



# Transforming UK Food Systems Conference, 23-24 March 2026



#TUKFS26



**Enhancing TUKFS  
programme level impact  
via three collaborative  
'Synergy projects':  
a critical discussion of  
process & outcome**



**1. Interdisciplinary working**

**2. BRIDGE-ACT project**

**3. Co-production TOOLKIT**

Peter Jackson, Kelly Parsons, Rebecca Wells, Isabel Fletcher, Davi Lemos; Marta Lonnie, Emma Hunter, Hanna Didcock, Manik Puranik, Victoria Norton, Bramble Gardiner, Jessica Bosseaux, Ferne Edwards, Brenda Mogeni, Hannah Greatwood, Alexandra Johnstone; Clare Pettinger, Charlotte Hardman, Ulrike Ehgartner, Lisa Morgans, Neil Boyle, Naomi Shaw, Lisa Howard, Hannah Mumby



# Interdisciplinarity across the TUKFS programme

Peter Jackson, Kelly Parsons, Isabel Fletcher, Rebecca Wells and  
Davi Lemos

*Session: Enhancing TUKFS programme level impact via three collaborative  
Synergy projects: a critical discussion of process and outcome*



# Introduction

- All projects in TUKFS programme were required to take an **interdisciplinary food systems approach**, working across the natural and social sciences
- Our Synergy project sought to synthesise the **views of programme participants** and to make **recommendations** for future interdisciplinary research programmes
- The report draws on a **literature review**, an **online survey** of 36 TUKFS participants (all career stages) and an interactive **workshop** (n=21) using group discussions and MIRO boards to share experiences and agree a series of recommendations.

**Based on your experience of the TUKFS programme, what skills and training are needed for successful interdisciplinary research?**



**What challenges can you identify on the 'dark side' of interdisciplinary research for individuals, project teams or institutions?**



# Working definitions



From UKRI, REF and other sources:

- **Multidisciplinary:** where researchers from different disciplines work largely independently of each other to address a common problem but there is little or no integration of disciplines
- **Interdisciplinary:** collaboration that involves significant interaction between two or more disciplines and/or moves beyond established disciplinary foundations in applying or integrating research approaches from other disciplines
- **Transdisciplinary:** research that crosses disciplinary boundaries and co-creates knowledge between academic and non-academic partners such as policymakers, businesses or civil society organizations.

# Positive and negative views

- Based on the evidence collected, our project **challenges the normative framing** of interdisciplinarity as a self-evident good, including both positive and negative experiences of working across disciplinary boundaries (**the ‘dark side’ of interdisciplinarity**)
- **Positive views** of interdisciplinarity included the production of richer analyses, novel outputs and more socially relevant research
- **Negative experiences** included the hidden labour involved in interdisciplinary working, potential career penalties (when academia still largely organised in disciplinary silos), and unacknowledged power relations.

# Survey findings



- Overwhelming agreement (27/31) that some degree of interdisciplinary working is needed for effective food systems research
- Wide **range of skills** required for working across disciplines: communication, project management, networking, humility, patience, kindness, open-mindedness, passion, commitment, tolerance, respect, sympathy and self-awareness
- **Training** needed for all participants not just PhDs and ECRs
- Frequent challenges around **communication and language**
- Involvement of **non-academic stakeholders** (co-production) highly valued though resourcing for this frequently underestimated.

# Workshop findings



- Importance of understanding **power differentials** within research teams and processes; need to recognise **the limits of one's own knowledge**
- **Additional time and resources** required for successful interdisciplinary working, the need to develop **shared language** and/or to acknowledge **disciplinary differences** in what is recognised as valid knowledge and what constitutes 'good science'
- The **under-valuing of professional service staff**, such as project managers and administrators, brokering between disciplines
- The challenges of joining a research team **part way through the project**, and for **PhD students** who are required to work across institutions with different administrative, training and supervisory requirements
- The potential **conflict between 'team science' and individual career progression.**

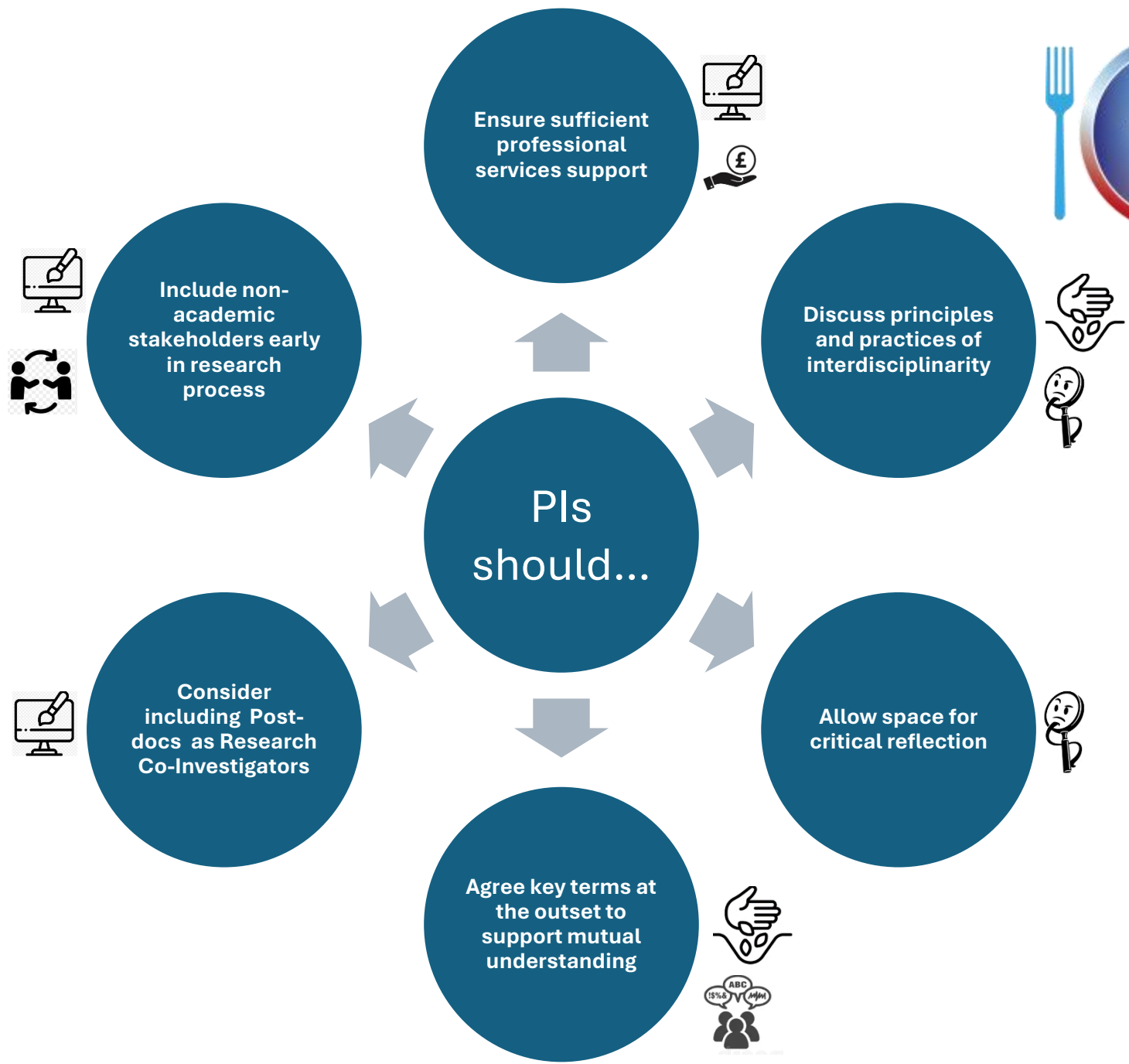
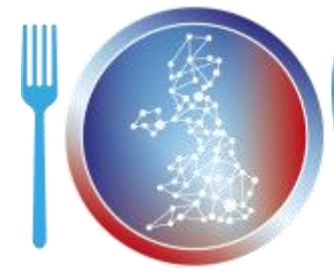
# Recommendations

