



Integrated Policies for Food Waste and Sustainable Food Systems in the Circular Economy

REFRESH final Policy Workshop

Brussels, 22 March 2019

Hilke Bos-Brouwers, Stephanie Wunder, Venice Graf



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WAGENINGENUR
For quality of life



REFRESH: Resource Efficient Food and dRink for the Entire Supply cHain

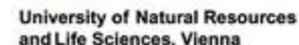
REFRESH's main objective is to contribute towards Sustainable Development Goal 12.3



To achieve this, the project's main goals are to:

- Develop **strategic agreements** to reduce food waste with governments, business and local stakeholders in four pilot countries (Spain, Germany, Hungary, and the Netherlands).
- Design and develop **technological innovations** to improve valorization of food waste and **ICT-based platforms and tools** to support new and existing solutions to reduce food waste
- Formulate EU **policy recommendations** and **support national implementation** of food waste policy frameworks
 - 26 Partners from 12 European countries and China
 - Duration: July 2015 – June 2019
 - Funding: ~ EUR 9 million

Project Partners





Consumer Behaviour

- Theoretical Framework
- In-house measurement
- On-pack guidance
- Consumer acceptance
- ICT Apps

Valorisation of unavoidable side flows

- Top waste streams
- Ingredients // texture processing & fibers
- Animal Feed
- Chemicals // bacterial conversion
- Economic modelling
- FoodWasteExplorer

Frameworks of action

- Framework agreements
- PWP platforms for VA (NL, GE, HU, ES, CH)
- FA pilots & evaluation
- Decision Tooling
- Blueprint

Behavioural economics

- Consumer & Retail modelling (BN & ABM)
- FW reduction scenarios
- Roadmap policy interventions

Environmental impact

- Simplified LCA/LCC approach of valorisation
- FORKLIFT
- Case studies

Dissemination

- Food Waste Contest
- Events
- Community of Experts
- Communication & online campaign



Policy

- **Mapping food waste drivers across the food supply chain**
 - identifies drivers of food waste and resulting waste streams across the supply chain in five food categories: bread, dairy, potatoes/tomatoes, prepared meals (sandwiches), and processed meat/poultry
- **EU policy review**
 - Identifies the impact of EU policy areas on food waste generation and/or prevention and discusses opportunities for improvement
- Qualitative **assessment of unfair trading practices and voluntary agreements with comparative case studies** across EU countries
- **6 Policy workshops**
 - Barriers to food waste prevention/valorisation and solutions
 - Windows of opportunity in EU policy
 - National approaches and voluntary agreements
 - Consumer behaviour
 - Animal feed
 - Integrated Policies for food waste
- Propose an **Action Plan** for policy change

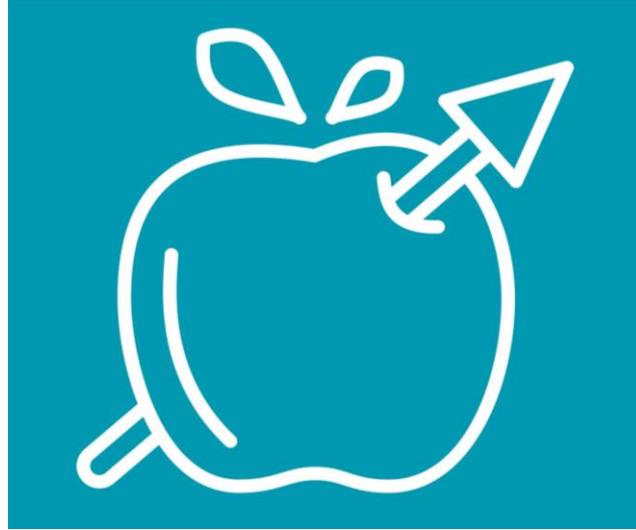


Introduction FoodWIN & Greenbizz

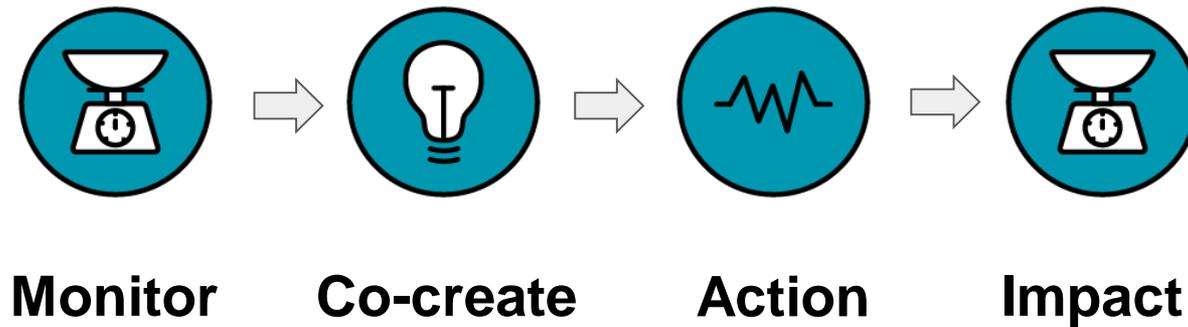
By Gil Op De Beeck
FoodWin

Goodmorning!
Welcome at Greenbizz





Our approach



Cities



Food waste estimation tool



Bring together city stakeholders



Impact

Examples: Food Lab Bruges: stakeholder platform developing food strategy of Bruges; Resto Restjes



Canteens



Food waste measuring



Participatory innovation workshop

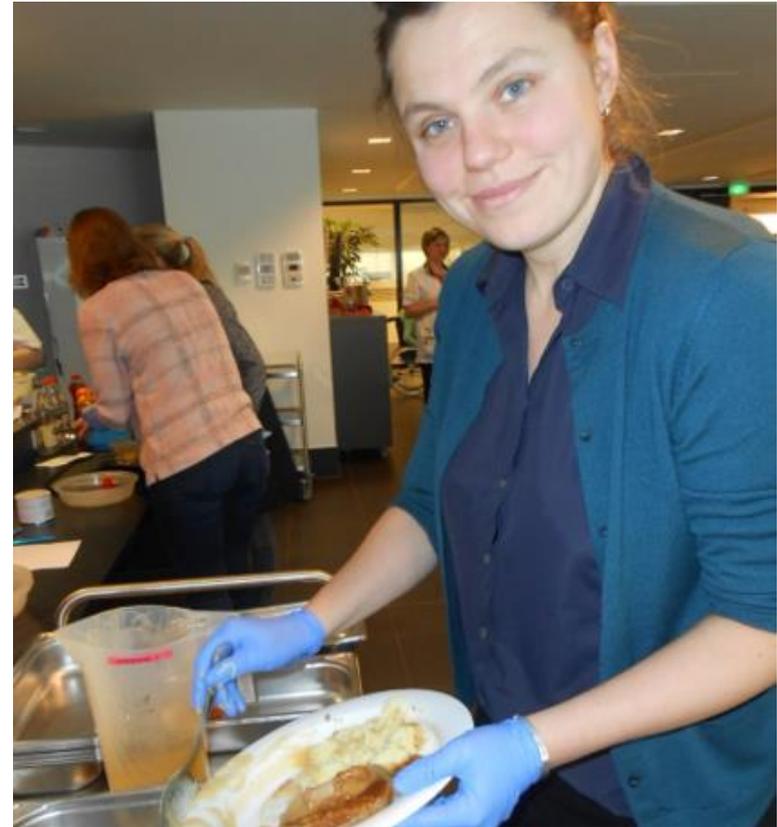


Action

Example:

Healthcare institutions Bruges

- 40% reduction in FW
- Savings: 50.000 euro/yr



FOODWIN

Innovation trajectories

- Look for innovation
- Traject:
 - Factsheet
 - Learning journeys
 - Food Waste Challenges
 - Action Labs
- Past: Apples and pears, Bread
- Currently: households



FruitCollect



FOODWIN PRESENTS:

THE FOOD WASTE FEST

- SOLUTIONS WORTH SPREADING -

APRIL 2ND 2019



Thanks for listening!

