

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

## Circularity & Resource Efficiency

*Toine Timmermans*, 16 October 2017

'Harnessing Research & Innovation for  
FOOD 2030:  
A Science Policy Dialogue'



# FUSIONS & REFRESH

“可持续发展与我们的食物” 减少食物浪费  
中国青少年环保创意赛暨挑战赛  
**REDUCE FOOD WASTE**



# European & global targets & initiatives

Focus on SDG12 (Responsible Consumption and Production) and SDG17 (Partnerships).

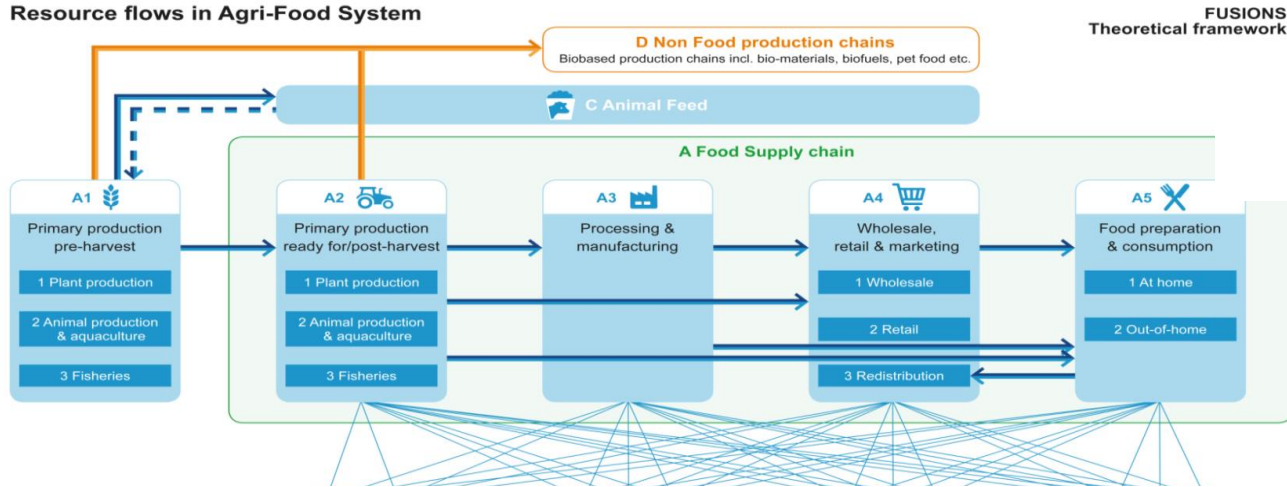
- SDG 12.3: By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses
- EC Circular Economy Package Target = SDG 12.3



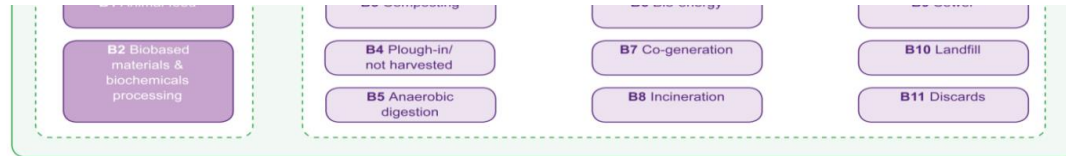
# FUSIONS multi-stakeholder platform



# FUSIONS definitional framework



**Food waste:** Any food, and inedible parts of food, removed from the food supply chain to be recovered or disposed to B3-B11, describing different end of life treatments



# Food waste – latest estimate EU-28

EU-28  
PRODUCES



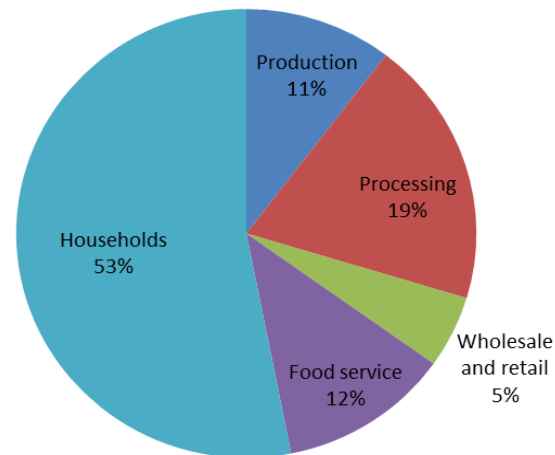
88 MILLION  
TONNES  
of food waste per year

amounting to an estimated

143 BILLION  
EUROS



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



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"