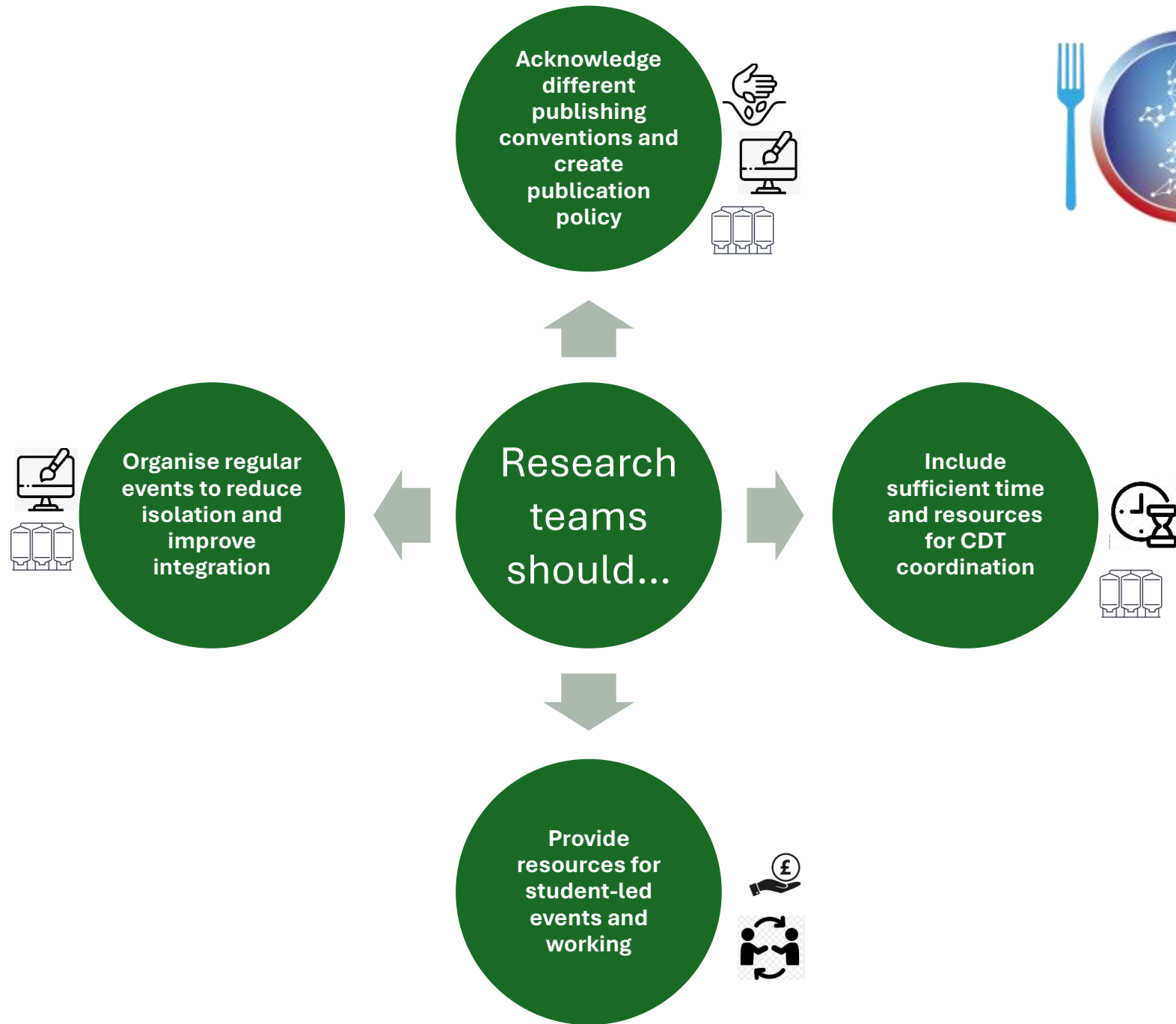


- Directed at different ‘audiences’ (funders, HEIs, researchers etc) at different stages in the project lifecycle (bid writing, on-boarding, dissemination, legacy etc)
- Used a series of icons to highlight key issues: time, funding, language, collaborative skills etc.









# Conclusions

- Successful interdisciplinary working requires early/continual **relationship (team) building**, the development of a **common framework, strong leadership and project management**, setting **clear goals with agreed ground rules and transparent expectations**
- The full **report and Exec Summary** available on TUKFS website
- Includes a list of **useful resources** recommended by survey and working groups participants
- **Thanks** to everyone who completed the survey and/or participated in the workshops.

# Bridging Theory And Practice For Actionable Change In Transforming Food Systems (The BRIDGE-ACT Toolkit)

Project funded through the Transforming UK Food Systems Programme

Annual Project Synergy Fund 2025 - 2026

TUKFS ECR PROJECT TEAM: Marta Lonnie, Hannah Greatwood and Emma Hunter (FIO Food),  
Manik Puranik, Bramble Gardiner and Jessica Bosseaux (FoodSEqual),  
Victoria Norton (HiFi Bread), Ferne Edwards (FixOurFood) and Brenda Mogeni (H3)

# VISUALISING IMPACT



Food Insecurity in people living  
with Obesity  
Improving sustainable and healthier food  
choices in the retail FOOD environment



Diet and  
Health  
Inequalities



HEALTHY SOIL  
HEALTHY FOOD  
HEALTHY PEOPLE

[https://www.canva.com/design/DAHDo1Ho-Ps/GdMthoX9GDtCHt\\_K8nP70g/edit](https://www.canva.com/design/DAHDo1Ho-Ps/GdMthoX9GDtCHt_K8nP70g/edit)



# FUNDING



## Transforming UK Food Systems SPF programme

### What is TUKFS?

£47.5M interdisciplinary programme that will help to transform the UK food system by placing healthy people and a healthy natural environment at its centre.

Delivered by UKRI, in partnership with the Global Food Security Programme, BBSRC, ESRC, MRC, NERC, Defra, DHSC, PHE, Innovate UK and FSA.

Call 2: Transforming UK food systems for health and environment (£14M) supports two to three- year research grants of between £250,000 – £2,000,000.

Projects but must; integrate both social and natural sciences; collaborate with at least one stakeholder organisation from government, business or civil society; address UK government priorities.

### UoA Team



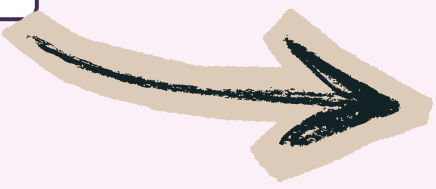
Prof. Alex Johnstone  
Project Lead

**FIO Food** | Food Insecurity in people living with Obesity  
Improving sustainable and healthier food choices in the retail FOOD environment

£ 1.6 mln  
2022-2026

**DIO Food** | Diet and Health Inequalities

£ 0.5 mln  
2023-2026



**BRIDGE-ACT**  
£40k

Annual Synergy Fund Project 2025-26

Dr Marta Lonnie  
Early Career Researcher



# TUKFS ECR TEAM



Food Insecurity in people living with Obesity  
Improving sustainable and healthier food choices in the retail FOOD environment



## Dr Marta Lonnie

The Rowett Institute, School of Medicine, Medical Sciences and Nutrition, University of Aberdeen



## Dr Hannah Greatwood

Obesity Institute, Carnegie School of Sport, Leeds Beckett University, Leeds



Diet and Health Inequalities



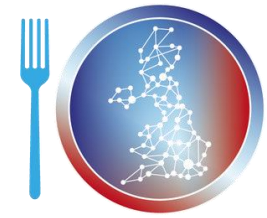
## Dr Emma Hunter

The School of Health, Robert Gordon University, Aberdeen



## Dr Ferne Edwards

School of Health & Psychological Sciences  
Department of Health Services Research and Management, University of London



TRANSFORMING UK FOOD SYSTEMS  
Strategic Priorities Fund



## Dr Manik Puranik

Department of Food and Nutritional Sciences, University of Reading



## Mx Bramble Gardiner

School of Health Professions, Faculty of Health, University of Plymouth



## Dr Jessica Bosseaux

Department of Food and Nutritional Sciences, University of Reading

## HiFi Bread



## Dr Victoria Norton

Department of Food and Nutritional Sciences, University of Reading



HEALTHY SOIL  
HEALTHY FOOD  
HEALTHY PEOPLE



## Dr Brenda Mogeni

Population Health, School of Medicine and Population Health, The University of Sheffield

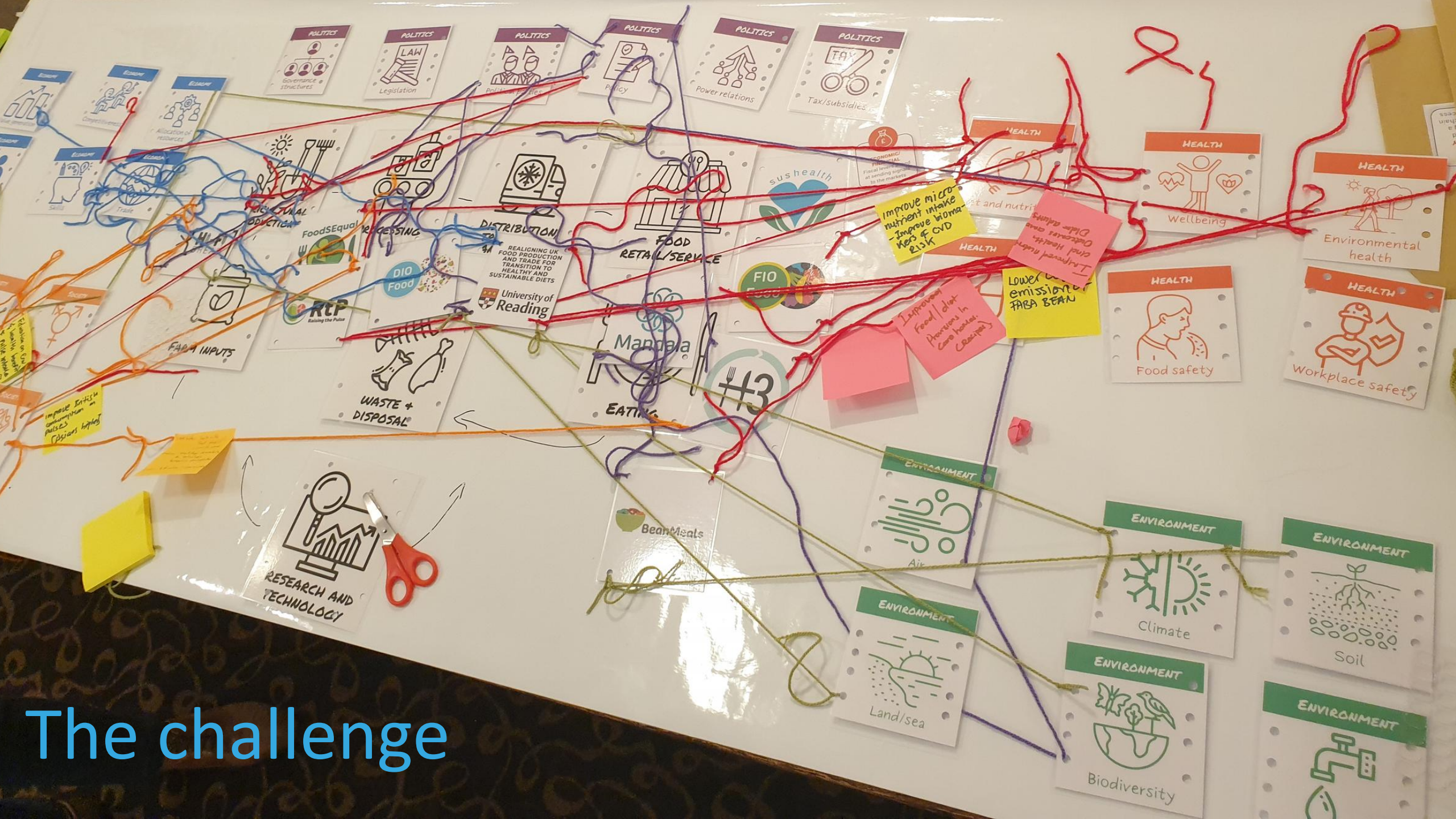
# TUKFS Early Career Researchers Conference