Contact me (for nearly everything):

gil@foodwin.org

+32 478 225 303





Ice-Breaker

Who are you

Why are you here?

What's your favorite, personal anti –
food waste tip @Home?



Agenda of today

- REFRESH Insights & Constellation exercise
- Food For thought
- Road mapping for integrated food waste policy
- From Options to Actions
- Wrap up and reflections



Interactive consultation 1

Presentation of REFRESH insights

by Stephanie Wunder
Ecologic Institute



Integrated policies for Food Waste and sustainable food systems in the Circular Economy

REFRESH insights
Policy Workshop, Brussels, March 22, 2019

Stephanie Wunder, Ecologic Institute



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REFRESH scope: three focus areas

1. Understand consumer behaviour and study potential (policy) interventions
2. Develop voluntary agreements across the food supply chain
3. Study new uses/valorisation of surplus food/food production side streams



EU project **Resource Efficient Food and dRink for the Entire Supply cHain** to reduce food waste across Europe

REFRESH policy work

- Focus areas reflected in policy work
 - Four policy briefs:
 1. Changing consumer behaviour (and implementation and monitoring of interventions)
 2. Feeding surplus food to omnivorous non-ruminant livestock
 3. Voluntary agreements
 4. Unfair Trading Practices
- } Integrated supply chain policies

The screenshot shows the REFRESH website interface. At the top, there is a navigation bar with links for Results, National Platforms, Events, News, About, and Get Involved. Below this is a search bar. The main content area is titled 'Results' and features a filter section for REFRESH results by Type, Issue, Target group, and Work package. Three policy briefs are displayed in a grid:

- Reducing consumer food waste**: Public campaigns and other policy instruments can significantly influence consumer behavior and contribute to a reduction of consumer food waste. However, there are only very few studies that have evaluated to what extent policy interventions actually reduced or prevented food waste.
- Regulating the role of Unfair Trading Practices in food waste generation**: This policy brief outlines the relevance of Unfair Trading Practices to understanding addressing food waste in the supply chain and makes recommendations on mitigating Unfair Trading Practices for a fairer and less wasteful supply chain.
- Voluntary Agreements as a collaborative solution for food waste reduction**: This policy brief outlines how to create a favourable context for the implementation of Voluntary Agreements (VAs) within any Member State to drive food waste reduction. The collaborative nature of VAs is furthermore highlighted, as the food waste savings target of a

3 Policy briefs just published on the REFRESH website



Integrated perspective: Food waste reduction and link to other (EU) policies



- 🥦 Screening of relevant EU policy areas related to food waste prevention
- ➔ Analysis of 10 related policy areas
- ➔ Many interlinkages
- ➔ Food Policy currently a „byproduct“
- ➔ Identified need for more coherence/integrated policies



REFRESH

Food waste prevention and valorisation: relevant EU policy areas

D3.3 Review of EU policy areas with relevant impact on food waste prevention and valorisation

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Handwritten notes on the bulletin board:

- Food policy that puts value of food centre, together with human + planetary (but do reach the stars!) → not this
- INTEGRATED FOOD POLICY
- Integrated Food Policy
- COMMON FOOD POLICY
- Support

Handwritten notes on the whiteboard:

COMMON FOOD POLICY (CFP)

- review of CAP & other policies (EU + national level)
- closing the gap amongst actors / supply chain
- INTERNAL TRADING PRACTICES (focus)
 - bring different policy instruments together
 - coherence with ~~the~~ SDG goals
- indicators, mapping + monitoring (scope: food waste prevention)



Need of integrated policies to reduce food waste and promote sustainable food systems

What kind of integration?

-  among sectors and policies
-  Integrated supply chain policies



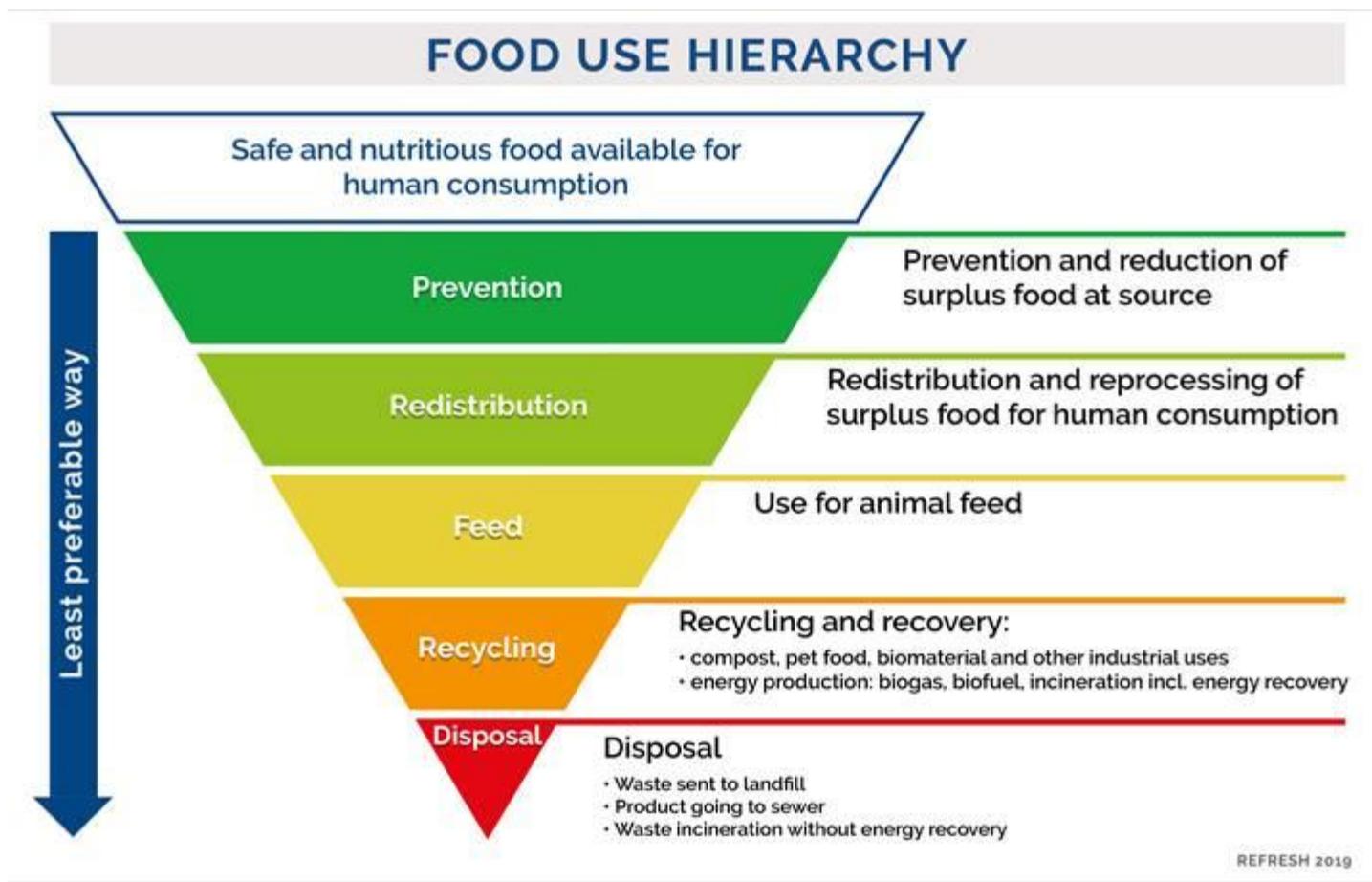
-  Coherence between different policy levels (EU→local)

