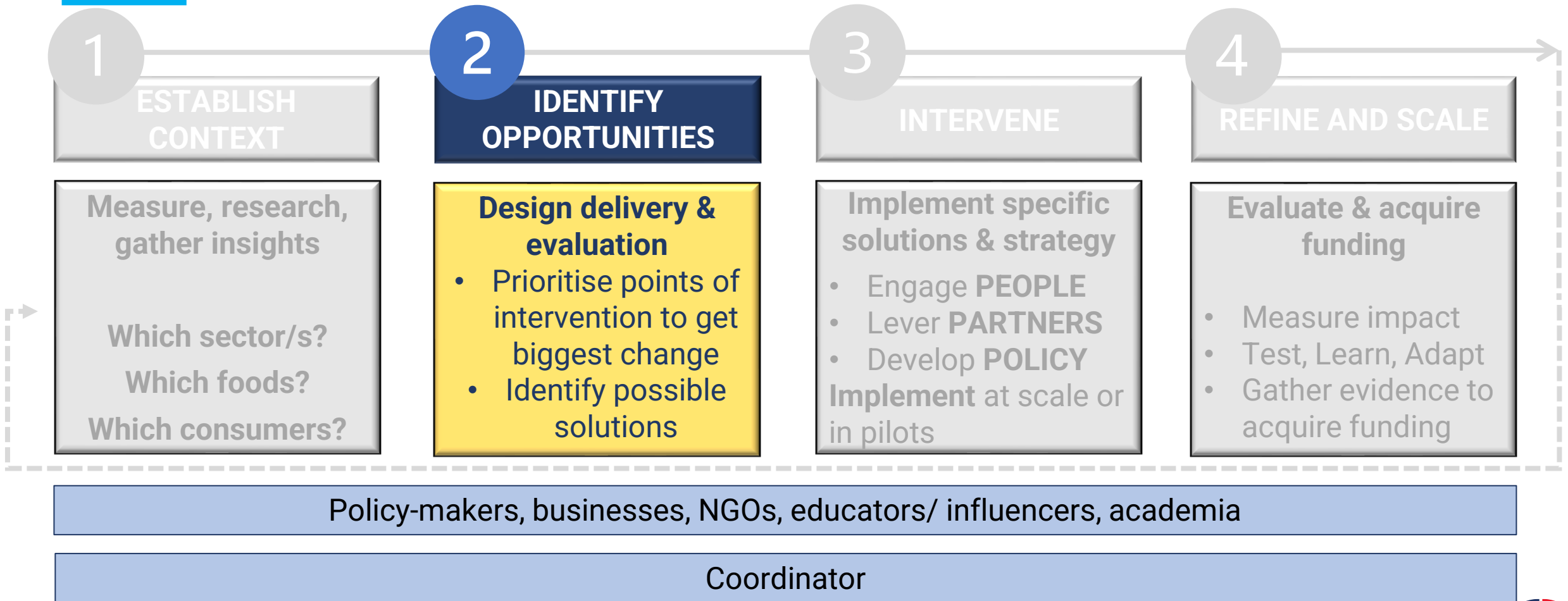
Undertake research to understand:

- Key sectors generating food waste in your country (measurement)
- Key types of food wasted (diaries or waste compositional analysis)
- Behaviours, practices and dynamics important to the issue (qualitative research)
- Extent of relevant behaviours, attitudes, knowledge (quantitative research)
- How groups of the population differ (e.g., segmentation)

Information gathered to be used in step 2: 'identifying opportunities'



