

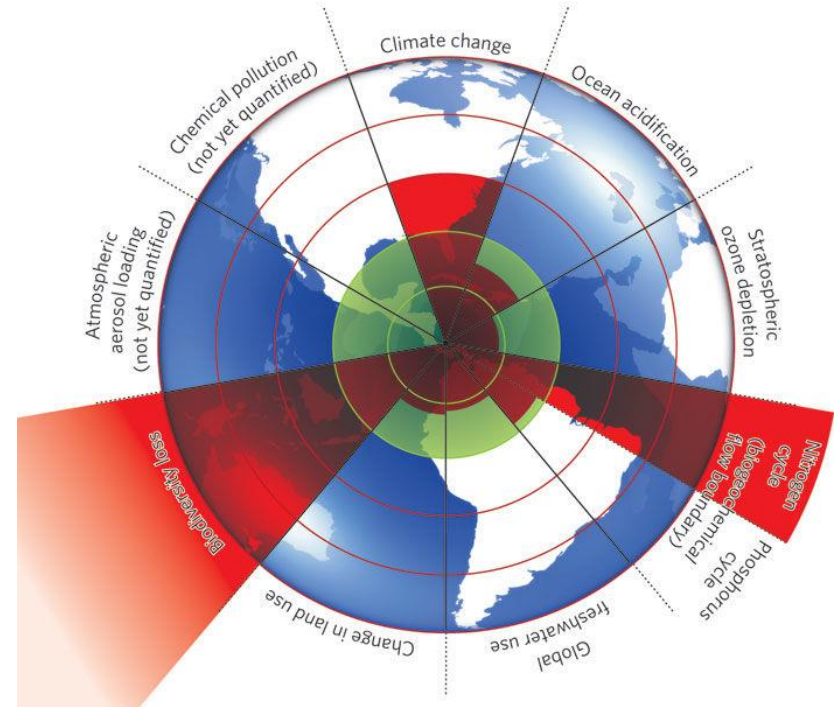
# Towards a circular economy in food; The role of public-private partnerships

*Toine Timmermans*

*Brussels, REA info session, 29 June 2018*



# Drivers for change



# Food waste – latest estimate EU-28

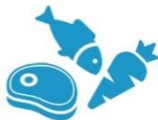
EU-28  
PRODUCES



88 MILLION  
TONNES  
of food waste per year

amounting to an estimated

143 BILLION  
EUROS



For more information on data and quantification, access the March 2016 FUSIONS reports "Estimates of European Food Waste" & "Food Waste Quantification Manual to monitor Food Waste Amounts and Progression"

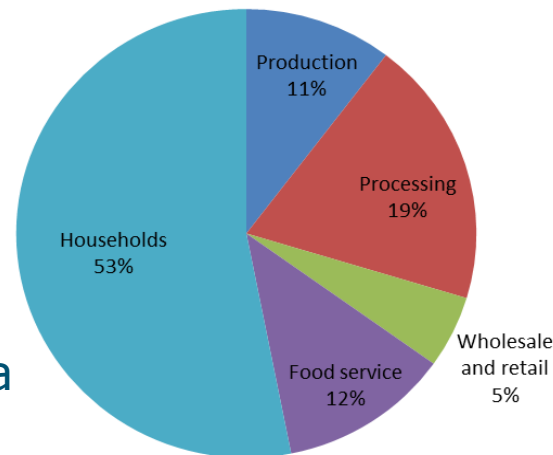


WAGENINGEN  
UNIVERSITY & RESEARCH



173 kg pro-capita  
food waste

- Equivalent of **20%** of all produced food in EU
- **143** billion euros
- ~ **304 Mt CO2 eq** (6% of total emissions of GHG in EU28%)