“Food loss and waste is a symptom of a dysfunctional food system”





Example 1: Need to be in line with Food Use Hierarchy





Feed surplus food vs. food safety vs. environment

- Use of discarded food (potential animal origin, incl. catering residues) from the food chain currently not allowed under EU regulation (food safety concerns)
- Feeding surplus food to omnivorous non-ruminant livestock has large potential to reduce carbon emissions, land use footprint and can reduce feed cost



→ REFRESH microbiologists studied different forms of heat treatment to inactivate dangerous pathogens: identified safe way of using food surplus





Renewable Energy/Bioenergy policies versus food use hierarchy

EU Renewable Energy Policy (RED) in conflict with food use hierarchy:

-  Incentivises the use of edible food as energy source over use of food/feed
-  Double counting towards the RE quota
-  Biogas/AD plants with path dependency that is difficult to reverse

→ support of feedstocks that can be food or feed should be discouraged





Example 2: Need for collaboration in the supply chain

- Food waste is a systemic problem, so solving it requires **collaboration** across the entire food supply chain.
- This is hard to legislate for - **Voluntary agreements** provide a potential solution to this policy challenge



→ REFRESH developed a blueprint with a key steps in setting up a voluntary agreement

✓ 5 key steps of setting up a voluntary agreement

1. Initiation and **Set-up**
2. Ambitions, Goals and **Targets**
3. **Governance** and Funding
4. **Establishing Actions**
5. **Measurement** and Evaluation





„Unfair Trading Practices“ cause food waste and are barrier to collaborative approaches

- UTP=Practices that deviate from good commercial conduct between two trading parties, often a result of unequal balance of power
- 🥦 Can occur independently of food waste, but have been found to be one cause of food waste
- 🥦 connected to quality rejects, last minute order cancellation, poor demand forecasting etc.
- 🥦 UTP's make collaborative measures (such as Voluntary Agreements) difficult to implement

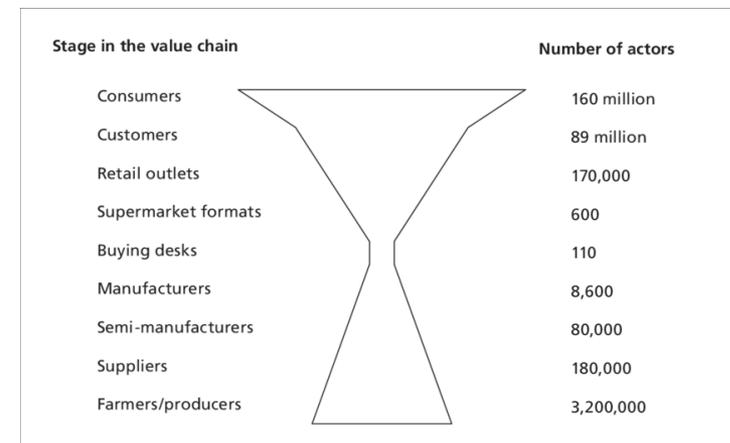


Source: Feedback global



„Unfair Trading Practices“

- Requires policy to look beyond legislation directly linked to food waste and to explore aspects of **competition and commercial law**
- Example of importance of **quality of data**: lack of robust EU food waste data at farm level may prevent understanding the scale of food waste in primary production (range of 11%-40% of all FW occur on farm level depending on methodology)

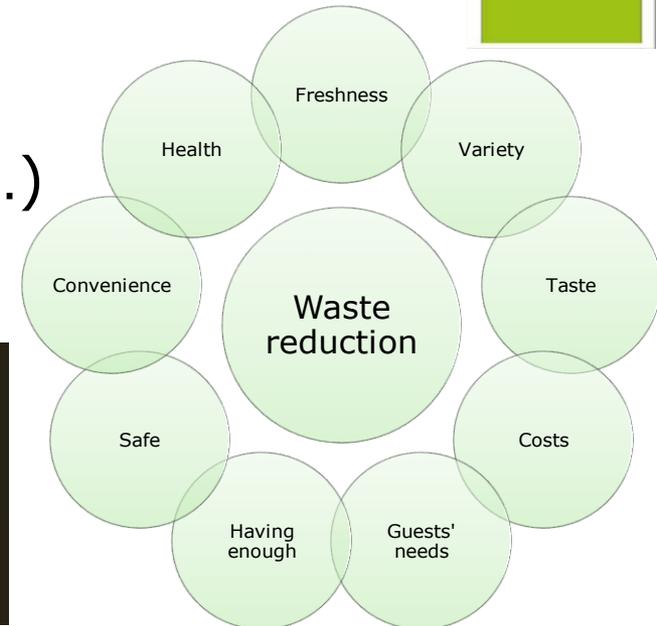




Example 3: Need to look into synergies with other policy objectives and into new policy instruments

- REFRESH research in consumer behaviour and food waste shows relevance of social norms
 - exploit tendency of individuals to conform to majority
 - emphasize positive behaviour of others
- Eating patterns are deeply rooted in culture → difficult area “to regulate” on consumer level → nudging approaches
- Need to find good balance of competing goals (health, taste, FW...)

%75
of guests in
this room
usually use
their towels
more than
once



POOR DIETS
pose a
greater risk to
health
than

unsafe sex,
alcohol, drugs,
and tobacco use
COMBINED.

Global Panel
on Agriculture
and Food Systems
for Nutrition



Need for integrated food policy/strategy

Next step today:

- 🥦 Better understand impact of each policy area:
Which are of particular relevance?
- 🥦 Better understand relation between different policy areas
- ➔ **Constellation exercise**
- 🥦 Think towards coherent approaches that serve food waste reduction AND more sustainable food systems overall
- 🥦 Think of concrete next steps
- ➔ Input through **presentations**
- ➔ Interactive **consultation** in the afternoon

Scope: policy areas analysed

1. Waste and resource policy
2. Food safety and hygiene
3. Special case: use of former food for animal feed
4. Agriculture & rural development
5. Fisheries policy
6. Unfair trading practices
7. Bioenergy
8. Product info & date labelling
9. Changing consumer behaviour
10. Voluntary cooperation



NOT analysed due to ongoing processes

- a. Donation and VAT issues
- b. Common Methodology, & Measuring approaches
- c. How to (better) include food waste measures in MS programs

Need for EU Food policy?