Step 2: Identify opportunities



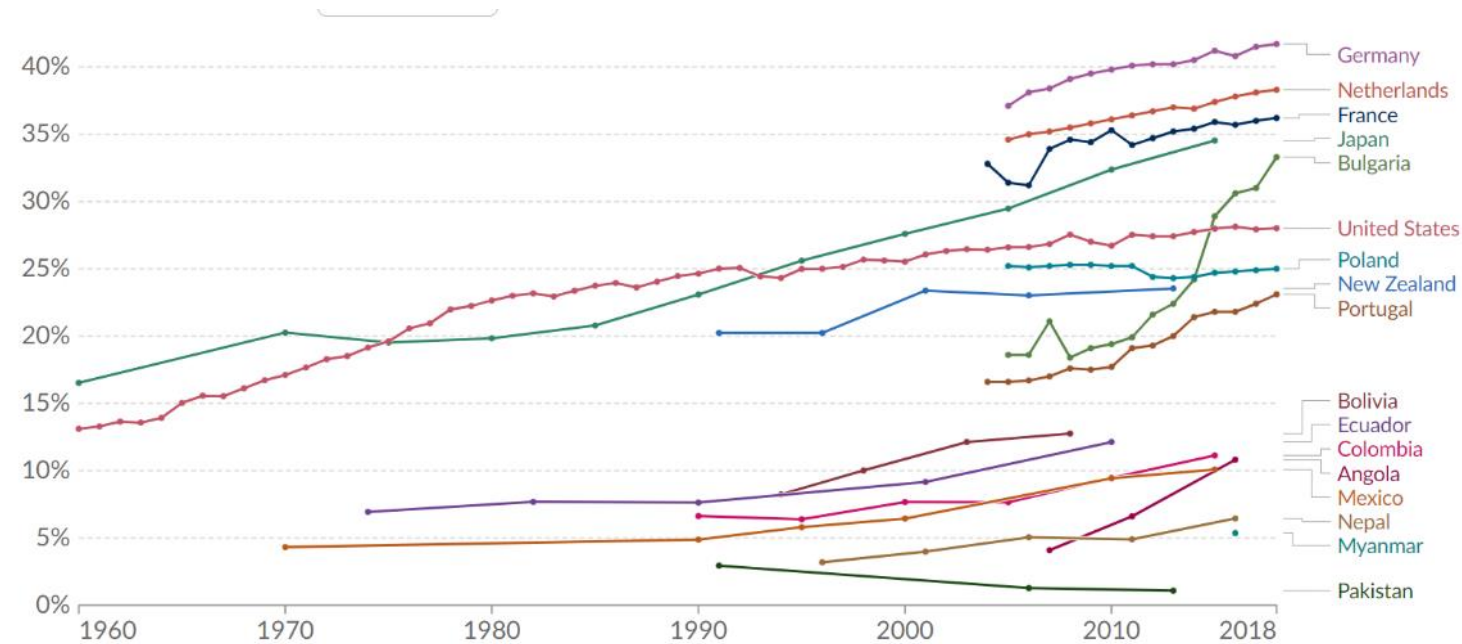
**Understanding how the
retail environment feeds
waste behaviours**

Buy what you need

The retail environment can have significant influence on household food waste.

Not being able to buy the right amount for the size of the household is an important factor.

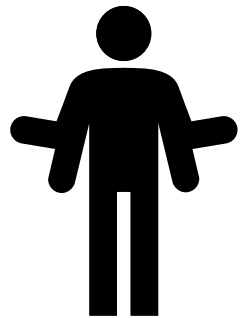
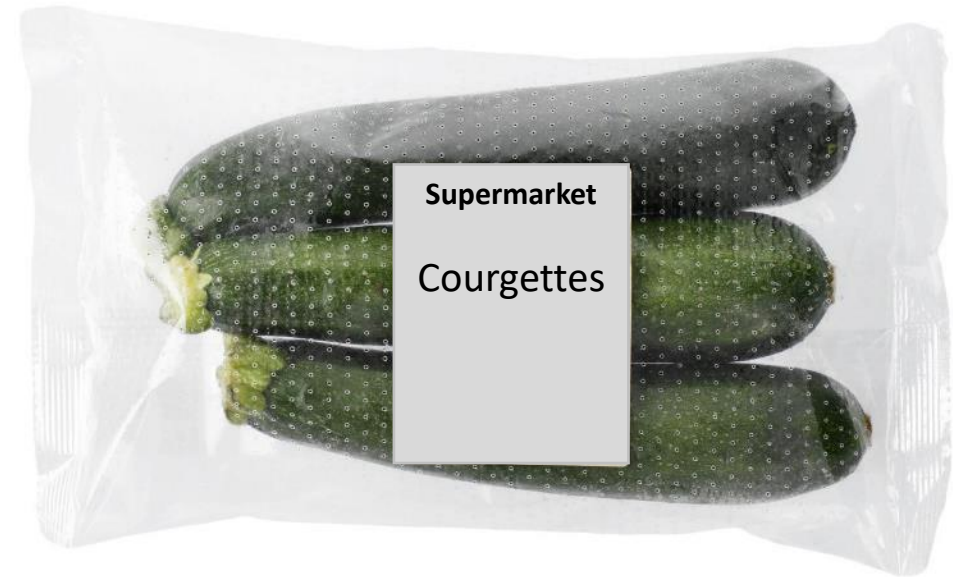
Percentage of one-person households, 1980-2018 [\[Source\]](#)



Example: 'buy what you need' as a desired behaviour

But what if you need one courgette and they are sold in packs of three?