Sheffield, 2024



# THE ORIGINS



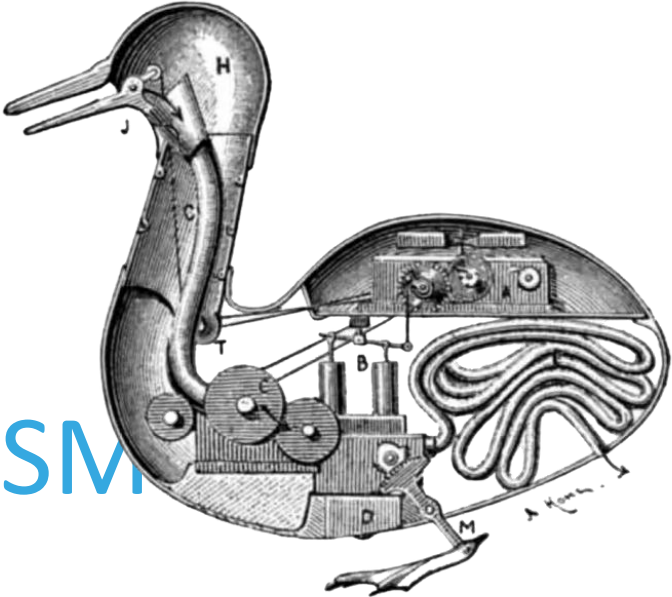


# The challenge

# The challenge

- **Transitioning into FS research** from other disciplines
- Limited availability of **collective learning tools** suited to participants with varying levels of expertise and understanding of FS complexities.
- Tools needed that provide a **clear semantic structure** and key concepts

## REDUCTIONISM



**INTERIOR OF VAUCANSON'S AUTOMATIC DUCK.**  
A, clockwork; B, pump; C, mill for grinding grain; F, intestinal tube; J, bill; H, head; M, feet.



# REDUCTIONISM

Identify a problem

Select AN intervention

Deliver it within depart. boundaries

Measure short-term outputs

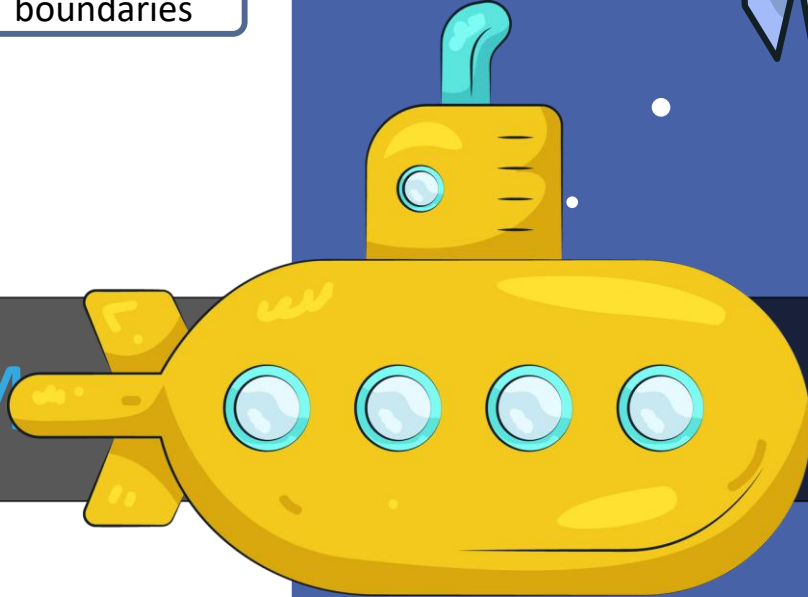
# vs. WHOLEISM

Designing actions that influence underlying structures

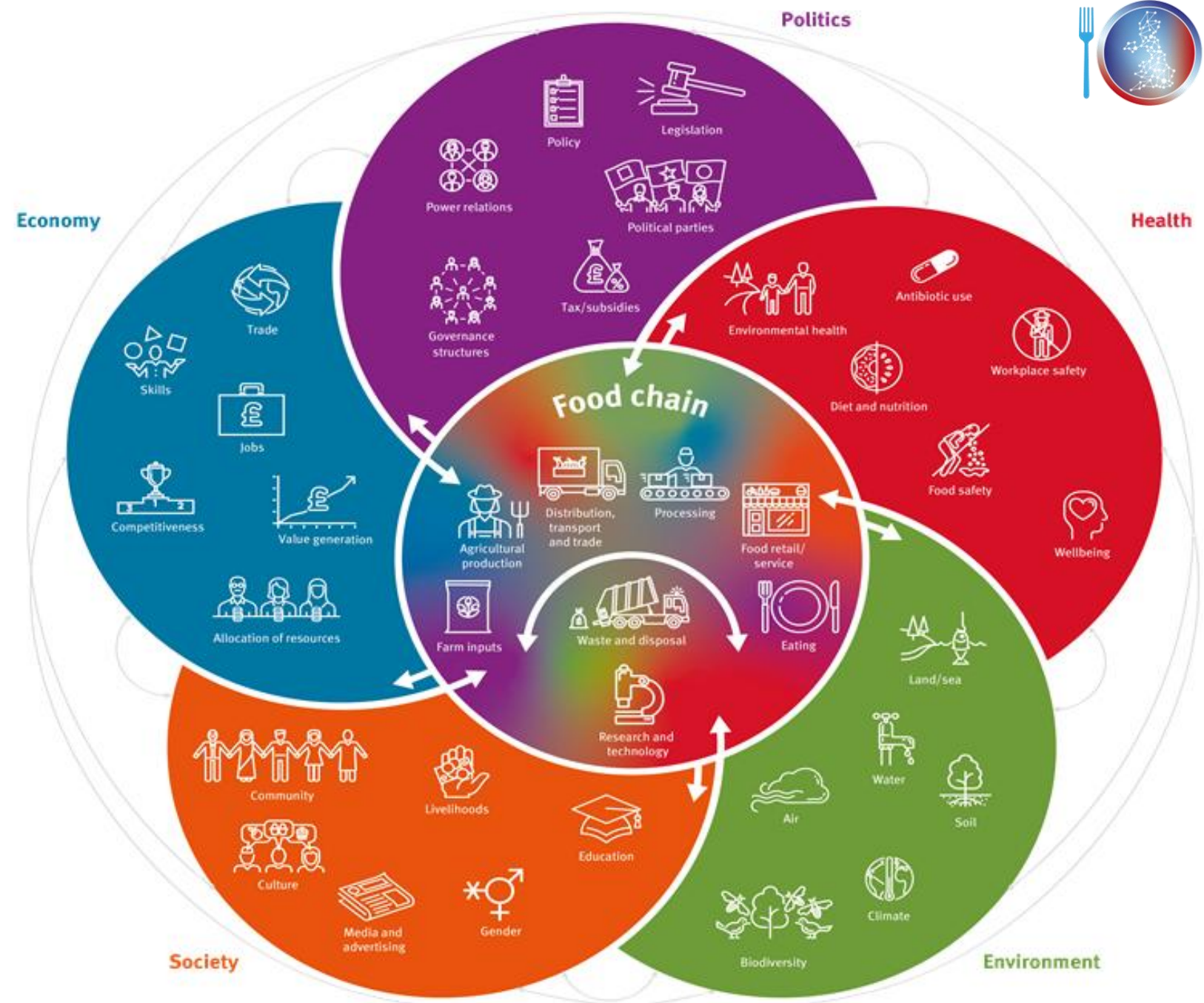
Unemployment → employability workshops

Poverty → crisis grants

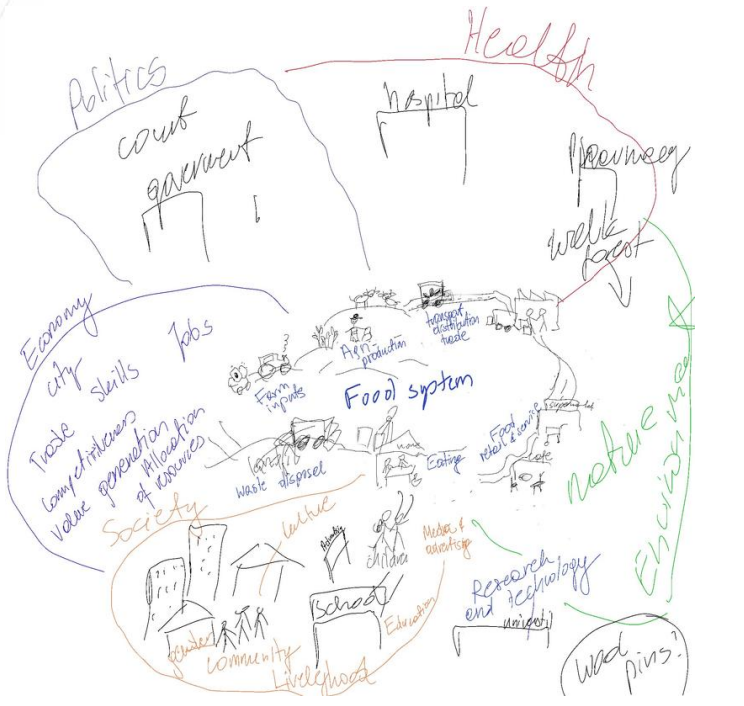
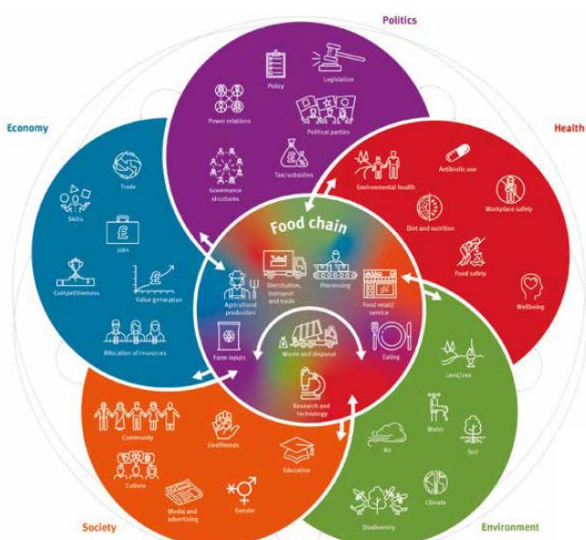
Obesity → Weight management classes