Consultation exercise

Chatham House Rules, please

participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed



Constellation Exercise

Aim of the session

To discuss the different angles of policy areas and how they relate to the generation and prevention of food waste

A constellation technique serves to create a physical set up, where people representing different policy areas position themselves in relation to each other, and to the signposted “Goal”.



What policy area has the largest contribution in the generation of food waste?



Policy areas

1. Waste Management
2. Food Safety
3. Food Information
4. Animal Feed
5. Climate Change / Env.pol.
6. Agricultural policy
7. Fisheries policy
8. FEAD
9. Unfair Trading Practices
10. Bio-energy
11. Health
12. Resource efficiency / packaging
13. Taxation / VAT regulation
14. Education
15. International trade
16. Donation
17. Animal welfare
18. Public procurement
19. International trade
20. Integrated food policy



Start of the exercise

Step 1

- 🥬 Go to your designated group space (3 [pre-]selected groups)
- 🥬 Each group selects 1 Rapporteur
- 🥬 Each group member selects a Policy Areas to represent
- 🥬 Max 10 minutes



Create the constellation

Step 2

- The Group members self-organise into a constellation
- The Rapporteur observes & invites to discuss criteria & placement
- The closer to the signpost or each other, the stronger the relation and/or higher the impact.
- High Impact means a high contribution to generation of food waste.
- **Max. 20 minutes**



Feedback & Group Comparison

Step 3

- At the signal, stop the discussion! Photo time
- Place your sign at the floor where you are standing
- Step away and gather around constellation No.1
- Summary by the Rapporteur No. 1 on process & positioning decisions (max. 3 minutes) + Questions (max. 5 minutes)
- All move towards constellation No.2, summary reported, questions + comparison with constellation No.1
- Move towards constellation No.3, summary reported, questions + comparison with constellation No. 1+2.
- Short reflection
- End of the exercise



Coffee break

 Back at 11.20 hrs



Food for thought (1)

A vision towards a Common Food Policy

By Chantal Clément
International Panel of Experts on
Sustainable Food Systems (IPES FOOD)



Towards a Common Food Policy for the EU

Chantal Clément, PhD
IPES-Food Coordinator



What is IPES-Food?

Since 2015, IPES-Food has been working to inform policy debates on food systems reform around the world, using:

- **A holistic approach**
- **Political economy focus**

IPES-Food's Work programme combines 1) **policy-oriented research (global)** and 2) **policy development processes (regional)**.



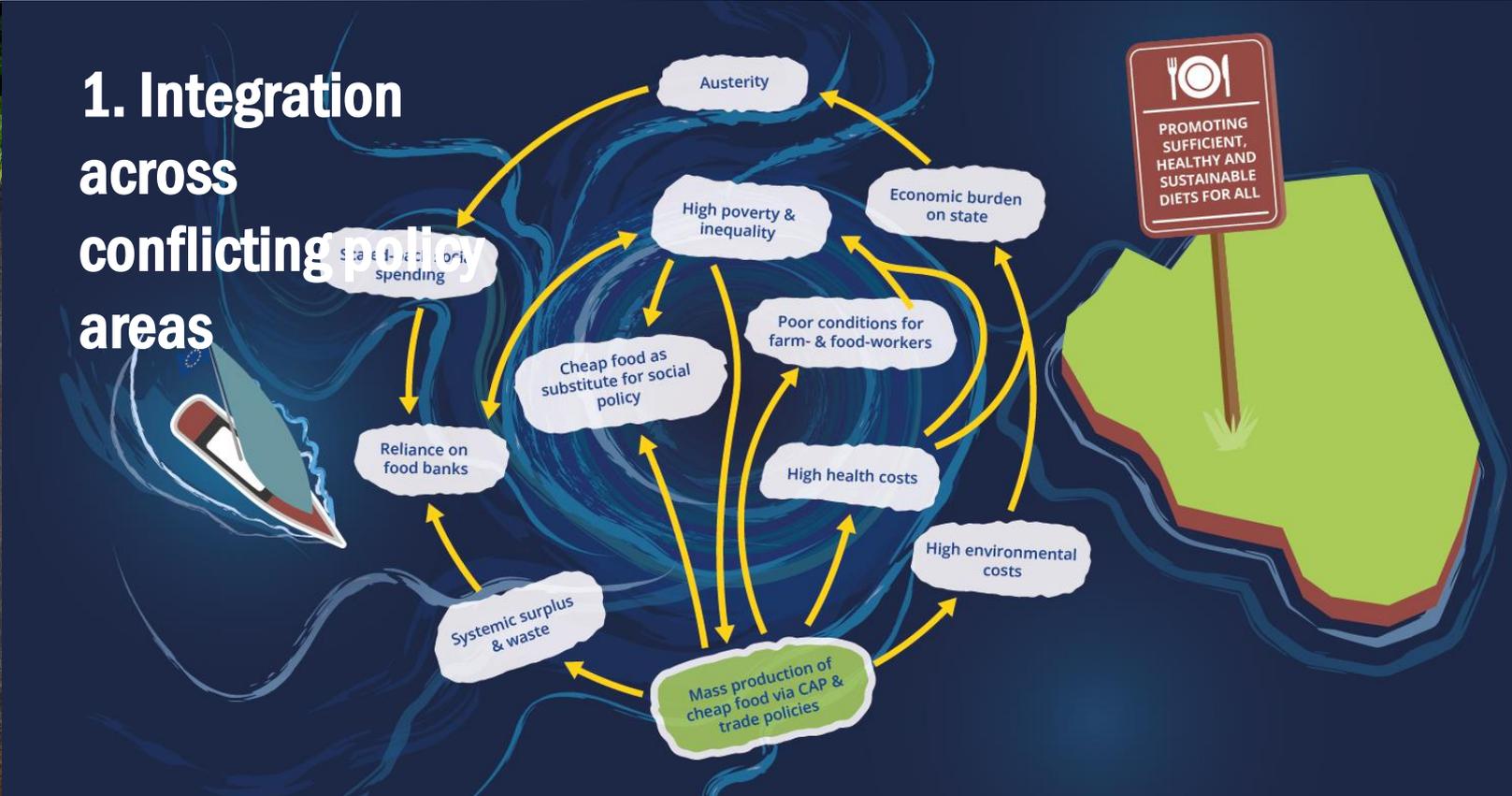
Food and farming systems are in crisis

- **Health risks.** More than half of adults in the EU are overweight & more than 20% obese.
 - **Environmental impacts.** Food systems account for up to 30% of global GHGs.
 - **Socio-economic challenges.** 1 out of 4 farms disappeared from the European landscape between 2003-2013.
- ➔ The current model delivers cheap food, but is very costly in social and environmental terms, and cannot be sustained...