Sometimes the objectives of retailers can contradict the objectives of consumer food waste reduction

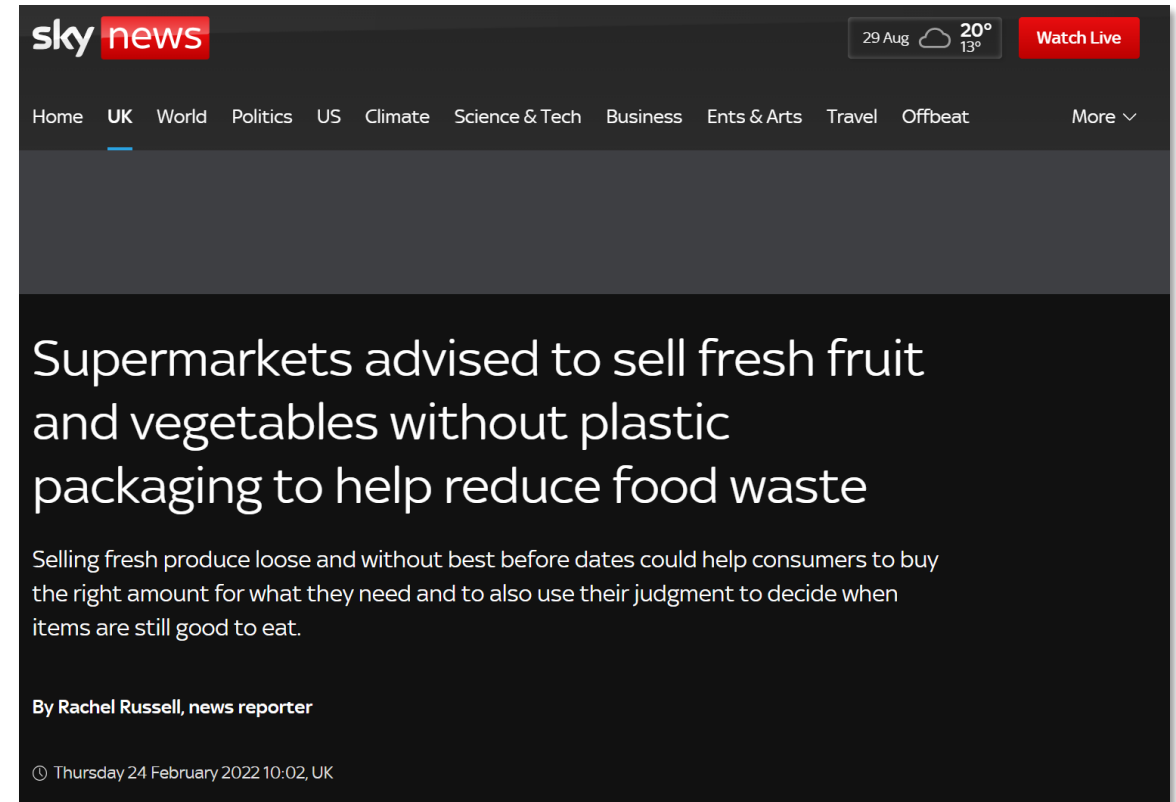


Retail Environment

Desired behaviour:
buy what you need



Convincing other organisations to change



The role of policy in consumer behaviour change

Policy has a key role to play

- **You can't legislate for good behaviour, but policy can make it easier:**
 - How things are packaged and sold
 - Safety and operational requirements for businesses
 - Limits on particular types of promotions (*etc.*)
- **Policy changes in other areas could impact food waste:**
 - Waste legislation -> landfill fees/bans, or payments for waste collection
 - Urban development regulations -> changing shop/market availability -> possibly change shopping habits
 - Working hours -> impacts time availability (time constraints contribute to food waste)



