

# Business model for Food Waste Prevention and Valorisation

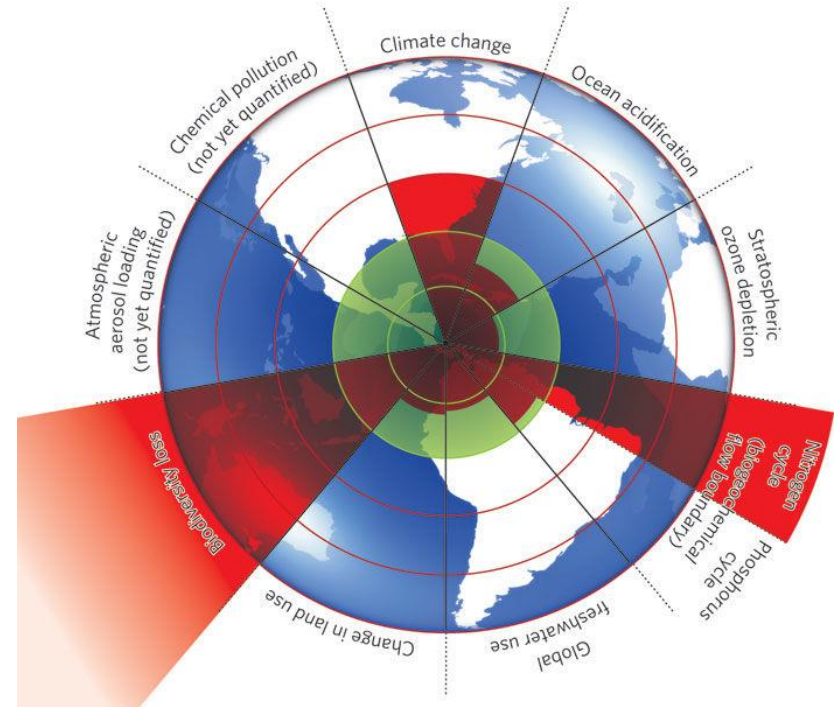
United against food waste

*Toine Timmermans*

Europatat Congress



# Drivers for change



# Anti food waste movement

## The Guardian



Nearly half of all fresh potatoes thrown away daily by UK households

Figures show nearly 6 million potatoes a day are wasted, at a cost of £230m a year

Nearly half of the edible fresh potatoes bought by UK householders each day are thrown away - 5.8 million of them per day, and at a “staggering” annual cost of £230m, figures show.



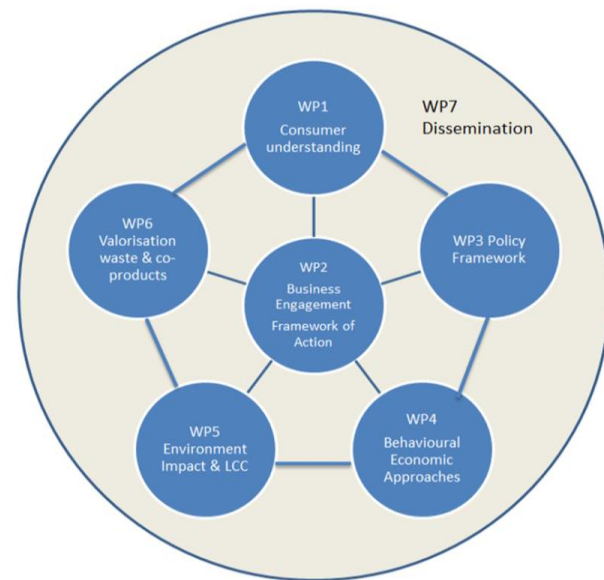




# Resource Efficient Food and dRink for the Entire Supply cHain (2015 – 2019)

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.