# FOOD SYSTEM







Domain	Column	Item	
Food system - centre	1	Farm inputs	
	2	Agricultural production	
	3	Distribution, transport and trade	
	4	Processing	
	5	Food retail & services	
	6	Eating	
	7	Waste and disposal	
	8	Research and technology	
	Politics	9	Power relations
		10	Governance structures
		11	Political parties
		12	Tax/subsidies
		13	Legislation
		14	Policy
Health	15	Workplace safety	
	16	Environmental health	
	17	Antibiotics use	
	18	Diet and nutrition	
Environment	19	Food safety	
	20	Wellbeing	
	21	Air	
	22	Water	
	23	Soil	
	24	Land/sea	
	25	Climate	
	26	Biodiversity	
Society	27	Community	
	28	Culture	
	29	Education	
Economy	30	Media & advertising	
	31	Gender	
	32	Livelihoods	
	33	Trade	
	34	Skills	
35	Jobs		
36	Value generation		
37	Allocation of resources		
38	Allocation of resources		

Item	Visual representation
Farm inputs	A supply store or warehouse labeled "Seeds, boxes, or megaphones, politicians in suits shaking hands, giving speeches, or campaigning; campaign offices with party flags and posters representing multiple ideologies (green for sustainability, red for labor, etc.)"
Agricultural production	Open fields, farms, and barns where large-scale crops like wheat, corn, or vegetables are being cultivated. Rural livestock farms or animal pens for dairy, poultry, or meat production, visible from a distance.
Distribution, transport and trade	Truck arriving to food factory, unloading crates of food retail & services
Processing	Truck arriving to supermarket, restaurant nearby, people eating outside (beer garden style); Family seating at home, maybe table set up in the garden (decking); Dining spaces in public plazas.
Food retail & services	Man taking bins out at the back of the house, bin lorry picking it up, wasteland at the distance. Recycling
Eating	University, modern looking lab building, glass-middle of this area?, or perhaps on a separate island as this will contest eventually to all of the elements. The tool is designed mainly for academics. Scientists
Waste and disposal	Workplace safety
Research and technology	Building site with few builders in helmets, scaffolding. Food processing plants and warehouses with visible safety signage like "Hard Hats Required" or "Safe Zone." Workers in protective gear (helmets, gloves, aprons) operating machines or packaging food, showcasing adherence to safety standards. Inspectors with clipboards conducting workplace checks, interacting with family walking into the forest with a dog, volunteers planting trees or cleaning litter. Citizens engaging in clean-up campaigns
Workplace safety	Family walking into the forest with a dog, volunteers planting trees or cleaning litter. Citizens engaging in clean-up campaigns
Environmental health	Young couple leaving pharmacy with medicine bag; Veterinary clinics and pharmaceutical buildings with signs like "Antibiotic Stewardship Program" or "Seal of Health Monitoring."
Antibiotics use	Person picking up fruit and vegetables in green grocers/ or a family picnic with fruit; Grocery stores or farmers' markets with signage promoting "Fresh & Local" or "Healthy Choices." A plate with well-balanced meal (grains, vegetables, proteins) prominently displayed as a mural or public art installation.
Diet and nutrition	Person picking up fruit and vegetables in green grocers/ or a family picnic with fruit; Grocery stores or farmers' markets with signage promoting "Fresh & Local" or "Healthy Choices." A plate with well-balanced meal (grains, vegetables, proteins) prominently displayed as a mural or public art installation.
Food safety	Ambulance outside the hospital, person (green face) stretcher. Restaurants and food stalls displaying health inspection grades or certificates on their walls. Vendors using gloves and hairnets, adhering to strict cleanliness practices. A group of people doing a group yoga class in public park; Community wellness hubs or urban parks featuring activities like yoga classes and mindfulness sessions near healthy food options. Urban spaces integrating green areas, dining areas, and recreational zones to promote a balanced lifestyle. Families enjoying picnics with healthy food in parks, individuals exercising or meditating.
Wellbeing	Item
Community	A living marketplace or international trade center with vendors, stalls, and flags of various countries, symbolizing global and local trade connections.
Culture	A sport or dining area with large cargo ships, containers labeled with food-related items, and cranes actively loading/unloading goods.
Education	A vocational school or training center with a sign reading "Food Industry Skills Training" featuring classrooms visible through windows. Apprentices working alongside skilled chefs, bartenders, or food scientists in modern kitchens, cafes, or laboratories. Chalkboard, a toolbar.
Media & advertising	School - children playing at school playground
Gender	Children leaving school, passing by a bus stop with big fast food advertising logos.
Livelihoods	Public toilets with signage (might be offensive?) A women-led cooperative enterprise near a hub or market. Lighting initiatives (like power-sharing or community kitchens, visibly making decisions or mentoring others).
Allocation of resources	People of different professions queuing for the bus at the bus stop - builders, nurses, policeman...

Item	Visual representation
Power relations	A tall, imposing government or corporate skyscraper at the top of a hill or elevated position, symbolizing centralized power. Smaller buildings (e.g., NGOs, advocacy groups, and food producers) at varying lower levels, visually emphasizing subordinate roles; Figures in formal attire (politicians, executives) shaking hands in a boardroom visible through glass windows.
Governance structures	City hall, surrounded by diverse citizens holding signs
Political parties	Political rally (outside). Election booths, ballot boxes, or megaphones, politicians in suits shaking hands, giving speeches, or campaigning; campaign offices with party flags and posters representing multiple ideologies (green for sustainability, red for labor, etc.)
Tax/subsidies	Tax office
Legislation	A courtroom or parliamentary chamber with stacks of documents labeled "Food Safety Law," "Agricultural Policy," etc.
Policy	Policy think tanks, conferences, or workshops depicted with whiteboards and people brainstorming.
Air	Clouds and modern windmills. Air quality monitoring stations or digital displays showing real-time air pollution levels, with data linked to food transportation and industrial emissions.
Water	River and watermill? Families enjoying clean public fountains, contrasting with polluted streams in industrial areas.
Soil	Flora on the edge of the map, maybe a little cross-section of the land/urban farms with visible composting stations and signage like "Soil Health in Action." Layers of soil depicted under green, with visible roots connecting to thriving plants.
Land/sea	Seaside area with a cafe. A city port with fishing boats unloading seafood, emphasizing the role of urban seafood systems. Fisheries and seafood vendors interacting with customers, showing sustainable seafood sourcing.
Climate	Cloud with rain and flooding. Solar panels for power generation and electric vehicle charging stations for food delivery trucks, emphasizing low-carbon solutions. Workers installing renewable energy systems on urban farms or factories.
Biodiversity	Wild animals in a forest. Scientists or educators leading biodiversity tours in urban parks or food forests. Butterflies, bees, birds, and a variety of plants integrated into the cityscape, representing harmony between biodiversity and urban food systems. Pollinators: friendly gardens or rooftops and balconies, with signage like "Bee-Friendly Zone"
Trade	Item
Skills	A vocational school or training center with a sign reading "Food Industry Skills Training" featuring classrooms visible through windows. Apprentices working alongside skilled chefs, bartenders, or food scientists in modern kitchens, cafes, or laboratories. Chalkboard, a toolbar.
Jobs	Jobcentre? A job fair venue or recruitment office with banners advertising food industry roles, such as "Farm-to-Table Careers" or "Urban Food Logistics."
Competitiveness	Two competing food company headquarters side by side, each adorned with banners touting their achievements ("1st Sustainable Food Chain," "Top Food Innovators"). Rival businesses (e.g., cafes) vying for customers in a busy city square, with people lining up at one but perusing at the other.
Value generation	A factory producing packaged food from visible production lines, emphasizing the transformation of raw materials into high-value goods. Investors shaking hands with entrepreneurs in front of buildings labeled "Food Investor" or "Innovation Hub."
Allocation of resources	Food bank with a sign like "Urban Food Equity Hub."

ECRs collated ideas for visualisation of 38 map elements



Parsons, Hawkes and Wells, 2019



# Who is it for?



## Local authorities and health boards

To help Scottish local authorities and Health Boards meet duties under the Good Food Nation (Scotland) Act 2022 and Community Empowerment (Scotland) Act 2015 - integrated, **systems-based community planning**.



## Early Career Researchers

To understand food system complexity, identify research gaps, and develop **systems-informed funding proposals**.



## Under- and postgraduate students

To strengthen **systems-based learning**, understand feedbacks and trade-offs.



## Cross-sector partners

To engage NGOs, industry and community groups in **inclusive food systems dialogue** through an accessible, non-technical systems framework.



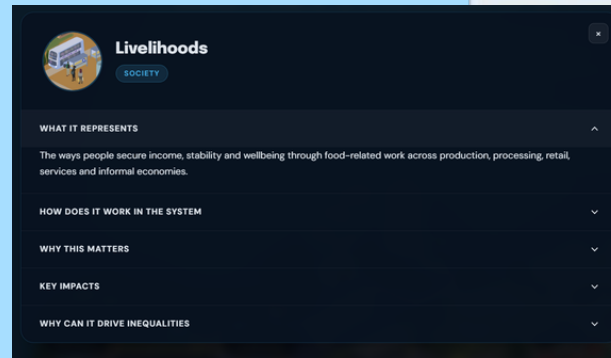
## Strategic partnerships and funding consortia

To support strategic alignment, stakeholder coordination, and impact planning for research consortia and cross-sector funding partnerships.