Key Points: Step 2, Identify opportunities

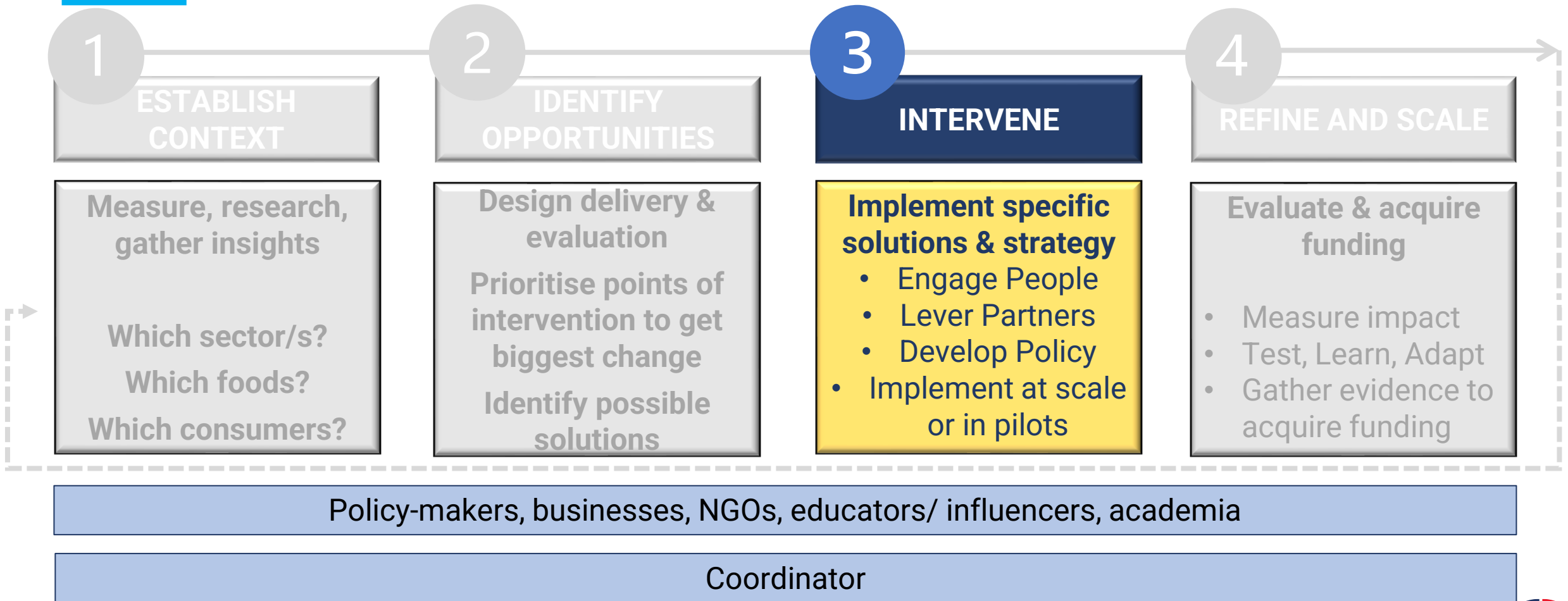
- Understand what changes could reduce food waste. Could include changes to:
 - Retail environment
 - People's kitchens
 - Disposal of waste
 - Specific behaviours
 - Other elements relevant to food in the home
- Determine how these changes could occur, including which organisations & businesses are important to individual changes
- Consider policy, it has an important role

The solutions developed here are implemented in step 3: 'intervene'



Poll

Step 3: Intervene



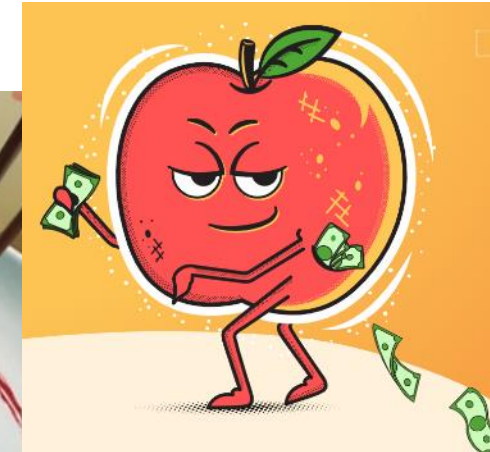
Designing effective campaigns and behaviour change interventions

Engage people ...



Launched in November 2007 when levels of household food waste in 2007 were 90kg/ person/year

HHFW **reduced by 24% from 2007 to 2018**, equating to 68kg/ person/ day.



Multiple ways of messaging: different entry points

Financial impact



Environmental impact



Emotional

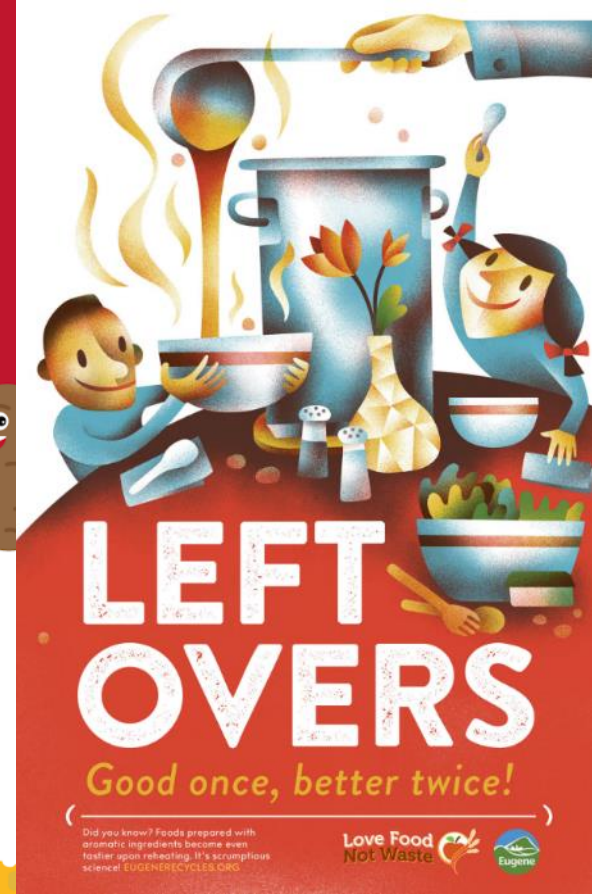
Food has feelings too

All food deserves to be loved. Plan your shopping list, use your freezer and get creative with leftovers.

Don't waste it.



Targeting behaviours



Lever partners ...