# Food waste – latest estimate EU-28

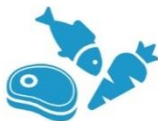
EU-28  
PRODUCES



88 MILLION  
TONNES  
of food waste per year

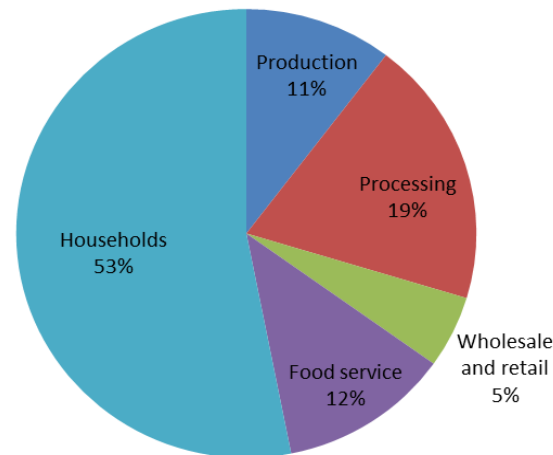
amounting to an estimated

143 BILLION  
EUROS

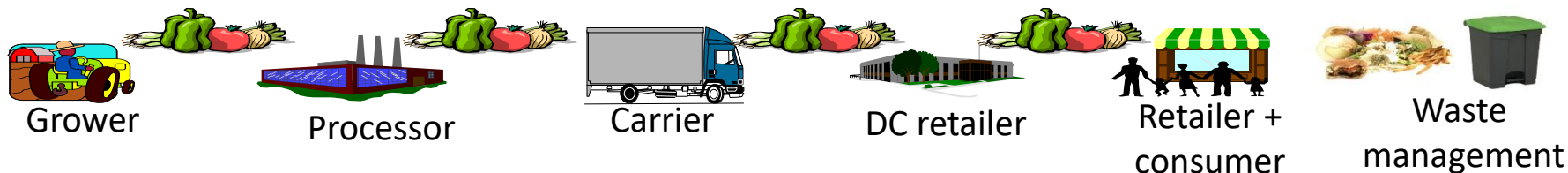


For more information on data and quantification, access the March 2016 FUSIONS reports "Estimates of European Food Waste" & "Food Waste Quantification Manual to monitor Food Waste Amounts and Progression"

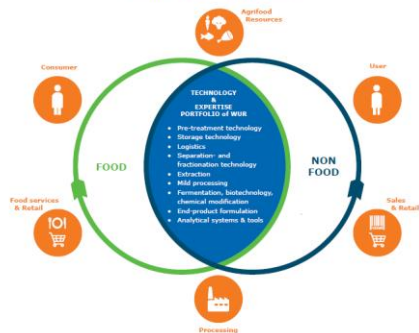
- Equivalent of **20%** of all produced food in EU
- **143** billion euros
- ~ **304 Mt CO2 eq** (6% of total emissions of GHG in EU28%)



# Circular economy & value chains/networks



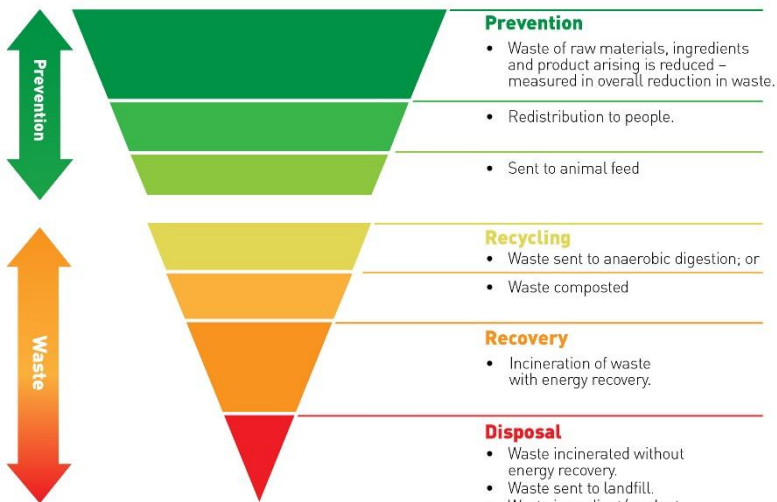
**WAGENINGEN**  
UNIVERSITY & RESEARCH  
Circular Economy in Food



Services of WUR



## Food and drink material hierarchy



Most preferable option

Least preferable option



# 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

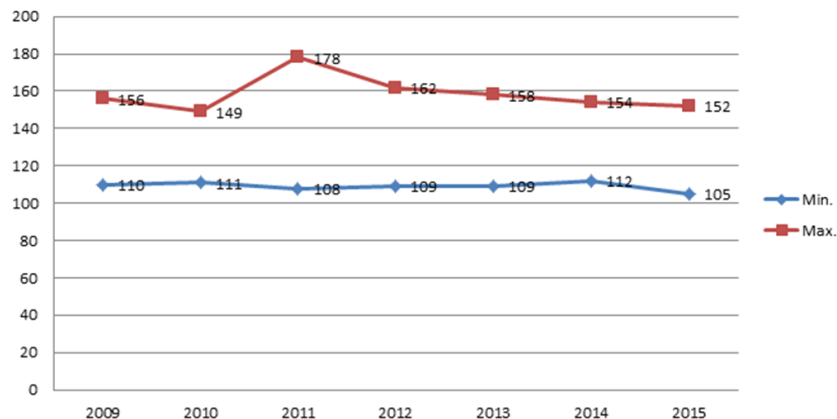


Rijksoverheid



# The Netherlands, time for a next step

Food waste across supply chain (kg.pp.py)