Why do we need an EU food policy? (i)

1. Integration across conflicting policy areas



Realigning policy tools across multiple sectors



Why do we need an EU food policy? (ii)



2. Integration across governance levels

- **Social innovation and experimentation** is emerging rapidly at the local level, however, EU and national policies are ill-equipped to encourage this type of experimentation.
- Where supportive EU policy frameworks do exist, the **opportunities are under-communicated**, ineffectively implemented at national/ local level, or subordinated to competing priorities.

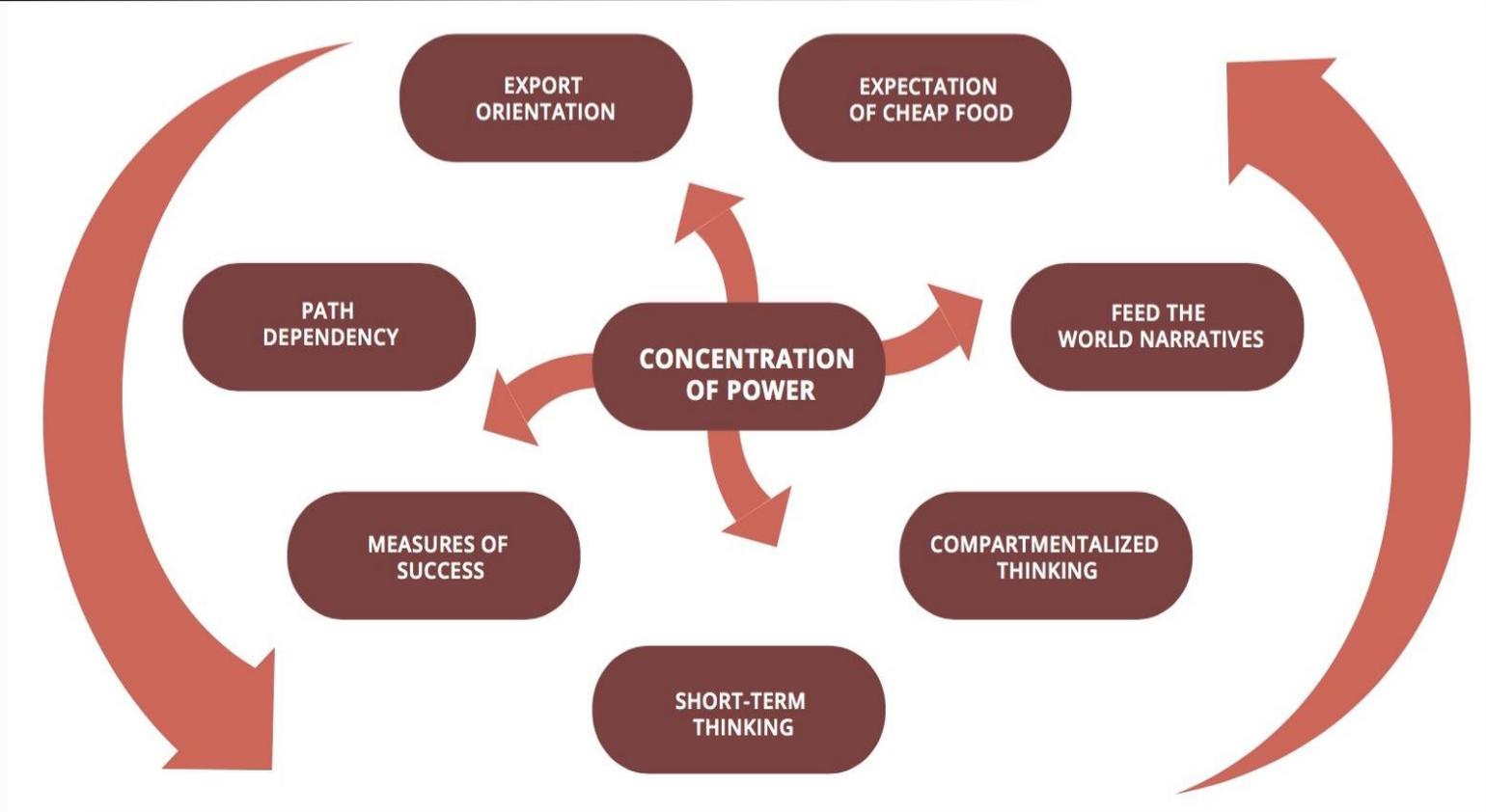
Why do we need an EU food policy? (iii)

3. Governance for transition

- The challenges identified by the UN SDGs must be urgently addressed.
- Current policies have proven slow to adapt to new challenges, and are locked into the paradigms of the past. A different type of policy – a **governance framework for transition** – is needed.
- There is a growing gap between the **mandate policy-makers** assume themselves to have and the space **citizens** are keen to reassert when given the chance



Integrated food policy can overcome structural barriers to change ('lockins')



A 3-year process of research & reflection: Bringing different voices to the table & asking the right questions



The 5 objectives of a Common Food Policy

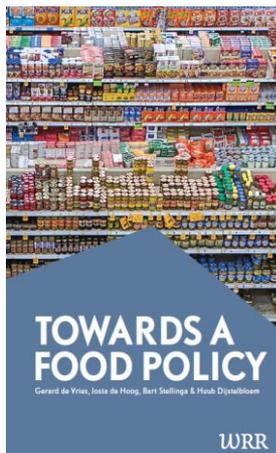
Policy reforms grouped under five objectives, represent the five paradigm shifts that need to occur in parallel to build **sustainable food systems** in Europe.



Integrated food policies already exist in the EU...



From a Common Agricultural Policy to a Common Food Policy



- Urban food policies
- City-region food policies
- National food policies

Support for integrated food policy at EU level is growing:

- **EESC** opinion on "More sustainable food systems (May 2016)
- **CoR** opinion "Towards a sustainable EU food policy" (March 2017)
- European Commission's in-house scientific advisers (the **JRC**, the **European Environmental Agency**, **SCAR**)

THANK YOU





Food for Thought (2)

An integrated perspective on food and food waste in the private sector & among social innovators

By Barbaros Corekoglu
European Institute of Innovation &
Technology (EIT)



EIT Food

Let's create the
future of food
together

Barbaros Corekoglu, Public Affairs Manager

EIT – European Institute of Innovation & Technology

- ◇ EU Body based in Budapest (2008)
- ◇ Operates through thematic “Knowledge & Innovation Communities (KICs)”





EIT's vision is to become the leading European initiative that empowers innovators and entrepreneurs to develop world-class solutions to societal challenges, and create growth and skilled jobs.