...or get existing brands to talk food waste

Extend your brand...

**LOVE
FOOD**
hate waste
NEW ZEALAND

As a nation we waste \$1.17 billion a year on food that we buy and then throw away uneaten



**J'AIME
MANGER**
pas gaspiller

EN 5 FAÇONS



Le chou

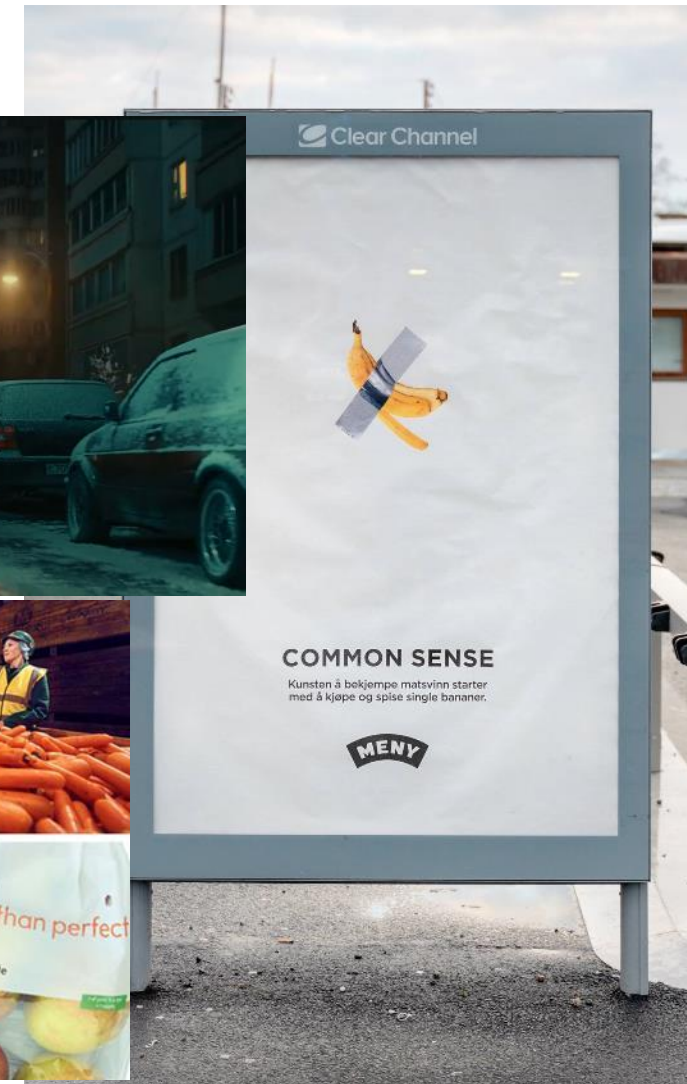
EN 5 FAÇONS



Le fromage



Ikea Christmas advert

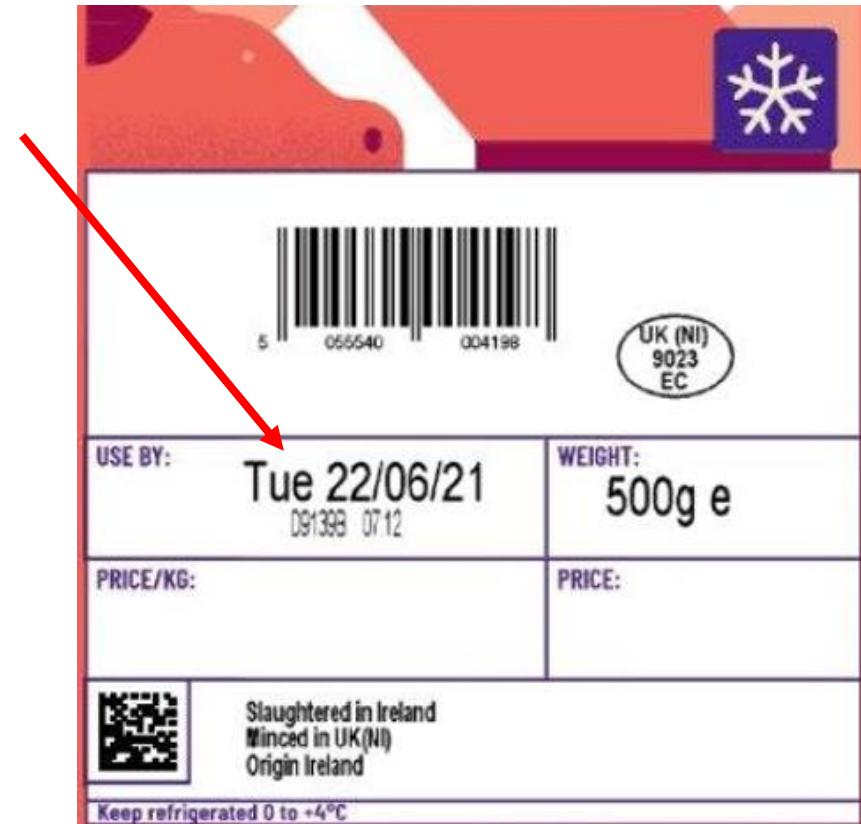


Other Behaviour Change Interventions in the UK

Eat Me, Freeze Me



Day-on-Date Label (DoDL)