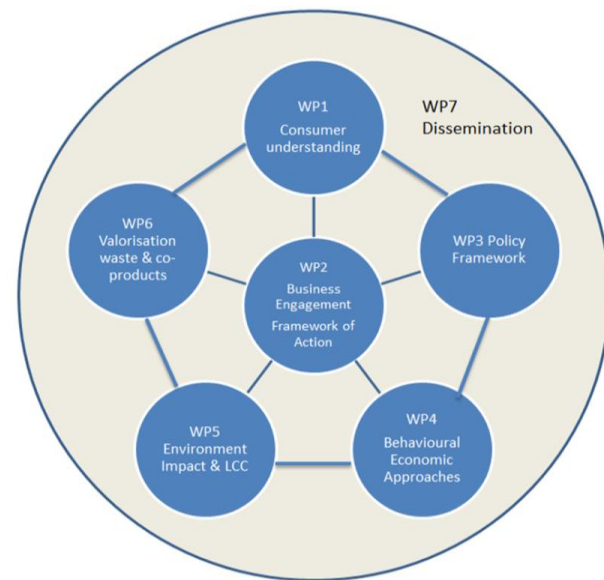
Wageningen  
Food & Biobased  
Research



# Resource Efficient Food and dRink for the Entire Supply cHain (2015 – 2019)

26 partners, 12 countries

Multi stakeholder platforms: the Netherlands, Germany, Spain, Hungary, China







# The REFRESH Project

A central ambition of the REFRESH project is to develop a 'Framework for Action' model that is based on strategic agreements across all stages of the supply chain (backed by Governments), delivered through collaborative working and supported by evidence-based tools to allow targeted, cost effective interventions.





# The Netherlands, Cooperation with industry

- 🥦 Cooperation between industry (sector organisations) and government since 2009
- 🥦 Joint agenda on reduction food waste
- 🥦 2014 year against food waste



Rijksoverheid

# UNITED AGAINST FOOD WASTE

## WHAT IS THE TASKFORCE?

Prevention and reduction of food waste is a crucial part of achieving a circular economy. All partners in the Taskforce Circular Economy in Food will collaborate and accelerate to minimize food waste, both across the food chain and by consumers, and to contribute in a transparent manner to this aim.

## WHY JOIN FORCES TO COMBAT FOOD WASTE?



1/3

A third of the world's food is lost or wasted every year.<sup>1</sup>



Food waste in Europe causes **6%** of all greenhouse gases emitted through human activity.<sup>2</sup>



**Wasting less food = helping to achieve climate goals and ensuring there is enough valuable food for the growing global population.**

That is equal to **105-152 KG** per capita annually in the Netherlands.<sup>3</sup>

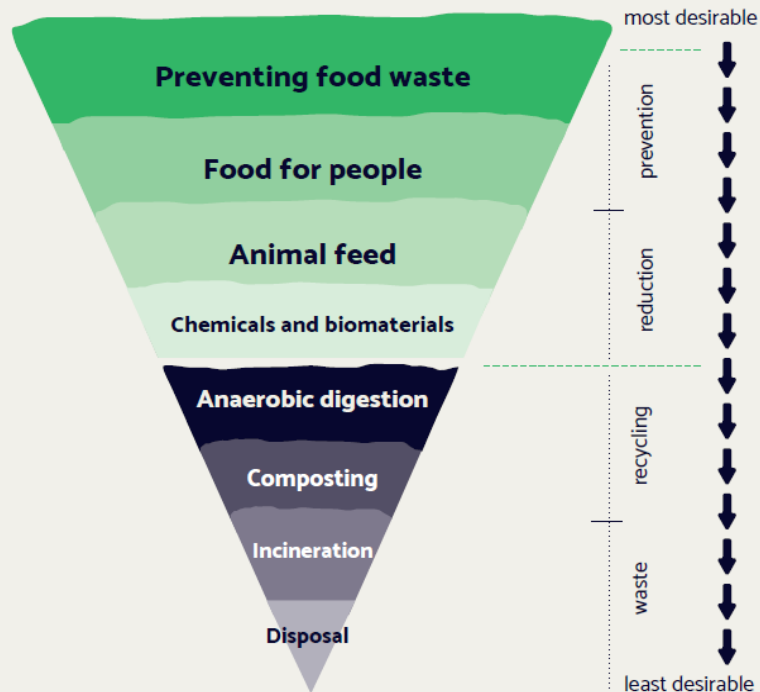
### The focus of the Taskforce

The Taskforce focuses on reducing food waste throughout the entire food chain. We will accomplish this by preventing and reducing as much food waste as possible and creating value from side flows according to the "Moerman Food Use Hierarchy".