# Why use it?

## ACCESSIBLE INTRODUCTION TO SYSTEMS THINKING



# THE ICEBERG MODEL



**EVENTS**  
What is happening?

**PATTERNS OF BEHAVIOR**  
What trends are there over time?

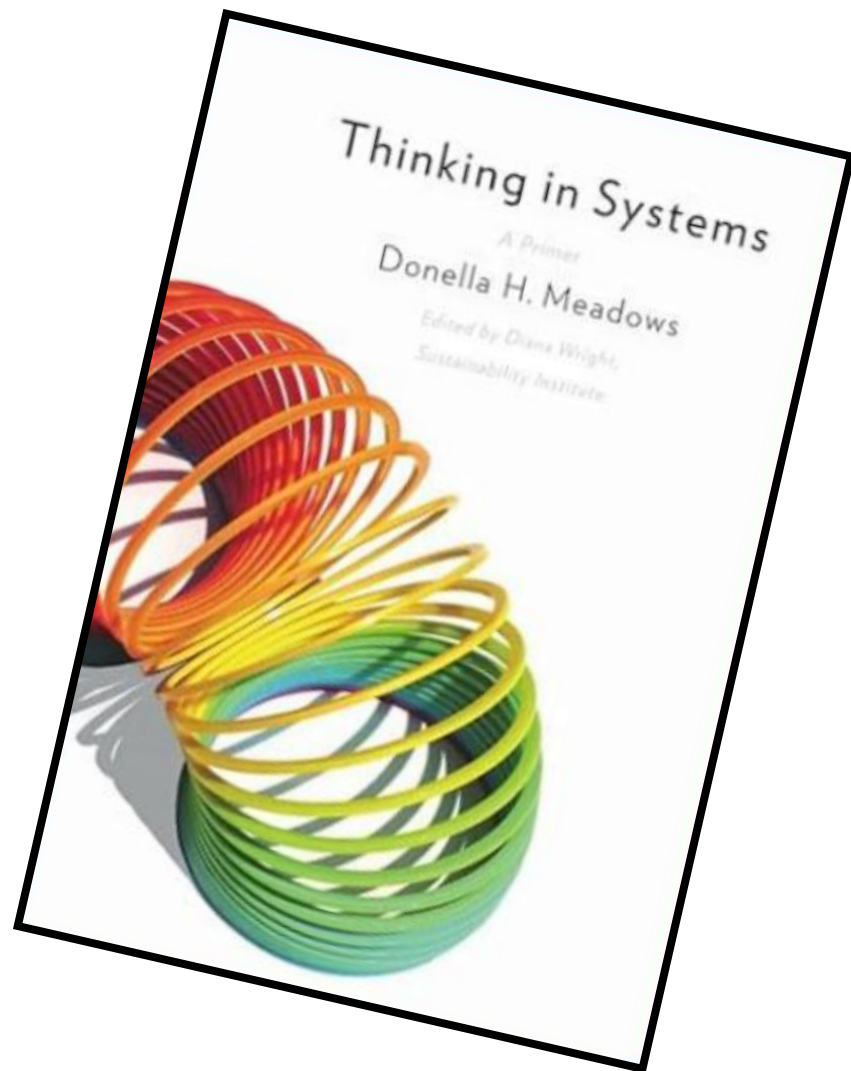
**SYSTEMS STRUCTURE**  
How are the parts related?  
What influences the patterns?

**MENTAL MODELS**  
What values, assumptions, + beliefs shape the system?

Increasing Leverage

From: Donella Meadows,  
Academy for Systems Change





Donella Meadows

## THE TOOLKIT

Prepare

Think

Refine

Amplify

# THE ICEBERG MODEL

Use this tool to help you think more systemically!



## EVENTS

What is happening?

## PATTERNS OF BEHAVIOR

What trends are there over time?

## SYSTEMS STRUCTURE

How are the parts related?

What influences the patterns?

## MENTAL MODELS

What values, assumptions, + beliefs shape the system?



From: Donella Meadows, Academy for Systems Change



# PREPARE

STEP 1



## Frame it

Formulate a precise, evidence-informed problem statement to anchor the session

Click to explore

STEP 2

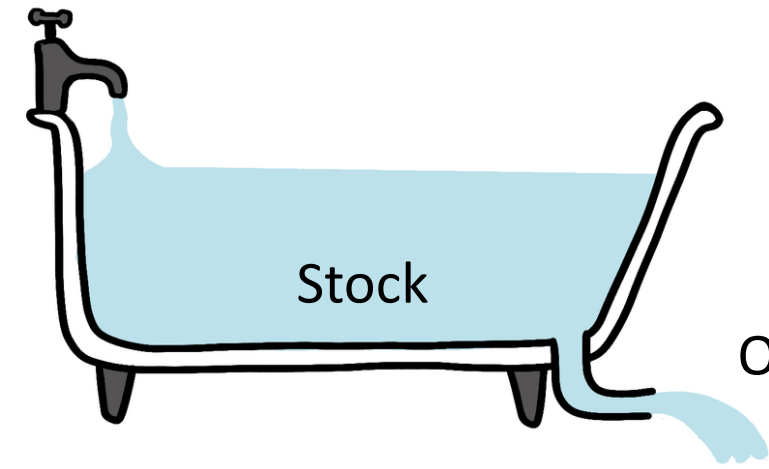


## Ground in evidence

Compile key data, research insights and lived experience

Click to explore

Inflow



Stock

Outflow

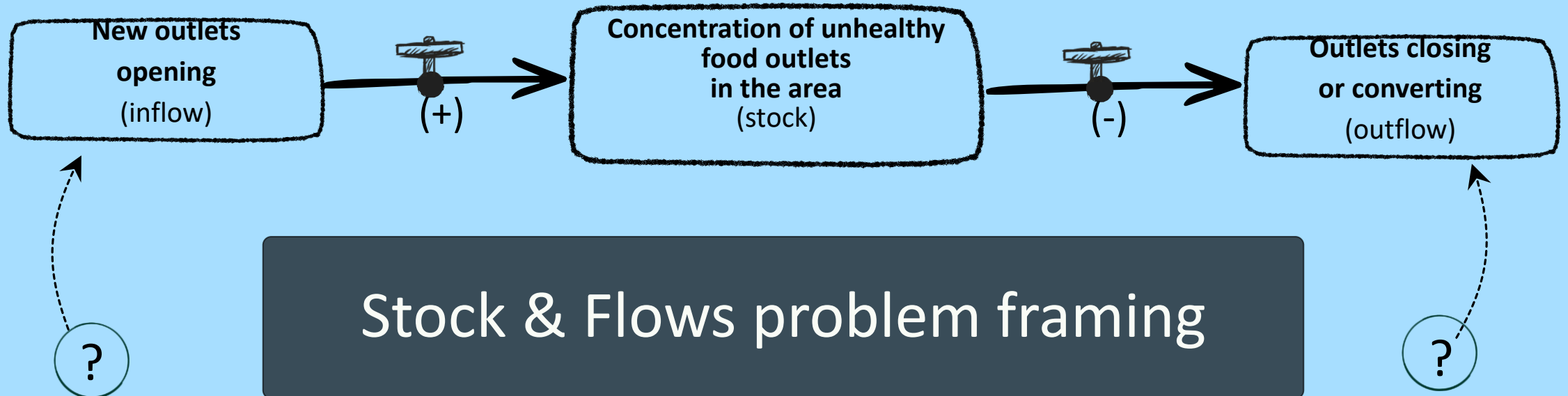
illustration by Hannah Mumby



From: Donella Meadows,  
Academy for Systems Change

From: Donella Meadows,  
Academy for Systems Change

**Figure 5.** The structure of a bathtub system—one stock with one inflow and one outflow.



# Stock & Flows are everywhere



Stock: **Community food skills**

Inflow: Education programmes / intergenerational transfer

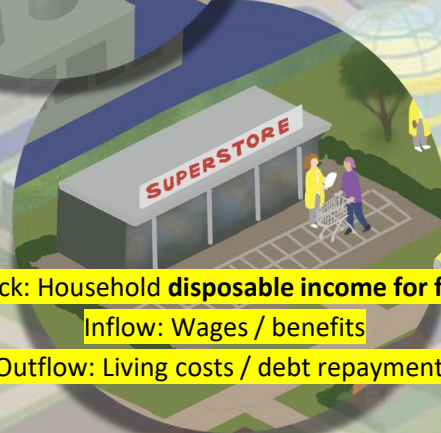
Outflow: Skill loss / reliance on convenience food



Stock: **Financial viability of local food businesses**

Inflow: Consumer spending / subsidies

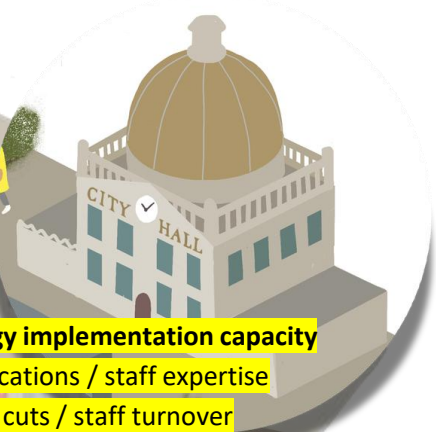
Outflow: Rising costs / business closures



Stock: Household **disposable income for food**

Inflow: Wages / benefits

Outflow: Living costs / debt repayments



Stock: **local food strategy implementation capacity**

Inflow: Funding allocations / staff expertise

Outflow: Budget cuts / staff turnover



Stock: Agricultural **greenhouse gas emissions** (accumulated)

Inflow: Livestock production / fertiliser use

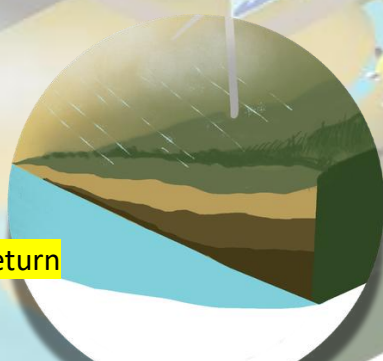
Outflow: Emission reductions / carbon sequestration



Stock: Adult **population with Type 2 diabetes**

Inflow: New diagnoses

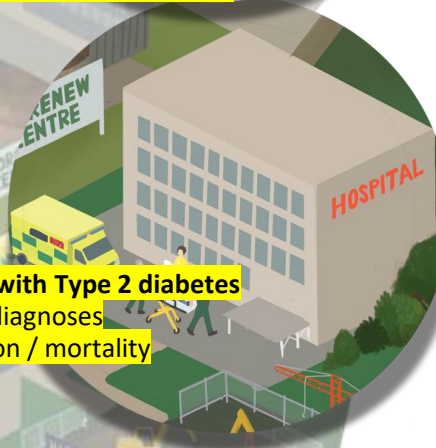
Outflow: Remission / mortality



Stock: **Soil fertility**

Inflow: Regenerative practices / organic matter return

Outflow: Intensive farming / erosion



Stock: Household **nutritional status**

Inflow: Access to nutritious food

Outflow: Poor diet quality / food insecurity

# DIVERSIFY PERSPECTIVES

3

STEP 3

**Set boundaries**

Establish the geographical, legislative and system boundaries

Click to explore

GEOGRAPHIC – LOCAL/REGIONAL/NATIONAL  
SYSTEM – WHICH PART OF THE FOOD SYSTEM?  
LEGISLATIVE – POLICY/REGULATORY FRAME  
TIMEFRAME – SHORT/MEDIUM/LONG