Key Points: Step 3, intervene

- In this section and the last, we've seen examples of campaigns, interventions and other activities to prevent food waste
- These have included consideration of how to:
 - Engage people
 - Lever partners
 - Develop policies

The solutions implemented here are evaluated and further funding sought in step 4: 'refine and scale'



Guest speaker

Understanding and changing behaviour in Food Service

Behaviours in Food Service

- **No one-size fits all: different consumers in different settings**
 - Children's food behaviour in schools
 - Patients' food behaviour in hospital
 - Diners' food behaviour in restaurant
- **Prevalence of eating out of the home & what settings**
- **Different cultural norms**
 - Is finishing everything on your plate/bowl considered rude, or does it show appreciation for the food?
 - Is it perceived appropriate to ask to take leftovers home?

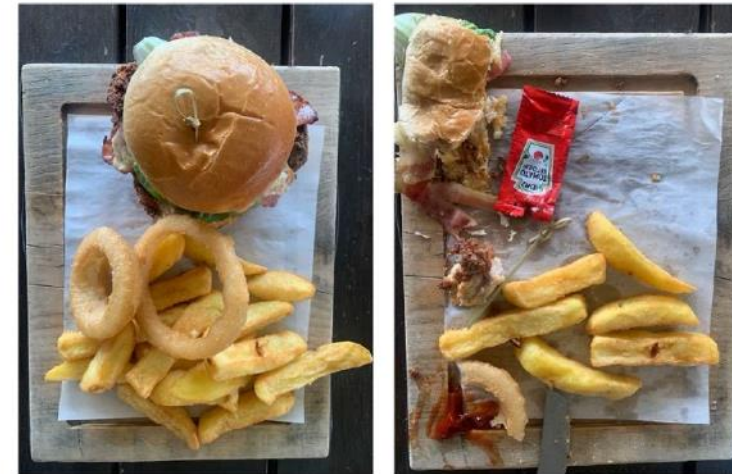


Research on attitudes in the UK

WRAP [research](#) found:

- Almost half said plate waste was due to portion size
- 15% of main courses were left uneaten
- Almost two thirds of people are concerned about wasting food, mainly due to wasting money
- But at the same time, a large portion is part of 'value for money' perception

Figure 6. Implicit satisfaction with larger portions (Indeemo qualitative phase)



This was the remainder of my chips (and a little bit of bread!) - gorgeous but I was just full up! I wouldn't say the portion was too big [researcher emphasis], I think they are perfect there but I am sometimes a grazer so don't always eat a full meal! I would rate this 5/5.

Female, 48, Midlands, no children at home, eats out of home several times a week



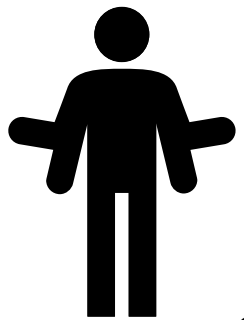
What can food service operators do?

- **Help customers** make more informed choices
 - Menu information: portion sizes, extras, sides, garnishes
- Behavioural **nudges** can help in some settings..
- ..but relying too much on citizens to change behaviour likely ineffective
- This may cause conflict with industry practices and incentives...



Contradictions between business objectives and food waste

‘Upselling’ is common industry practice which may encourage over-ordering



Customer wanting to buy the right amount for their appetite



Restaurant wanting to maximise the income per customer



China's 2021 law

Mix of initiatives for both businesses and consumers

- 1) Improve back-of-house management
 - 2) Provide information/guidance
 - 3) Improve supply, with range of portion sizes
 - 4) Improving menu design for groups
 - 5) Information and equipment in buffers
- No encouraging overordering
 - Providing necessary information
 - Rewards and punishments

Article 7 Catering service providers shall take the following measures to prevent food waste:

(1) establish sound food purchase, storage, and processing management systems, strengthen the vocational training of service personnel, and incorporate saving food and avoiding food waste into the training content;

(2) take the initiative to remind customers to prevent food waste, post or place anti-food waste signs in prominent locations, or have service staff give instructions or explanations to guide customers to order the right amount of food as needed;

(3) improve the quality of catering supply, make food in accordance with standards and specifications, reasonably determine quantities and portions, and provide different portion size options such as smaller portions;

(4) in case of group dining services, incorporate the concept of preventing food waste into the menu design, and prepare dishes and staples reasonably in accordance with the number of diners; and