**2015 - 2030**  
**50% reduction**

## OUR OBJECTIVES

**In a joint effort, we aim to make the Netherlands one of the first countries to cut food waste in half. We will make the Netherlands a leader and a global role model in terms of realizing Sustainable Development Goal 12.3.**



**WOULD YOU  
LIKE TO  
PARTICIPATE?  
Join the Taskforce!**

**SAMENTEGENVOEDSELERSPILLING.NL**



<sup>1</sup> FAO, Global Food Losses and Food Waste—Extent, Causes, and Prevention, 2011.  
<sup>2</sup> FUSIONS, Criteria for and baseline assessment of environmental and socio-economic impacts of food waste, 2016.  
<sup>3</sup> Wageningen Food & Biobased Research, 2017, Monitor Voedselverspilling, update 2009-2015, rapport nummer 1747.

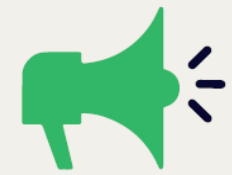
**The Taskforce acts in  
four distinct ways:**



**1. Monitoring progress  
and impact:** The Taskforce  
measures the effects of its  
individual and joint approach.



**2. Joining forces to  
combat food waste across  
the food supply chain:**  
Taskforce members and leaders  
combine their strengths, networks  
and knowledge to develop  
innovative solutions.



**3. Joining forces to combat  
food waste by consumers:**  
The Taskforce aims to achieve  
sustainable changes in  
behaviour through campaigns,  
interventions and living labs.



**4. Changing  
the rules:** The  
Taskforce promotes  
the legislation and  
instruments needed  
to create a circular  
economy.



# Ecosystem for implementation & action



**Subgroup meeting EU FL&FW platform at  
Three-Sixty, week of 1 October 2018 (tbc)**





# Business pilots on Surplus Food concepts



6/7/2018



# Ugly fruits and vegetables



KROM  
KOMMER

IT'S TIME FOR  
**A NEW DEFINITION OF QUALITY**

KROMKOMMER CALLS FOR ABOLITION OF SPECIFIC EUROPEAN MARKETING STANDARDS FOR FRUITS AND VEGETABLES

image 1 *skin damage*

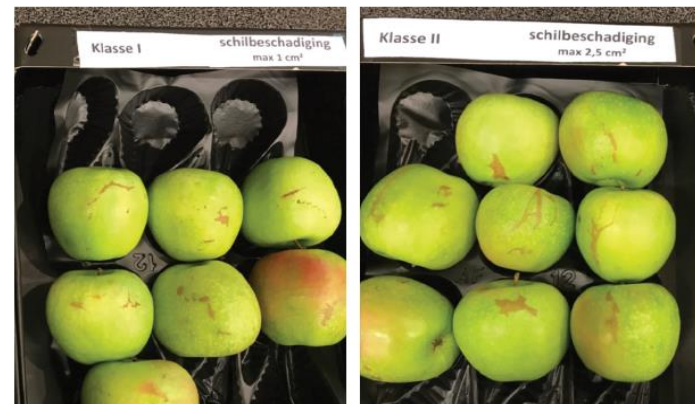


image 2 *color or red stripes*



# Circular systems & novel products



6/7/2018



# Use of food stuff for animal feed



Expert panel on the risk management of using treated surplus food in pig feed  
([www.eu-refresh.org](http://www.eu-refresh.org))

## ENVIRONMENTAL IMPACT OF FOOD WASTE RECYCLING

	Pig feed (wet)	Pig feed (dry)	Biogas	Compost
Damage to the ozone layer	Green	Green	Yellow	Red
Carcinogens	Green	Green	Yellow	Red
Non-carcinogenic toxins eg heavy metals	Green	Green	Yellow	Red
Ionizing radiation	Green	Green	Yellow	Red
Photochemical oxidant formation	Green	Green	Yellow	Red
Global Warming Potential *	Green	Yellow	Green	Red
Freshwater eutrophication	Green	Green	Yellow	Red
Marine eutrophication	Green	Green	Yellow	Red
Terrestrial eutrophication	Green	Green	Yellow	Red
Eco-toxicity	Green	Green	Yellow	Red
Fossil fuel depletion *	Green	Red	Green	Yellow
Depletion of other non-renewable resources	Green	Green	Yellow	Red
Acidification	Green	Green	Yellow	Red
Particulate matter emissions	Green	Green	Yellow	Red

\* The Global Warming Potential and fossil fuel depletion calculations use the current UK energy mix. If renewable energy were to be used for the processing of the feed, feed would score better on these aspects.