STEP 4

**Diversify Perspectives**

Bring together voices spanning multiple food system dimensions and lived experience

Click to explore

## THE TOOLKIT

Prepare

Think

Refine

Amplify

# Deliverable 2

## Impact planner



Facilitated workshop materials

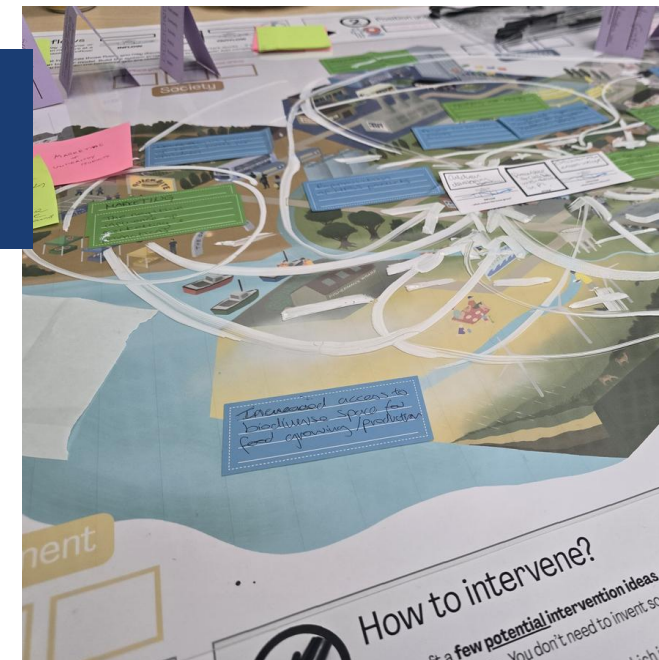
- to Identify reinforcing loops driving the problem
- To Locate leverage points
- to Design actions that influence underlying structures (not just 'symptoms')

Instead of asking:

*"What project can we fund?"*

It asks:

*"Where in the system can we intervene to change the trajectory?"*



### 1 Identify your stock & flows

Start by identifying your **main stock** – the key outcome or (issue) that builds up over time (something you can measure at a point in time). Then define its **Flows**: what increases it (inflow) and what decreases it (outflow).

As you explore what influences those flows, you may discover additional important stocks – if so, take another card and add them to your model. Build the system progressively. Start simple! Add complexity only when it becomes necessary to explain the behaviour you are observing.

**Printable card set A**

### 2 Position yourself

Introduce yourself briefly and place your name card in the area of the food system your role is most connected to.

**Printable card set B**

### 3 What influence the FLOWS?

Take two colours of sticky notes:

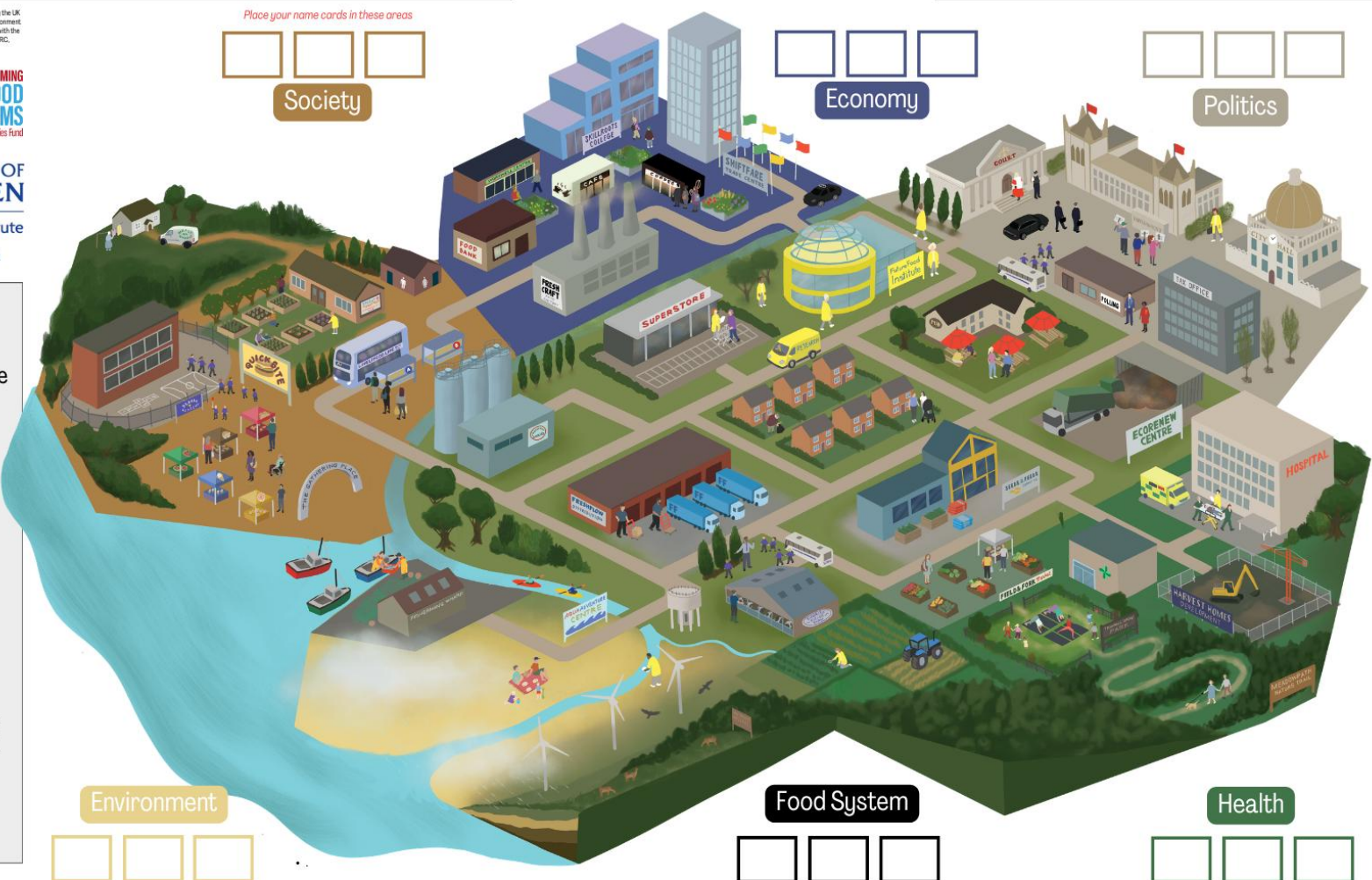
- yellow** for factors that **increase** your stock (influences **INFLOW**)
- blue** for factors that **decrease** it (influences **OUTFLOW**).

Write **one factor per note** and place it near the part of the map or environment it relates to (e.g. food retail density/supermarket or transport access/bus).

**REFLECT:** When finished, step back and notice - are some areas of the map empty? If so, why? Are those areas less relevant - or could important factors be overlooked? Can you think of any factors from those unmapped domains?

This research was funded through the Transforming the UK Food System for Healthy People and a Healthy Environment SPX Programme, delivered by UKRI, in partnership with the Global Food Security Programme, BBSRC, ESRC, MRC, NIHR, Defra, DHSC, CHD, Innovate UK and FSA.

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The Rowett Institute  
FIOFood@abdn.ac.uk



### 8 Advocacy Phase

On your name card, note who you might reach out to continue the conversation.

How can you help explore and support the development of the intervention and broader food system changes?

Visit the website to access resources that help boost impact, engage stakeholders, build strong narratives, and maximise the success of your grant proposals

### 4 Relationships

#### 4.1 FIND CONNECTIONS

Look at all the factors on your sticky notes. **Connect each factor** (sticky note) to your **stock & flow card** by drawing lines to the relevant **faucets** on the **INFLOW** or **OUTFLOW** "pipes", since **factors influence flows, not the stock directly**. If a factor doesn't link directly to a flow, connect it to other factors and branch out.

#### 4.2 ADD +/- SYMBOLS

Add a **small symbol** next to the arrow:

Use **+** if the two things move in the **same direction**. If one increases, the other increases. If one decreases, the other decreases.

Example: ↑ vegetable intake → + → health ↑

Use **-** if they move in **opposite directions**. If one increases, the other decreases. If one decreases, the other increases.

Example: ↑ household income → - → food poverty ↓

#### 4.3 MARK THE LOOPS

If your arrows created a circle, you've found a loop!

There are two types of loops

**R = Reinforcing Loop** (also called a positive feedback loop)  
If the loop makes the issue grow stronger - mark the loop with: **R**

**B = Balancing Loop** (also called a stabilising loop)  
If the loop helps control or reduce it - mark the loop with: **B**

Reinforcing loops contain an **even number** of negative (-) links (including zero).  
Balancing loops contain an **odd number** of negative (-) links (including zero).

### 7 Who can help?

You may not know the exact interventions yet - but you know **where change is needed!** Think who should join the next meeting to assess feasibility, impact, risks, costs, and alignment before developing a funding bid or a research proposal?

Write specific names, organisations, or groups on **green** sticky notes - especially those within your existing networks or professional sphere. Place them on the map.

### 6 How to intervene?

Now, draft a **few potential intervention ideas** on **purple** sticky notes and place them next to the leverage points. You don't need to invent something new - use an **evidence-based** approach!

After the workshop, check which interventions have worked in the past, which have not, and why. One useful example of evidence resource is the **Solution Bank**, developed through the Transforming UK Food Systems (TUKFS) Programme Researchers (Parsons, Hawkes & Wells, 2019)

Bring back **evidence-checked options** to the next meeting. This will strengthen feasibility discussions and help build a strong funding bid or proposal.