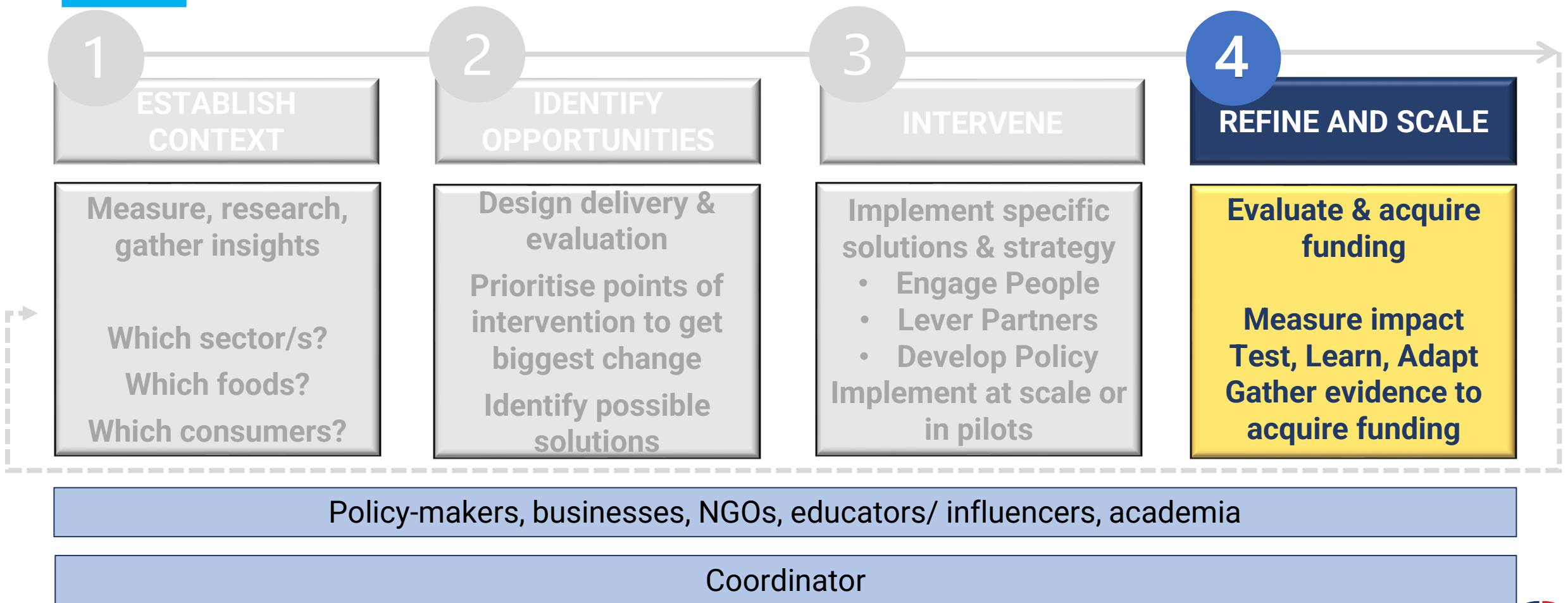
(5) in case of buffet services, take the initiative to inform diners of the consumption rules and requirements for preventing food waste, provide different sizes of tableware, and remind customers to take the appropriate amount of food.

Catering service operators shall not deceive or mislead diners to overorder.

Catering service operators may enrich the menu information by specifying food weight, the portion size, and recommended number of diners on the menu, give them ordering tips, and provide public spoons and chopsticks, and doggy bags as required.

Catering service operators may reward diners who participate in the Clean Plate Campaign; they may also charge customers who cause obvious waste the corresponding fees for handling food waste at clearly stated rates.

Step 4: Scale



Distinction between monitoring and evaluation

- **Monitoring:** measuring food waste and / or tracking other relevant changes
 - Important to track food waste nationally to see whether positive change is occurring => see Food Waste Index
- **Evaluation:** understanding whether interventions and policies are being implemented, and the impact they are having
- Both are useful



Evaluation – overview

- Interventions benefit from evaluation:
 - To understand if the interventions was implemented as planned
 - Whether the intervention changed behaviours
 - Whether it led to less food waste
- As food systems and human behaviour are complex, **we may get unexpected results**
- Undertaking an appropriate evaluation can help understand how an intervention can be **refined and improved**
- Impact evaluations can **assess how much food waste has been prevented**:
this information can help unlock further funding