**FEED  
BACK**

6/7/2018

ENVIRONMENTAL BENEFITS







Knowledge and Best  
Practice on Food  
Waste Prevention

[refreshcoe.eu](https://refreshcoe.eu)



[toine.timmermans@wur.nl](mailto:toine.timmermans@wur.nl)

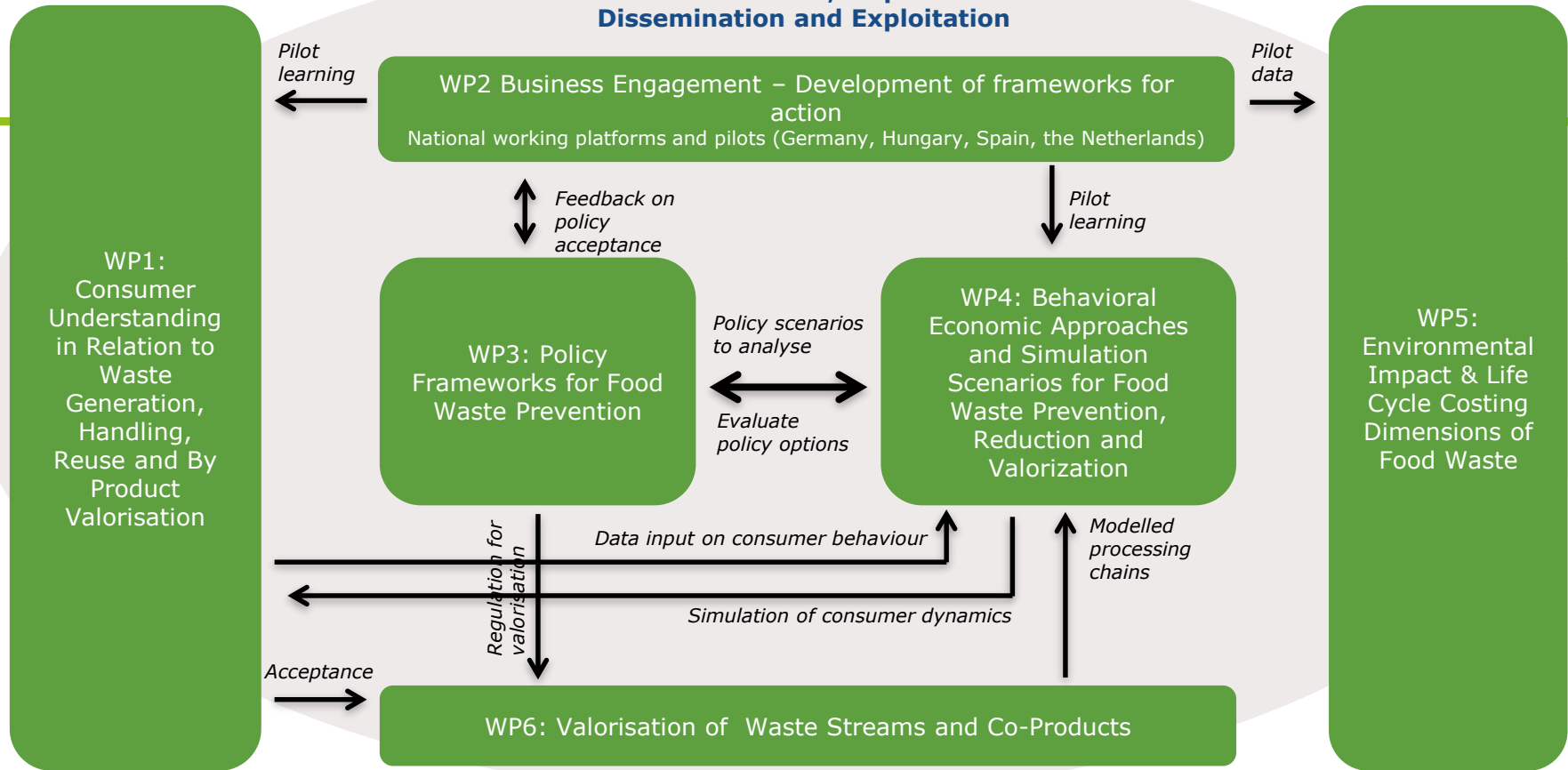




# The REFRESH Project consortium



## WP7: Communication, Impact Oriented Dissemination and Exploitation





# REFRESH: impact oriented dissemination







# Policy review and action plan

- 🍌 **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
- 🍌 **EU policy review**
  - 🍌 Identifies the impact of EU policy areas on food waste generation and/or prevention and discusses opportunities for improvement
- 🍌 **Policy workshops**
  - 🍌 2 Upcoming workshops in 2018-2019:
    - National approaches and voluntary agreements (19 June 2018, Amsterdam)
    - Consumer behaviour
    - Animal feed
    - Synthesis workshop: implications of REFRESH results for policy
- 🍌 Propose an **Action Plan** for policy change