### 5 Where to intervene?

#### 5.1 Review your loops

Where could breaking a harmful loop or strengthening a helpful one significantly shift the flow?

#### 5.2 Spot leverage points

Where do many arrows meet? Which factors influence many others?

#### 5.3 Mark leverage points

Place **2-3 pink sticky notes** next to these high-connection areas - they are often the most influential points for intervention.

# Feedback

**Video here**

# THE TOOLKIT

Prepare

Think

Refine

Amplify



**R = Reinforcing Loop**

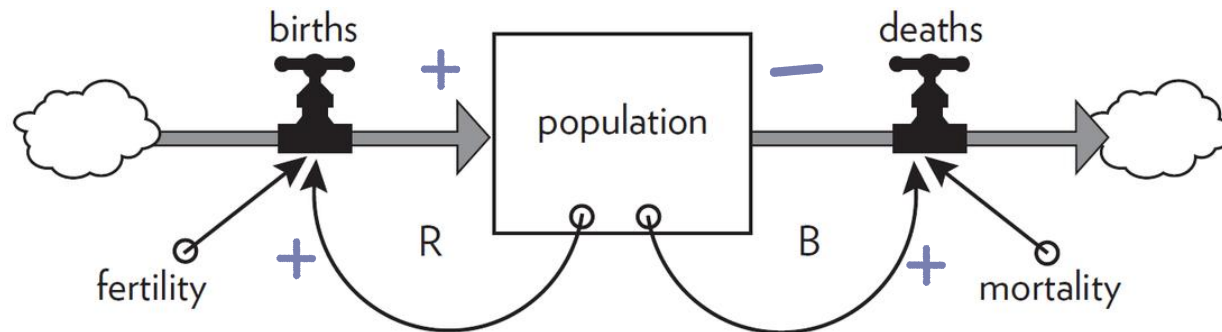
(also called a positive feedback loop)

If the loop makes the issue grow stronger - mark the loop with: R

Reinforcing loops contain an **even number** of negative (-) links (including zero).

**+** Use + if the two things move in the **same direction**

- If one increases, the other increases
- If one decreases, the other decreases



**B = Balancing Loop**

(also called a stabilising loop)

If the loop helps control or reduce it - mark the loop with: B

Reinforcing loops contain an **odd number** of negative (-) links (including zero).

**-** Use - if they move in **opposite directions**.

- If one increases, the other decreases.
- If one decreases, the other increases.

**Figure 21.** Population governed by a reinforcing loop of births and a balancing loop of deaths.



# evidence-based intervention design

Structural Driver	Loop Influence	Proposed Leverage Point	Evidence Source
Limited local availability of fresh produce	Reinforcing: low demand → fewer suppliers → less variety → low demand	Support local co-ops and farmers' markets to increase availability	Local food desert mapping; community surveys, Solution Bank
Inefficient food distribution	Balancing: uneven supply → waste and high cost → uneven access	Partner with food hubs / social enterprises to redistribute surplus	Local food redistribution programs; WRAP Scotland reports, Solution Bank

**Mandala** Home About Search

Keyword Search

Enter search term (optional)

Browse / Refine search

**Who instigates**

Which food system actor will initiate this solution?

Private sector  Public sector

Civil society  Other

**Who is impacted**

Which food system actors will be impacted by the solution?

Private sector  Public sector

Civil society  Consumers

Other

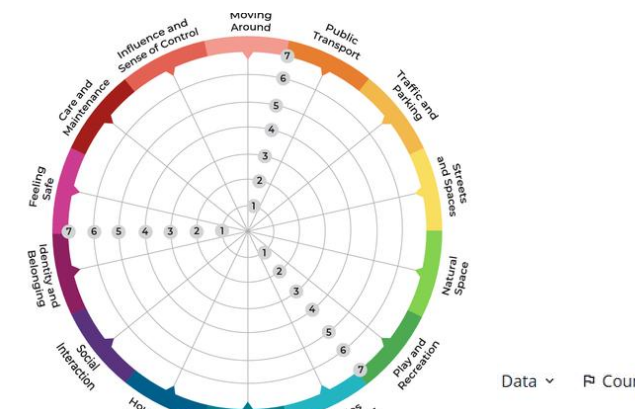
**Outcomes**

Which food system outcomes are likely to be impacted?

Health  Environment

Social  Economic

Food security



**Synergy projects: Co-production of research for food systems transformation**

Mapping and exploring examples of co-production activities across Transforming UK Food Systems (TUKFS) projects

**The Food Systems Dashboard** gives a complete view of food systems by bringing together data from multiple sources.

- [More About the Dashboard](#)
- [More About Food Systems](#)
- [Download Data](#)

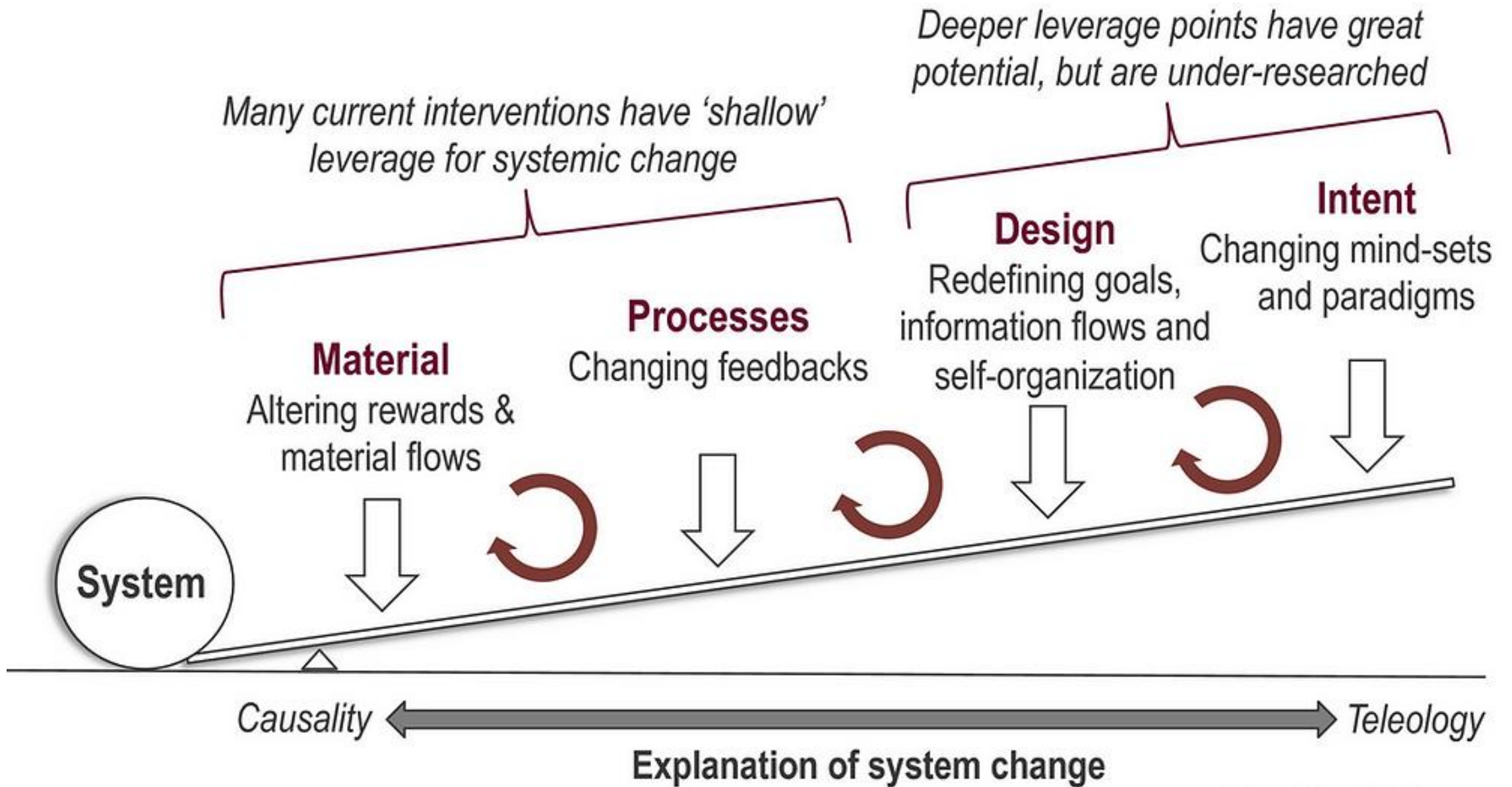
## THE TOOLKIT

Prepare

Think

Refine

Amplify



Adapted from D.J. Abson

# Thank you

## TUKFS ECRs:

- Marta Lonnie (FIO Food)
- Hannah Greatwood (FIO Food)
- Emma Hunter (DIO Food)
- Manik Puranik (FoodSEqual)
- Bramble Gardiner (FoodSEqual)
- Jessica Bosseaux (FoodSEqual)
- Victoria Norton (HiFi Bread)
- Ferne Edwards (FixOurFood)
- Brenda Mogeni (H3)
- Hafize Sahin Ersoz (Realigning UK..)

## TUKFS Network Support

- Tracey Duncombe
- Beth Mead

## TUKFS Expert Advisors

- Prof. Alex Johnstone
- Prof. Mark Green
- Prof. Carol Wagstaff
- Prof. John Hammond
- Dr Kelly Parsons
- Dr Rebecca Wells

## External collaborators

- Dr Francesca Pontin

Consumer Data Research Centre; Priority Places for Food

- Prof. Michelle Morris

Healthy and Sustainable Places Data Service

- Dr Daniel Crabtree & Bea Dawkins

NIHR: Health Determinants Research Collaboration Aberdeen

- Victoria Gilbert

Future Advocacy

## Independent evaluators

- ICF





Food Insecurity in people living  
with Obesity  
Improving sustainable and healthier food  
choices in the retail FOOD environment



Dr Marta Lonnie

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# TUKFS ‘co-production toolkit’ – maximising its reach beyond academics, to project collaborators & policymakers

Clare Pettinger, Charlotte Hardman, Rebecca Wells, Ulrike Ehgartner, Lisa Morgans, Neil Boyle, Naomi Shaw, Lisa Howard, Hannah Mumby

TUKFS projects: FoodSEqual; BeanMeals; FIOFood; H3; FixOurFood; Cultured Meat & Farmers; Mandala Consortium; Social Enterprises as a Catalyst for Sustainable & Healthy Local Food Systems



# What is Co-production?

A collaborative way of working alongside individuals and groups with diverse forms of knowledge and expertise in equal partnership for equal benefit (Co-Production Collective, 2021).