- First EU initiative **bringing together** the three sides of the '**knowledge triangle**': business (companies and SMEs), education institutions and research centres.
- Aim to increase the **cooperation** and **integration** between higher education, business and research to facilitate the transition from:

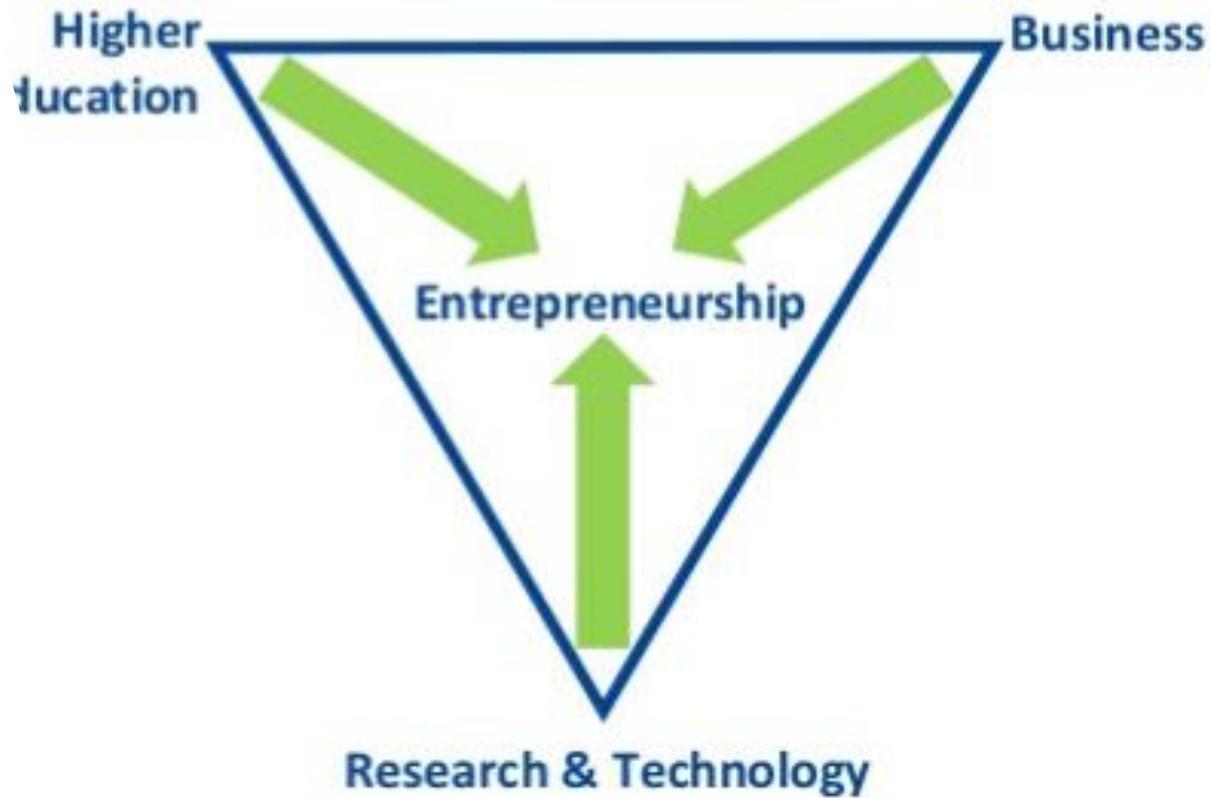


student to
entrepreneur

idea to product

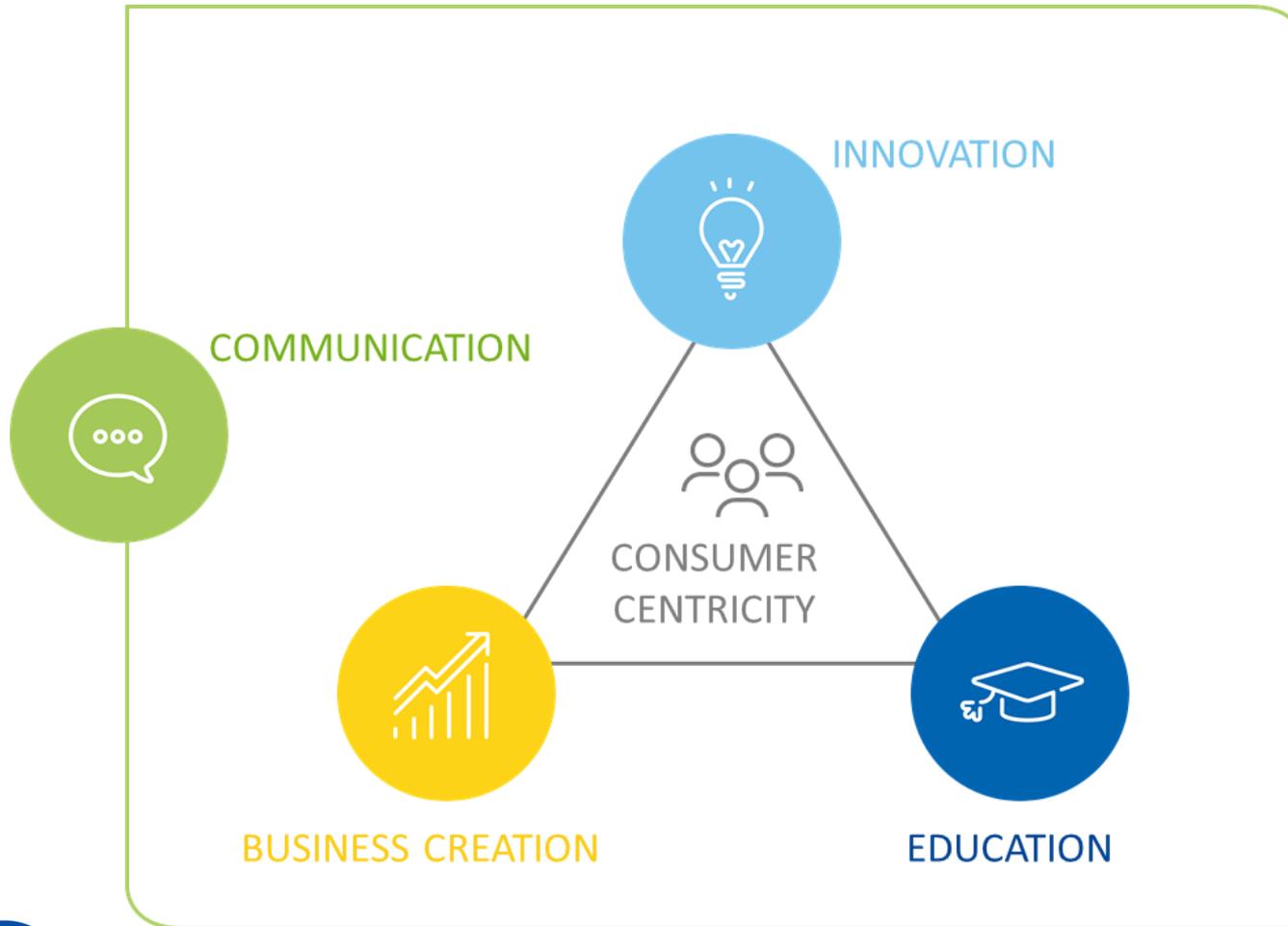
lab to citizens

The Knowledge Triangle of EIT



Squaring the Knowledge Triangle

4 Action Areas of EIT Food



'EU Food Systems' Today

THE FOOD SECTOR IN SUMMARY

- EUR **1,244 billion** turnover – largest manufacturing sector in EU;
- Provides **44 million** jobs in the EU;
- **99.1%** of companies are SMEs with **63.3%** of sector employment and **49.6%** of turnover;
- **0.27%** R&D investment as a share of output by private sector.