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

# 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>

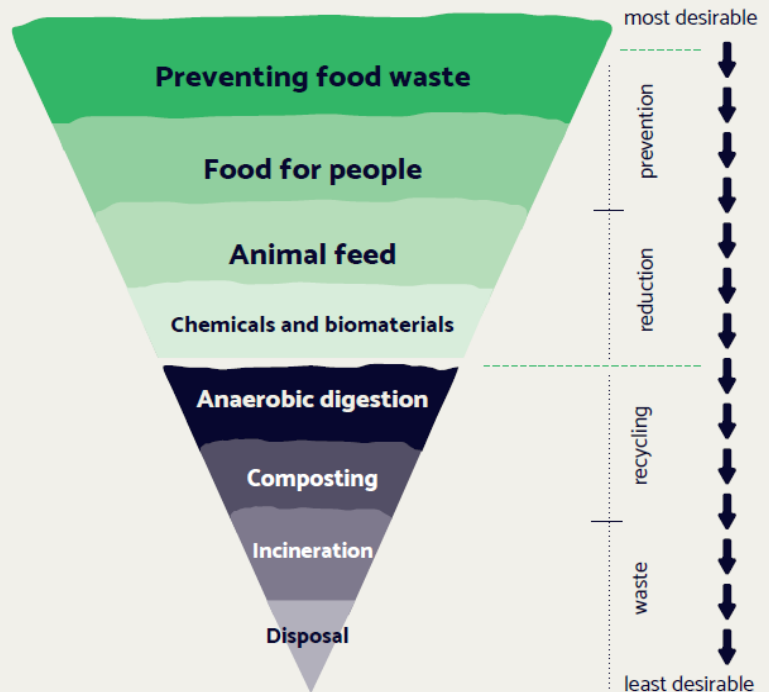
### The focus of the Taskforce

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!**

**SAMENTEGENVOEDSELVERSPILLING.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.

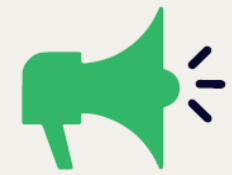
**The Taskforce acts in  
four distinct ways:**



**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.

# Taskforce Circular Economy in Food





# National Frameworks for Action



Ministry of Economic Affairs



Rabobank



[www.eu-refresh.org](http://www.eu-refresh.org)

Wageningen  
Food & Biobased  
Research



# Ecosystem for implementation & action





# Dutch Champions 12.3 event 20 Maart 2018



# Business pilots on Surplus Food concepts

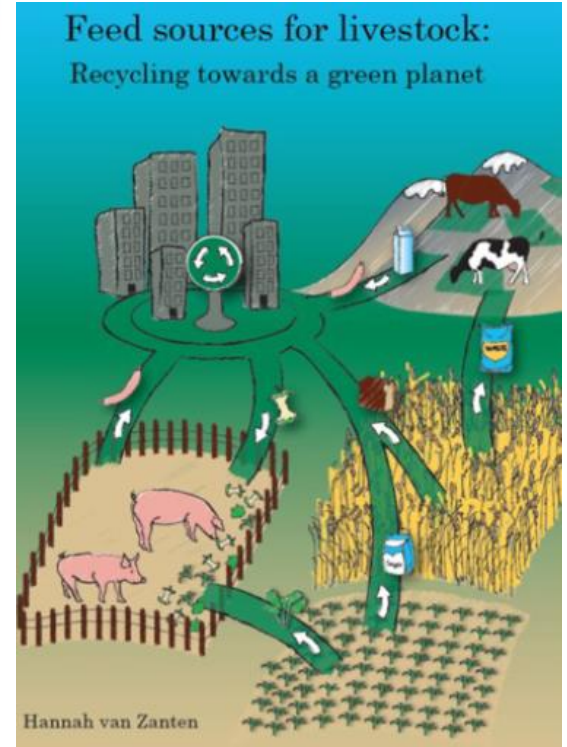
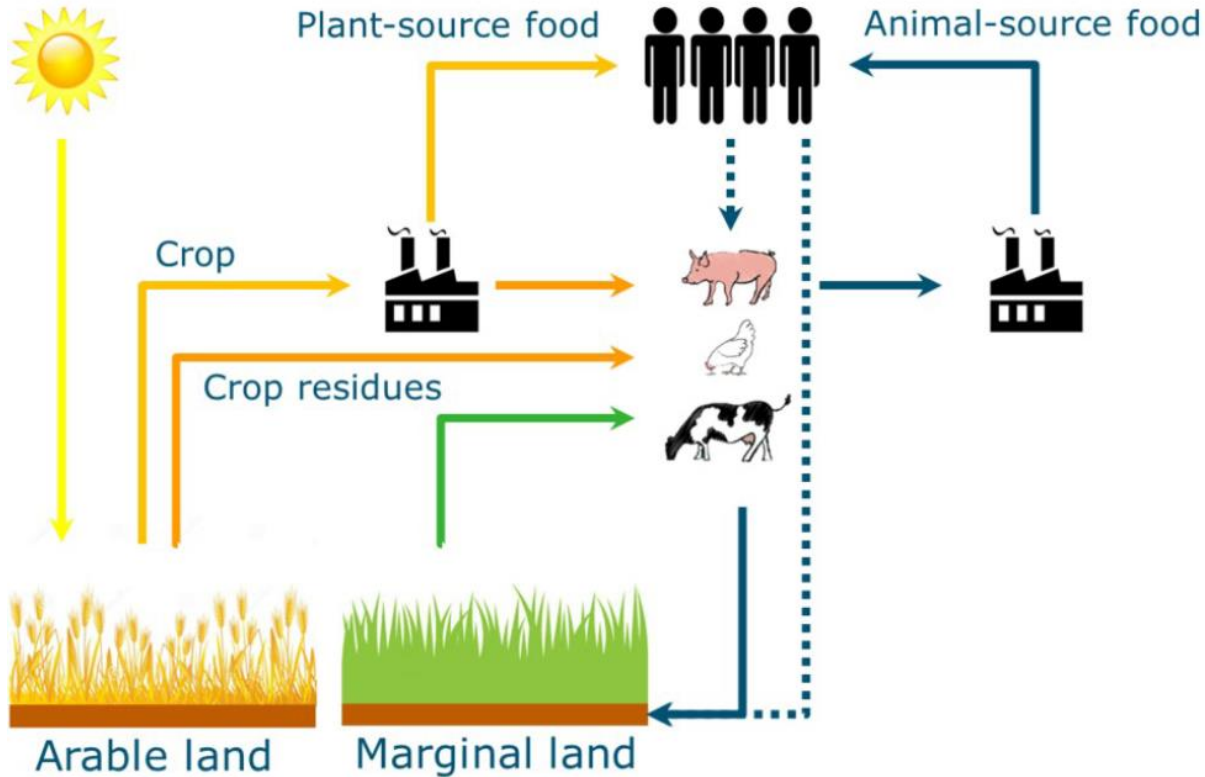




