## **REFRESH:** The Business case of Food Waste Prevention and Valorisation

Toine Timmermans







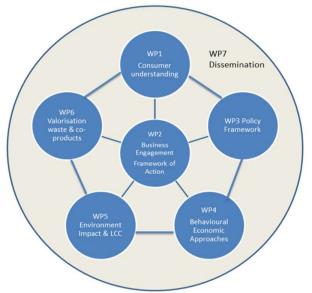




Resource Efficient Food and dRink for the Entire Supply cHain (2015 - 2019)

26 partners, 12 countries

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





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#### 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







amounting to an estimated

143 BILLION EUROS

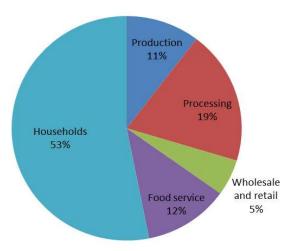


For more information on data and quantification, access the March 2016 FUSIONS reports "Estimates of European Food Waste" & "Food Waste Quantification Manual to monitor Food Waste Amounts and Progression"



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%)



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"可持续发展与我们的食物"减少食物浪费



Fact and allies for the I

#### WP2: National Frameworks for Action





































**PROTIX** 































## WP2: Ecosystems for implementation & action



















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## WP2: Business pilots on Surplus Food concepts





## WP2 & 6: Pilots Circular systems & valorisation













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## WP2: Technology & ICT as a game changer

#### **Smart monitoring**















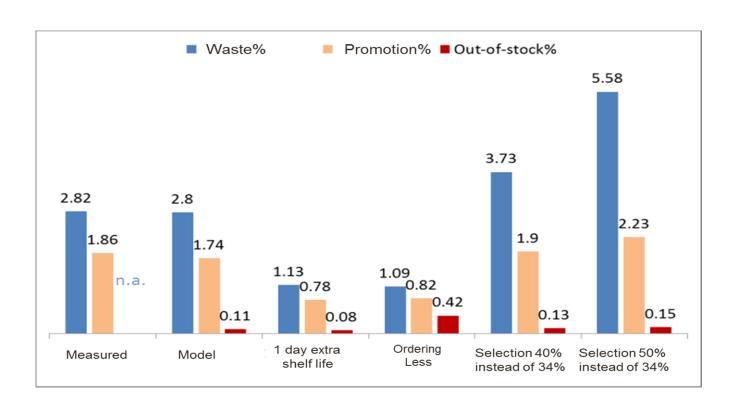
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## WP2: Decision Support modelling

Scenario's	Vegetable chain		Meat chain	
	Retailer	Producer	Producer	Retailer
Change of production season	Χ	Χ		
Variation in keep ability / shelf life	X	X	Χ	Χ
Variation order unit (combined with 'change of production season')	X	X	Χ	Χ
Variation temperature	Χ	X	X	X
Variation customer demand		X		
Waste vs. Out-of-Stock	Χ			X
Effect of promotions	X			Χ
Effect of other (better, smarter) order policies	X	X	X	Χ

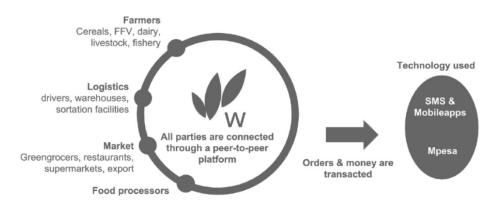


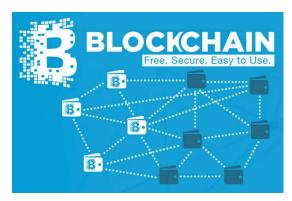
## WP2: Decision Support modelling, iceberg lettuce





## WP2: new ICT-enabled business models











#### "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.



Measuring waste

Training staff

Buying storage equipment

Changing packaging 😻

 ★ Selling imperfect produce

New products

Reducing waste management costs

Avoiding cost of food not sold



**COMPANIES** 



#### 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



#### 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."



## Thanks for your attention



Knowledge and Best Practice on Food Waste Prevention

refreshcoe.eu

toine.timmermans@wur.nl





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