ENTREPRENEURSHIP AND NEW BUSINESSES

- Only **50%** of European start-ups survive the first 5 years
- **9 out of 10** start-ups fail due to lack of a market need for their products;
- Only **2.6%** of all EU start-ups are in the food sector;

SECTOR'S GLOBAL ENVIRONMENTAL IMPACT

- Responsible for **25%** of global CO₂ emissions;
- **32%** of all food goes to waste;
- Sector consumes **70%** of global freshwater extractions.

CONSUMPTION HABITS

- Over **50%** of European citizens are overweight;
- **14%** of EU household budgets spent on food and drink
- **25%** of EU citizens order grocery products online and **55%** are willing to do so in future;
- **62%** of European consumers are willing to pay more for sustainable brands.



Strategic Objectives

Transparency in the Supply Chain

- 1) Address low consumer trust in their food

Distorted Nutritional Habits

- 2) Create consumer-valued food for healthier nutrition

Fragmented supply chain

- 3) Build a consumer-centric connected food system

Sustainability

- 4) Enhance sustainability through resource stewardship

Skill gaps

- 5) Educate to engage, innovate and advance and attract new talent into the food sector

Limited entrepreneurial culture

- 6) Catalyse food sector entrepreneurship and innovation

EIT Food – Transforming the Food System

We are on a MISSION

EIT Food is an ecosystem for solving complex societal challenges by deploying innovative solutions



**EIT Food is the biggest consumer-
centric
open science innovation ecosystem**





eit Food

Consumer Trust

Public Health

Talent

Venturing and Growth

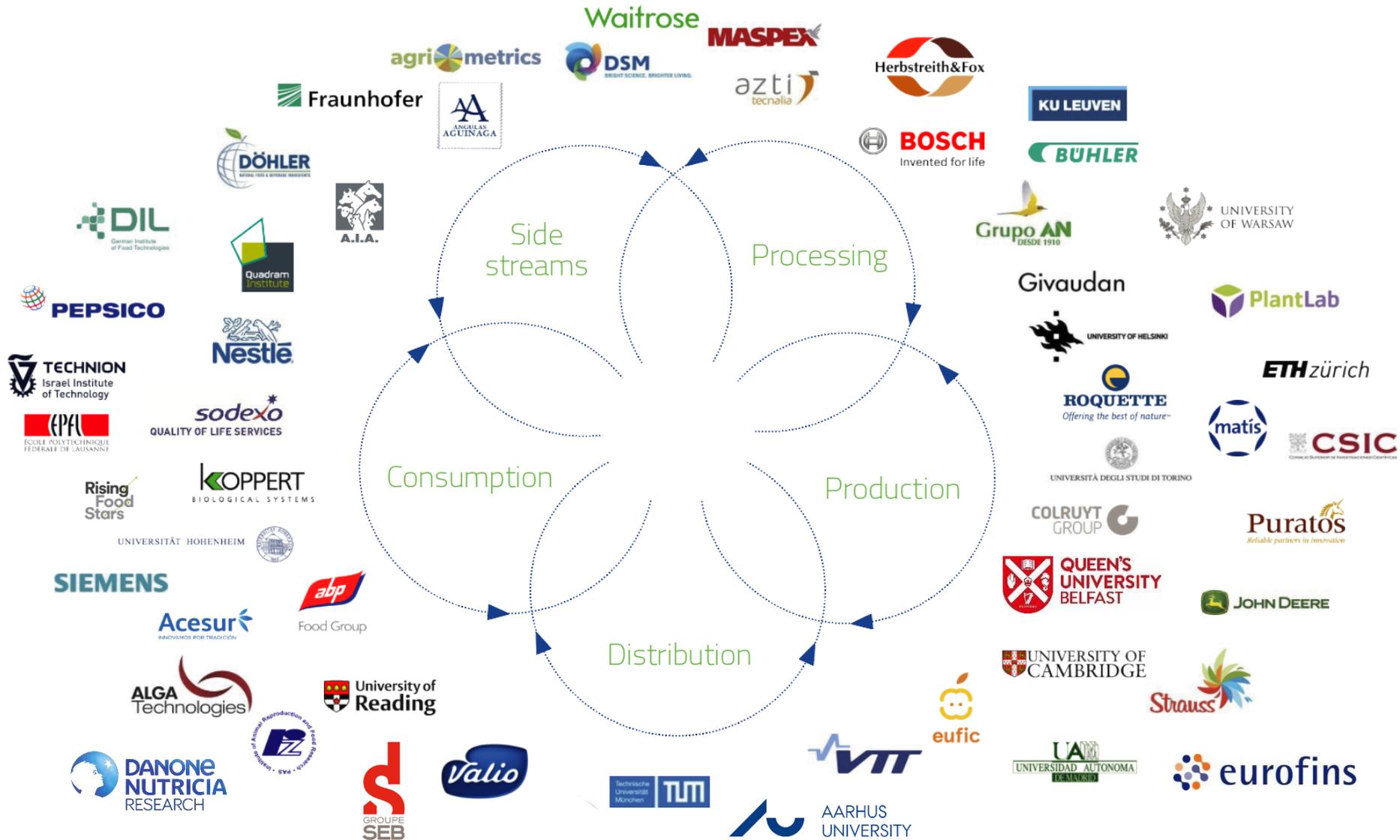
Connectivity and Transparency

Sustainability

Being innovative requires going beyond value chains...
...we are building an **ecosystem**

EIT Food Partners

Transforming the Food System together



Europe's most promising start-ups - RisingFoodStars



EIT Food - Knowledge & Innovation Community For Food

5 Co-Location Centers (CLCs)

Leuven (BE-FR-CH)

Reading (UK-IE-IS)

Madrid (ES-IT-IT)

Munich (DE-NL)

Warsaw (PL-FI-DK-HU)

Core partners (55)

Economic Actors

(19 LE; 7 SMEs; 4 associations)

Higher education (12)

Research & Technology Org. (8)