# FLW PROTOCOL



A multi-stakeholder effort to develop a global  
*FLW Accounting and Reporting Standard*



World Business Council for Sustainable Development

# Social Innovation: feasibility support

- **Surplus Food**



- **Disco Bôcô**



- **Hungarian**



## **Foodbank Association**

- **Cr-EAT-ive**



- **Gleaning**

Gleaning  
Network EU

- **Social**

## **Supermarkets**



**Deloitte.**

Deloitte  
Développement  
Durable

- **Order-Cook-Pay**





# Cr-EAT-ive Project – Greece

## Raise awareness and influence behaviour

### Objectives

- **Raise awareness** on food waste and **influence behaviour** of kindergarten children, their parents, teachers & staff

### Outcomes

- Food waste **diaries** (30 families)
- **Teaching materials** for children (teacher guides, fun exercises & a board game)
- Educational **guidelines** aimed at parents
- Guidance & training of canteen staff



Food Waste Diary



Guidelines for home.



### Project Participants

- 6 Kindergardens
- 480 children
- 480 families
- 25 Teachers
- 7 Kindergarten Heads



# European policy Arena; What's happening

- Harmonisation of food donation guidelines; Date labelling
- Support former foodstuffs utilisation as animal feed
- Monitoring of food waste at MS level (input FUSIONS, Eurostat)
- EU platform food loss & food waste (public/private)
- European Court of Auditors report (call for increased policy coherence)



# (Social) innovation & systemic causes

EAT  
FIVE  
A DAY

WEIRD  
FRUITS &  
VEGETABLES

intermarché  
inglorious  
fruits &  
vegetables  
globeveight  
dopmet  
fruits & vegetables



INGLORIOUS  
fruits & vegetables

by intermarché

"Fruittelers zijn pionnen van Europees stratego"

## Honderdduizenden kilo's hardfruit klaar voor vernietiging

Tholen - Honderdduizenden kilo's appels en peren, uitgespreid op het Belgisch-Limburgse land, liggen klaar om vernietigd te worden. Dat gebeurt met het overaanbod fruit dat wordt 'weggehaald' om de markt te beschermen. Fruitteler Kris Franssens maakte deze week foto's van het fruit op de velden. Na de Russische boycot zorgde Euro voor dat er een interventieregeling kwam waardoor een bepaald deel van fruit uit de markt wordt gehaald. De appels en peren kunnen niet worden 'weggegeven', want dan komt het alsnog op de markt terecht.



## Tienduizenden biologische bloemkolen halen de winkel niet

14 okt 2016 - 11:44 • 0 reaksjes • Frysk

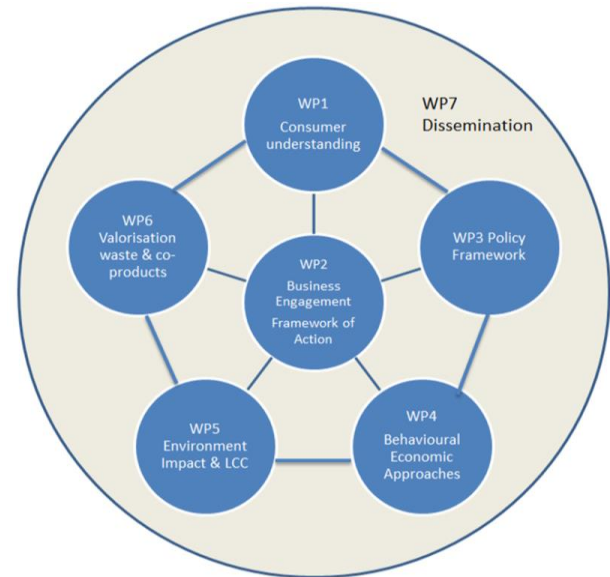




# Resource Efficient Food and dRink for the Entire Supply cHain (2015 – 2019)

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.