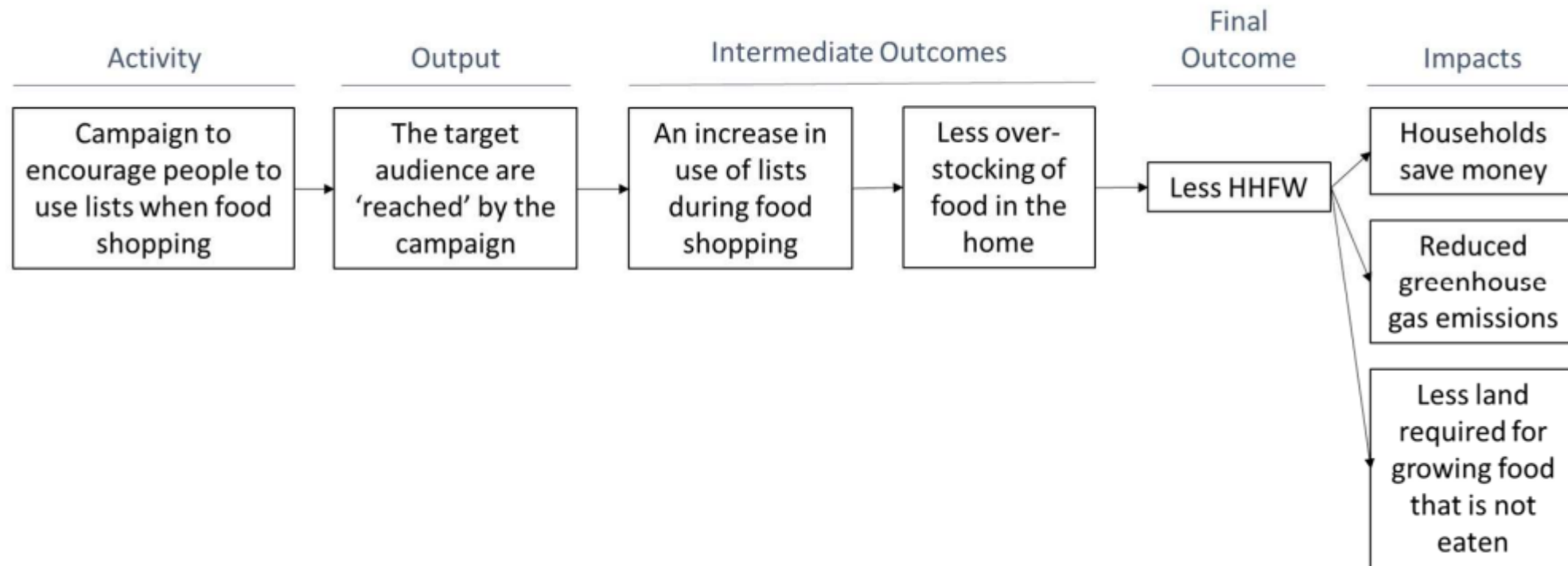
Evaluation – tips

- Consider monitoring and evaluation **when developing** an intervention – **not after** it has been implemented
- Build it **into your plans** from the start
- Allocate an appropriate proportion of the total budget to evaluation
- **Understand your intervention:**
 - What are its characteristics?
 - What does it seek to influence?
 - How does it bring about change?
 - Create a logic model / theory of change...



Articulate how your intervention works with a logic model

Figure 1: Hypothetical example of a logic model



Types of evaluation

- Type of evaluation will depend on:
 - Type of intervention (e.g., campaign, change to retail environment)
 - What questions you want the evaluation to answer
- Recommend considering an **impact evaluation**:
 - Did the intervention lead to less food waste?
 - Ideally involves measuring food waste over course of intervention, or during pilot



Benefits of a good evaluation

- Understand whether your intervention led to change and magnitude of change
 - => helps **decide whether to continue, stop or redesign** intervention
 - => allows **calculation of return on investment** and / or cost efficiency
 - => **supports future funding**
- Understand why your intervention led to change (or didn't lead to change)
 - => helps **improve your intervention**



Funding & generating content

- Mixed funding: direct financing and in-kind support

Direct funding

National / local governments

International aid / development funding

Trusts and foundations

Walmart  org



FEED



In-kind support

Sponsors and partners

Businesses can offer financial support to national campaigns, but can also leverage their own resources and consumer bases for campaigns & interventions



Citizen-led support

Raise awareness ->

Create a movement ->

Community leaders, chefs, bloggers, influencers spread awareness and advice



Key Points: Step 4, Refine and Scale

Evaluation can provide:

- Understanding of whether an intervention or strategy reduced people's food waste
- Information to refine the intervention / strategy
- Evidence to convince others to adopt successful interventions

Funding crucial to success:

- There are a range of funding sources available
- Funding could be monetary or in-kind support
- Funders have different objectives, so different framing of issue may be needed



Strategic approach to citizen behaviour change

- The UK has learnt a lot on the journey **over the last 15 years...**
- Citizen engagement and awareness raising is important, but needs to be **combined with systemic changes...**

Don't just *ask* citizens to behave 'well' in a world that makes that difficult ...

... *empower* them, so that the system makes those choices easy

- Fewer, **more impactful activities:**
 - How food is packaged and sold,
 - How restaurants engage with their customers,
 - Waste infrastructure available for households and businesses *etc.*