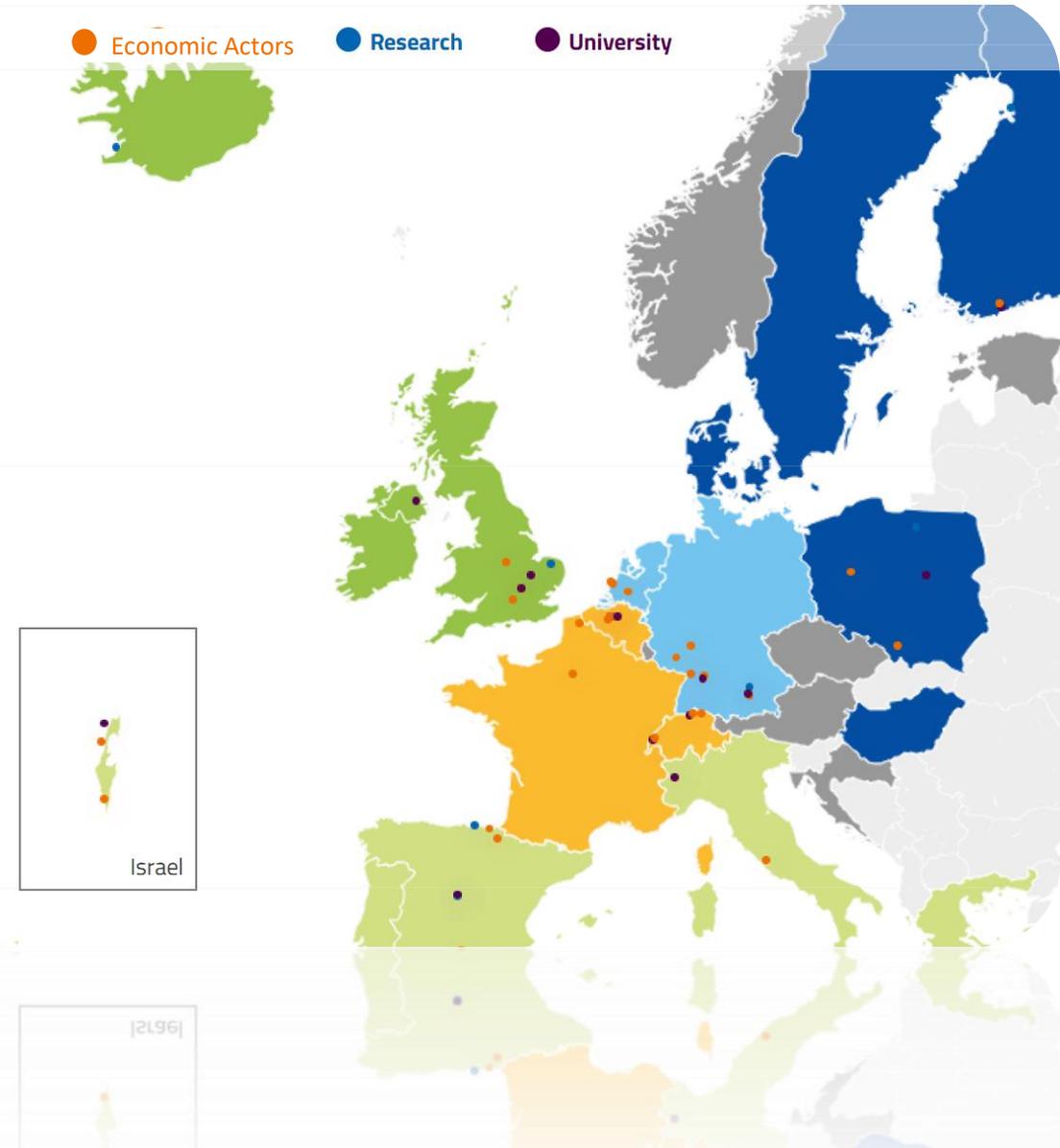
RisingFoodStars

Start-ups (50)

Network partners

Civil society

Regional and public authorities



How to go bananas?

Circular Food Generator Track

- Multi-disciplinary students from different universities
- Societal Challenge: Valorising food loss and food waste from manufacturing and retail
- 10 months so come up with a solution
- Coaching from industry, retail and universities



RRI – Responsible Research & Innovation

Responsible Research and Innovation (RRI) implies that societal actors (researchers, citizens, policy makers, business, third sector organisations, etc.) work together during the whole research and innovation process in order to better align both the process and its outcomes with the **values, needs and expectations of society**.

Circular Food Generator Track

Education (talent)

Food Technology (integration)

Reduced Waste

Entrepreneurship (business)

New Product (economy)

Healthy Alternatives



Future of Food – Future of Europe

Reconnect to Food

New Communication Culture



Food Systems Approach
Transdisciplinary
Involve all actors

Strengthen collaborative R&I

R&I as an enabler to address challenges

Ecosystems

Let's Put ~~your money,~~ *energy*

~~where your mouth is!~~

food



10 innovative prototypes

3 new start-ups

10 RIS fellows

26 specialists

22 SME knowledge transfer workshops

3 innovative product formats

+14000 learners

22 partner internships

+3m

TrustTracker™

€300k Innovation Grants

2018

5 countries

startups supported **90**

+40k citizens engaged

5 nutritional behavior models

1st VS

138 entrepreneurs
21 investors
555 matchmaking

food unfolded

25 partner guidelines templates

50 partners startups projects

46 tailored dialogues

19 business ideas

100 influencers

THANK YOU!



barbaros.corekoglu@eitfood.eu



EIT Food is supported by the EIT
a body of the European Union

eitfood.eu





Lunch

Introduction

by Steven Desair
Eatmosphere.be



Interactive consultation 2

Road mapping for integrated food waste policy

By Stephanie Wunder



Consultation exercise

Chatham House Rules, please

participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed



Consultation exercise – Part 1: Road mapping for integrated food waste policy and discussion on future policy options

13.20-14.30

1. Find „**your**“ **group** (see name tag)
2. Group appoints **moderator** (responsible that the group stays in time and respects rules) and **rapporteur** (reports back, structures content) (2 persons)
3. **Think (5 min total): What interventions are needed** for more sustainable food systems (that among other things works according to circular economy principles and reduces food waste)?
 - 3 quiet min. everyone: Think of interventions (policy, business...) you think are needed for more sustainable food systems (**1 idea per card**, readable)
 - 1 more minutes everyone: **select your favourite 2 ideas** you want to present



Consultation exercise – Part 1: Road mapping for integrated food waste policy and discussion on future policy options

4. Present ideas to the group (12 min each round= 25 min total)

First person starts to **share first idea** with the group, place the **card in the coordinate axes system** (y: Impact to reduce FW and x: impact to achieve sustainable food system) and explain why – no discussion yet only questions if understanding is unclear

5. Sticky dots and focus on two top interventions (15 min): everyone places 3 stickers on favourite suggestion, the 2 ideas with the most dots are further discussed in the group (write on long sticky paper): name of the intervention, why it is important, who would need to take which action, when

6. 14.15: Rapporteurs present results (2 min)



Coffee Break

Back at 14.55 hrs



Interactive consultation 3

From options to actions – next steps

By Stephanie Wunder



Consultation exercise part 2 – From Options to Actions/action points for Commissioner

14.55-15.45

Find a new group **group** (choose yourself, max 8 pax)

1. **Appoint** new **moderator** (responsible that the group stays in time and respects rules) and **rapporteur** (reports back, structures content) (2 persons)
2. **Think** (5 min in total):
 - What should the next Commissioner do? (DG Sante or other) – collect ideas (1 idea per card, readable)
 - select your favourite 2 ideas you want to present
3. **Present** (25 min): first person starts with one idea, 2 rounds, place idea on coordinate system (impact FW and time)
4. **Prioritize**: 3 dots per person for 2 favourite suggestions
5. **Specify**: Agree on wording for required action, specify
6. 15.25: **Report back** (Rapporteurs on 2 ideas, 2min)



Wrap up & reflections

By Hilke Bos-Brouwers

Finalising – June 2019



Knowledge and Best Practice on Food Waste Prevention

refreshcoe.eu



Valorisation Database

FoodWasteExplorer



REFRESH Event



Webinar: Measuring and managing retail food waste

02 May 2019

Webinar: Tackling consumer food waste

29 Apr 2019

Webinar: Voluntary Agreements to address food waste

10 Apr 2019

Webinar: Adding value to food waste and by-products

09 Apr 2019

REFRESH Event



REFRESH Final Conference 2019: Fresh ideas to reduce food waste and valorise surplus food

09 May 2019 to 10 May 2019
Spain, Barcelona



Thank you for your participation!!