# Framework for Actions 'Blueprint'





# Germany

Coordinating  
Partner CSCP

## Priorities

- Grocery/retail sector
- Out-of-Home
- Consumer
- Supply chain/ production



### Business

- Aldi Nord
- Aldi Sud
- Metro
- Nestle
- Penny
- Sodexo
- Associations (food & retail)

### Academic

- Professor Dr. Guido Ritter (FH Munster)

### NGOs

- WWF
- Foodsharing
- Consumer organisations
- Die Tafeln

### Government / Public Organization

- Federal Ministry of Food and Agriculture
- Environment Ministry NRW
- Bavarian State Ministry for Food, Agriculture and Forestry
- German Council for Sust. Dvlpmnt



# Hungary

Coordinating Partner  
Hungarian Food Bank Association

## Priorities

- Quantification of food waste
- Supply chain / retail
- Consumer
- Hospitality



## Business

- Wholesale Market
- HORECA Marketing Club
- Budapest
- TESCO

## Academic

- Agricultural Research Institute

## Government / Public Organization

- Ministry of Human Resources

## NGOs

- ÉFOSZ (Alliance of Hungarian Food Manufacturers)



# Spain

## Coordinating Partner Creda

### Priorities

- Consumers
- Hospitality
- Primary production



### Business

- ACES
- AECOC (GS1)
- ASEDAS
- COAG
- FCAC
- Espigoladors
- Gastrofira
- Mercabarna
- PACKNET

### Academic

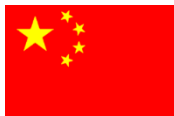
### Government / Public Organization

- Waste Agency  
of Catalonia
- Metropolitan  
Area of  
Barcelona

### NGOs

- Barcelona Food  
Bank
- HISPACOOOP
- Plataforma  
Aprovechemos  
los Alimentos
- PROSALUS
- Nutrición Sin  
Fronteras





# China

Coordinating Partner  
IVLC

A multi-stakeholder conference was held in Beijing November 2016 to launch **REFRESH in China**. It attracted **100 participants** from Governments, research institutions, NGOs, public (youth)



中华环保联合会  
All-China Environment Federation



# Netherlands

Coordinating Partner  
Wageningen Research

## Priorities

- Actions, solutions & business case development
- Supply chain collaboration & transparency
- Valorisation
- Integrated consumer action



### Business

- Albert Heijn
- CBL
- Hutten Catering
- LWM
- McDonalds
- Rabobank
- Unilever
- Protix
- Sligro Food Group
- MVO-NL
- Foodtech Brainport
- Wageningen University