# Business pilots on Surplus Food concepts



# Concept of a Circular Narrative

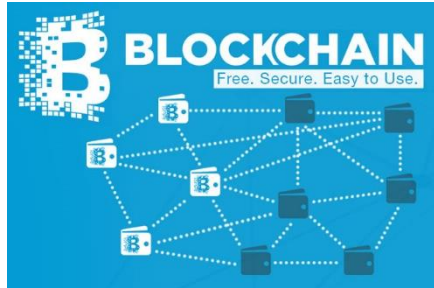




# Circular systems & novel products



# New business models





# Opportunities potato sector emerging countries

- A potato farmer in Kenya currently produces 4-6 MT/ha/harvest. The losses on farm level are 8% (average; differ per county)
- The survey showed that up to 65 percent of recorded damage and loss in potatoes occurs at postharvest and is caused in particular by inappropriate harvesting tools, an insufficiently trained workforce, and lack of grading and storage
- New varieties are available with longer dormancy and better product characteristics from farmer to processor to consumer
- Potato processing is fast growing business



# "business case" of FLW

## 1. SAVE MONEY

An analysis of 700 companies in 17 countries found that investing in food loss and waste reduction yielded a 14-fold return.

### COMPANIES

-	+
EVERY <b>\$1</b> INVESTED	YIELDS <b>\$14</b> IN RETURN

- |  |   |
|--|---|
| Measuring waste           |  Selling imperfect produce       |
| Training staff            |  New products                    |
| Buying storage equipment  |  Reducing waste management costs |
| Changing packaging        |  Avoiding cost of food not sold  |

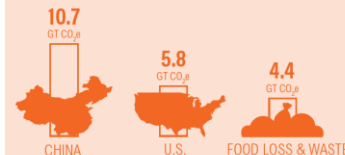
## 2. FIGHT HUNGER

The world throws out **1 billion tons** of food each year while **1 in 9 people** globally remain malnourished.



## 3. CURB CLIMATE CHANGE

Food loss and waste produces **8% of global greenhouse gas emissions**; if it were its own country it would be world's **third-largest emitter**.



## 4. CONSERVE RESOURCES

It takes a **China-sized amount of land** to grow food that's ultimately lost or wasted.



## 5. IMPROVE REPUTATION

**Reducing food loss and waste** improves relationships with customers, vendors and other stakeholders.



## 6. COMPLY WITH LAWS

**Government agencies** and **companies** sometimes must adhere to regulations on disposing organic waste, including food.



## 7. UPHOLD ETHICS

Executives, staff and consumers increasingly recognize food loss and waste reduction as **"the right thing to do."**



# UNITED AGAINST FOOD WASTE



Knowledge and Best  
Practice on Food  
Waste Prevention

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