# Launch REFRESH CoE at World Food Day

## Online Community of Experts helps tackle food waste in Europe

**A new digital network has been launched to encourage collaboration and bring together expertise from across Europe and beyond in a focussed response to the global issue of food waste. The Community of Experts (CoE) aims to help drive action at every level of the supply chain by empowering individuals, organisations and nations through the sharing of skills, knowledge and resources needed to act against food waste.**



Knowledge and Best  
Practice on Food  
Waste Prevention

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

# Dutch Taskforce Circular Economy in Food



Ministry of Economic Affairs



Rabobank



VNO NCW

eerlijk over eten  
Voedingscentrum



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

Wageningen  
Food & Biobased  
Research



# Taskforce Circular Economy: Ecosystem & impact







# 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** (e.g. biofuels – prevention should come first)
- **Economic & legal frameworks** (food -> feed, food -> food)
- Commitment for a collective **consumer driven** action program (harmonised consumer insights research)





# R&I needs for policy support

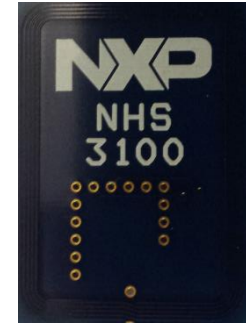
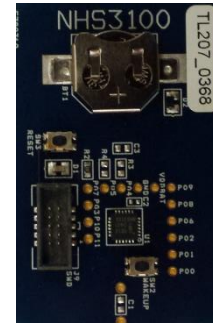
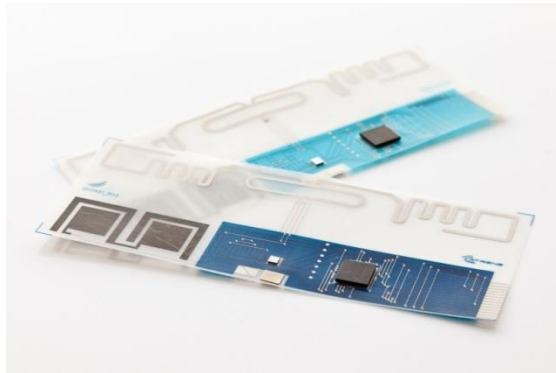
- **Indicators** for a circular economy and trade-off decision support models
- Strategies & business behaviour (systemic approach); private - public **collaboration** models
- **Scale size** of resources cycles (preferably local, global where needed?)
- **Consumer** focus, chain reversal, personalised & predictable
- New transformational **business models** (sharing economy, blockchain)
- **Technology** & paradigm changes break throughs: Bio-refinery, valorisation of by-products & side streams, **redesign for circularity**

# Circular systems & novel products

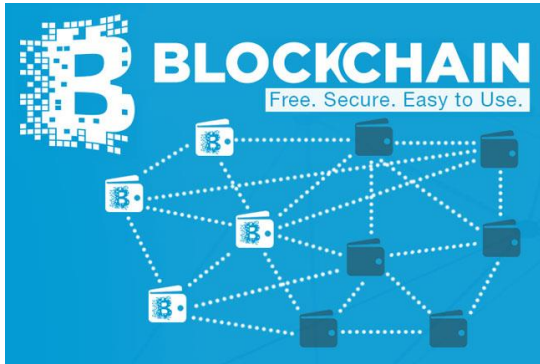
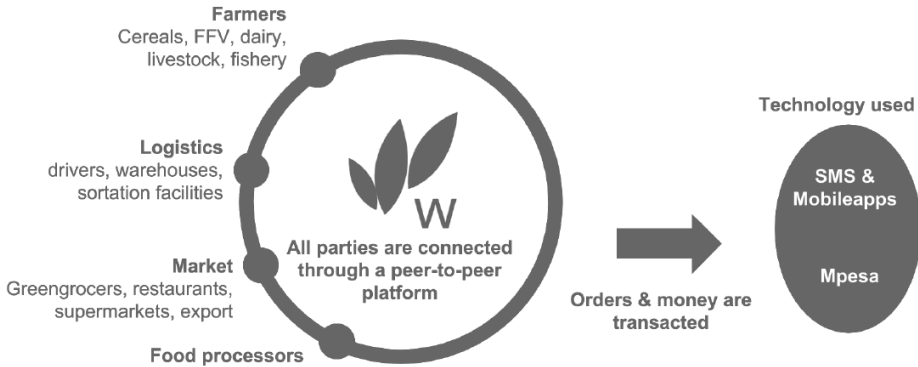


# Technology as a game changer

Smart monitoring



# Leapfrogging – new business models



# Thanks for your attention



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Waste Prevention

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