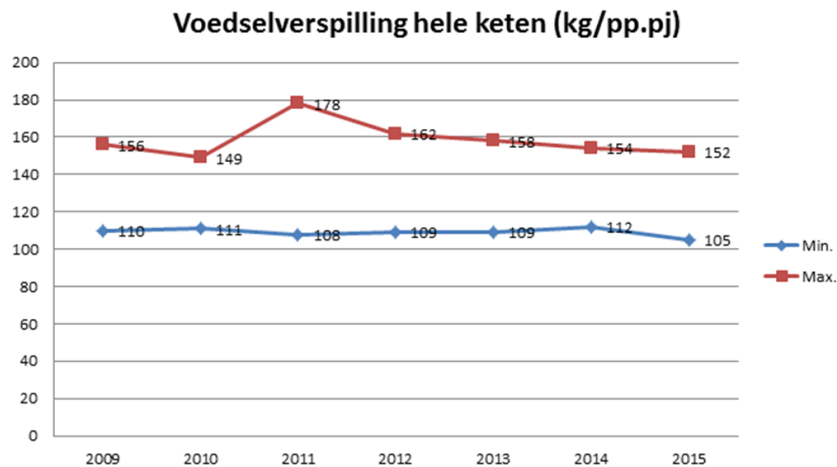
### Government / Public Organization

- Ministry of Agriculture, Nature & Food Quality

### NGOs

- Natuur & Milieu
- Youth Food Movement
- Kids University

# The Netherlands, time for a next step (2016)

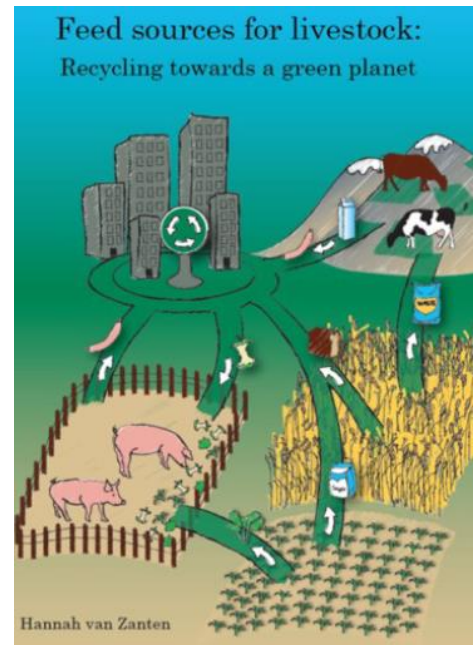
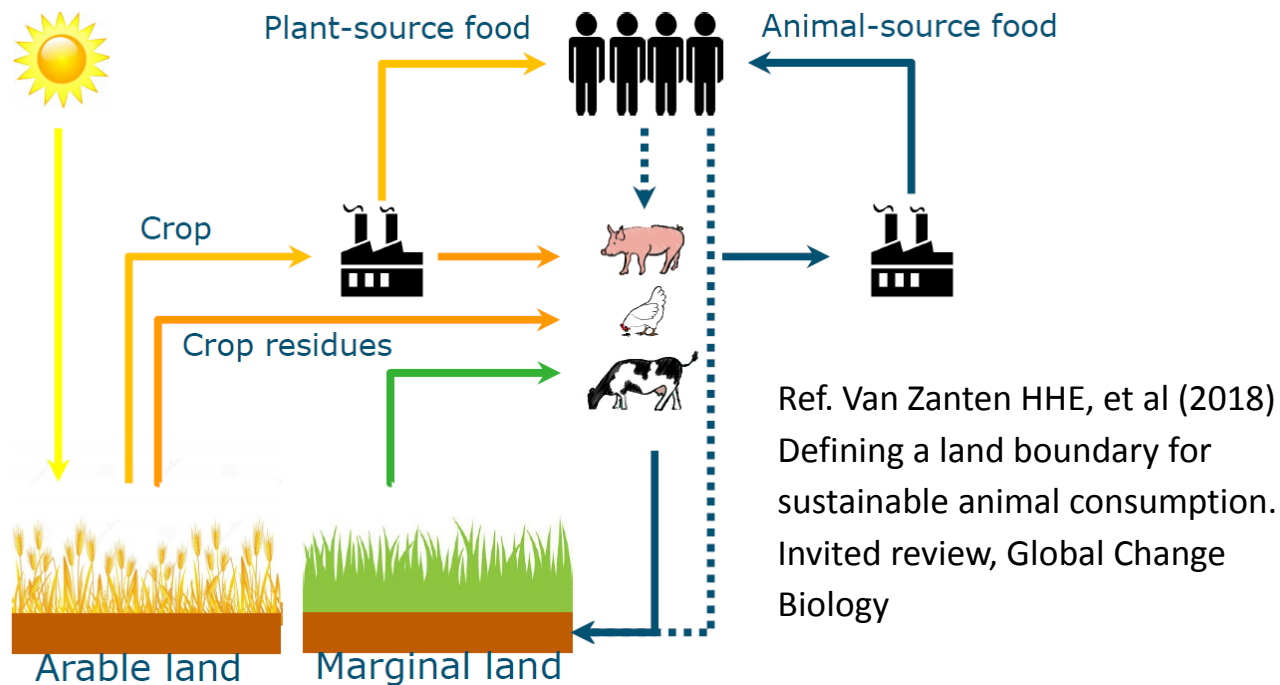


- Food waste losses on political and business agenda
- Awareness
- Lots of individual actions (research, campaigns, new businessmodels)
- But: no 20% reduction
- New phase