## Core Values



### HUMAN

We value people as people, do everything wholeheartedly, and work to make a genuine difference.



### INCLUSIVE

We support everyone to be included and participate fully in our co-production community.



### TRANSPARENT

We share power, make decisions openly and collectively, and are accountable to our co-production community.



### CHALLENGING

We say it like it is, continually questioning both the status quo and ourselves, even when that's the hard thing to do.

***'co-produced research' is a key strategic aim of TUKFS research programme***

- *"...facilitates both creative and inclusive collaborations with multiple stakeholders to produce innovative, community-identified responses and solutions"*

(Kreiling and Paunov, 2021)

- **BUT**
- Lack of appreciation as concept & *"misappropriation of its use"*  
(see Oliver et al, 2019; Williams et al 2020)



# Methodological considerations

- Creative participatory approaches
- N=39 food system 'stakeholders'
- Collaboration with creative illustrator (Hannah Mumby)
- Diverse beneficiary perspectives
- Critique of complexity/messiness (publication)
- Ongoing reflexivity on the 'hidden' (challenging) aspects of co-production (Lisa Howard)



## Co-Leads

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Prof Charlotte

Hardman

## Research Assistant

Naomi Shaw

## Co-Investigators

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Joanne Craven

Dr John Dooley

Dr Bethan Mead

Dr Lisa Morgans

Dr Rebecca Wells

Dr Ulrike Ehgartner

## Creative Facilitator

Hannah Mumby

Lisa Howard

# FINDINGS (4 themes)



**KNOWLEDGE**



**INCLUSIVITY**



**RELATIONSHIPS**



**POWER**

*'Messiness'  
&  
complexity*



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Creative Facilitator

















Hannah Mumby

Lisa Howard

# Outputs - 1

16 case studies  
from  
8 TUKFS  
projects...



 <p>Co-designing a bean-themed game with school children</p>	 <p>FoodSEqual community food researchers: co-producing healthy and sustainable food systems in Plymouth</p>	 <p>Healthy Soil, Healthy Food, Healthy People (H3): Co-designing a regenerative agriculture trial with farmers</p>	 <p>Whole-school engagement in BeanMeals</p>
 <p>Healthy Soil, Healthy Food, Healthy People (H3): Developing partnerships with community organisations</p>	 <p>Co-designing retail strategies with people with lived experience of obesity and food insecurity</p>	 <p>Sharing good practice and learning through co-production with local food partnerships</p>	 <p>Working with farmers to identify the threats and opportunities of cultured meat technology</p>
 <p>Co-producing knowledge about systemic innovation processes</p>	 <p>Co-creating a local food action plan with ShelfFood</p>	 <p>Creative school engagement with FoodSEqual Plymouth</p>	 <p>Co-production of knowledge with social enterprises</p>
 <p>Co-designing healthy and sustainable hospital food for children</p>	 <p>The Plymouth Fish Finger: Collaborating with 'blue food' system stakeholders</p>	 <p>Collaboration with industry and third-sector partners in FIO Food and DIO Food</p>	 <p>Collaborating with the Yorkshire Grain Alliance</p>

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# Outputs - 2

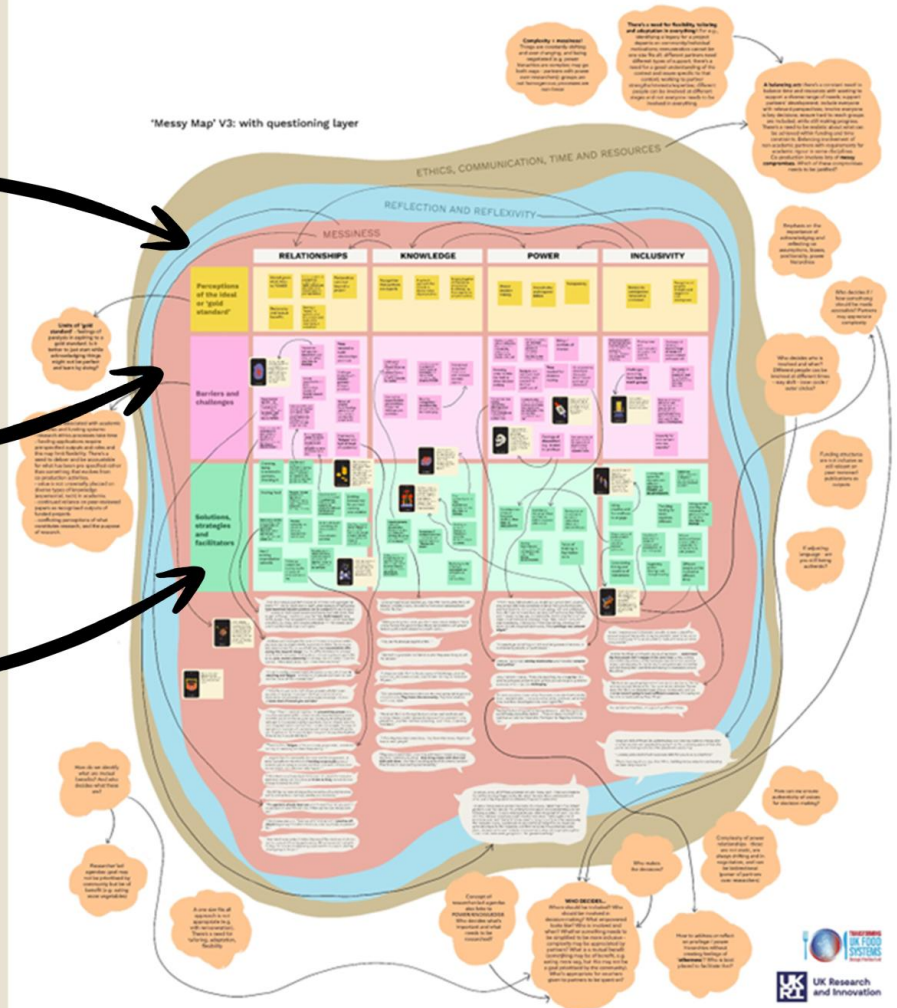
## 'MESSY MAP':

Aspirations

Barriers

Strategies & facilitators

....linked to the 4 themes



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# Outputs - 3

## Illustrated checklist:

providing  
recommendations for  
researchers & practitioners



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# Outputs - 4

Policy workshop

Summary of a **POLICY WORKSHOP** we ran:



**“Evolving the ‘TUKFS Co-production toolkit’  
to maximise its reach to project  
beneficiaries and policymakers.”**

***Policy workshop summary***



**Research team:** Dr Clare Pettinger, Professor Charlotte Hardman,  
Naomi Shaw, Dr Rebecca Wells, Dr Ulrike Ehgartner, Dr Neil Boyle,  
Dr Lisa Morgan

Co-facilitated by Hannah Mumby

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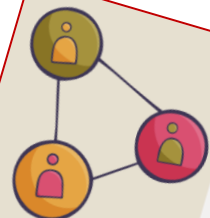
Lisa Howard

# Outputs - 5

*\*video\**



Upskilling food system thinkers



Building new relationships

Ongoing partnerships and interest in future collaboration



Co-created knowledge relevant to diverse audiences



Developing new skills and building capacity



Confidence to innovate with the security of TUKFS funding



Sharing knowledge and facilitating learning



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Hannah Mumby

Lisa Howard

# Output 6 - Lisa Howard & Hannah Mumby

**Illuminating perspectives in co-produced research:**  
an illustrated conversation starter



**Ethics and Procedures**



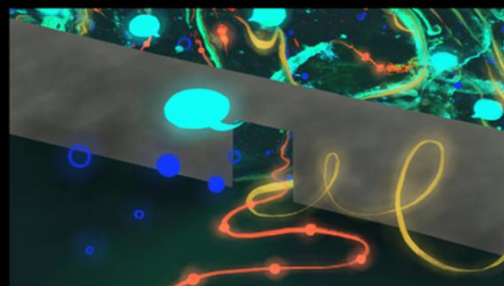
**Money and Resources**



**Identity**



**Change and Growth**



**Communication**



**Home Life**

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Hannah Mumby

Lisa Howard

# Publication



## Nutrition Bulletin



ORIGINAL RESEARCH | [Open Access](#) |

### What does 'co-production' look like for food system transformation? Mapping the evidence across Transforming UK Food Systems (TUKFS) projects

Naomi Shaw, Charlotte A. Hardman, Neil Bernard Boyle, Joanne Craven, John Dooley, Bethan R. Mead, Lisa Morgans, Hannah Mumby, Clare Pettinger

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# Our TOOLKIT

Online co- production toolkit  
<https://www.plymouth.ac.uk/research/synergy>



**Synergy projects: Co-production of research for food systems transformation**

Mapping and exploring examples of co-production activities across Transforming UK Food Systems (TUKFS) projects

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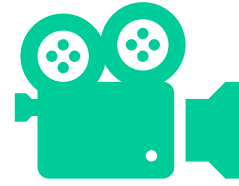
Dr Ulrike Ehgartner

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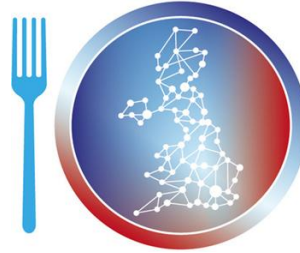
Hannah Mumby

Lisa Howard

# Let's share the video



## THANKS to:



- Funder (TUKFS - UKRI)
- Naomi Shaw
- Lisa Howard & Hannah Mumby
- Co-I (Charlotte, Neil, Joanne, John, Beth, Lisa, Rebecca, Ulrike)
- Project collaborators
- Everyone who lent a hand on this project



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