# Dutch Taskforce Circular Economy in Food

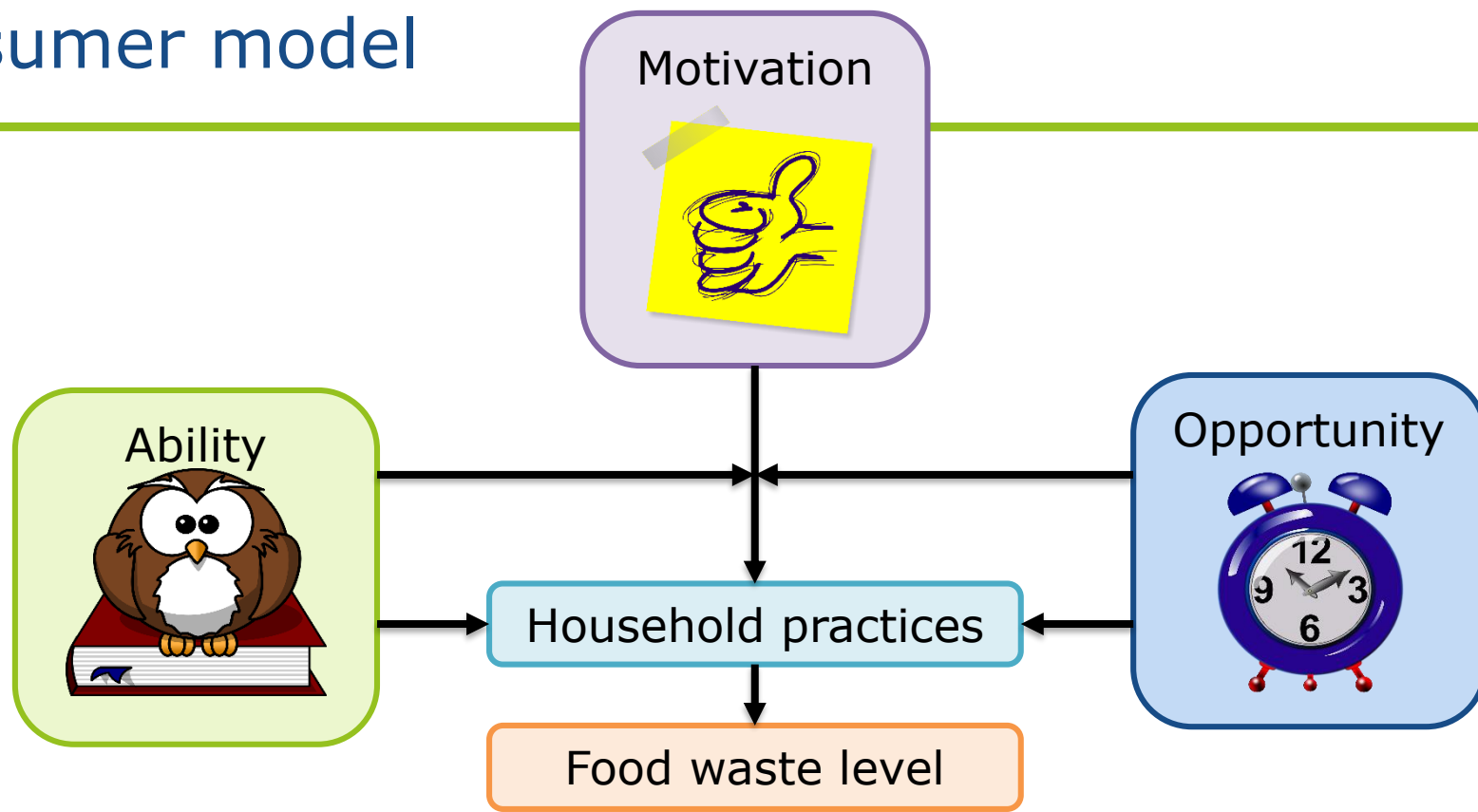


# Concept of a Circular Narrative





# Consumer model





# Frameworks for action, some systemic aspects

- 🥦 **Transparency** (Target, Measure, Act), Actions & Monitoring progress
- 🥦 Supply chain **collaboration** (forecasting, utilisation & circular business models), value chains & **responsibility**
- 🥦 **Externalities** & balance in economic, ecologic & social-economic impacts
- 🥦 **Policy coherence** (prevention should come first)
- 🥦 **Economic & legal frameworks** (food -> feed)
- 🥦 Commitment for a collective **consumer driven** action program (building on harmonised consumer insights research)

