

WELCOME

Multistakeholder Conference

From Innovation to Investment: ZeroW Systemic Innovation Living Labs Pitching Session

September 16, 2025

ZeroWaste

Systemic Innovations Towards a
Zero Food Waste Supply Chain

Pitch SILL 9

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Tilburg University, Wageningen University &
Research



SILL 9 Objectives

- Reducing FLW at consumer level → 9% of all bought food in The Netherlands
 - Approximately 150 euros per person per year → 2.700.000.000 euro per year
 - Consumers might be unaware of the FLW consequences
 - Poor planning

SILL 9 Objectives

- Reducing FLW at consumer level → 9% of all bought food in The Netherlands
- Consumers might be still unaware of the FLW consequences
 - *Create a Food Label to inform consumers*
- Provide consumers with weekly recipes that reduce their food waste and impact
 - *From approximately 38 grams food waste per person per day (dinner) to significantly less grams food waste*

TEAM

- Joris Wagenaar, Liana van der Hagen
 - Zero Hunger Lab, Tilburg University
- Maïke van Rooijen, Joke van Lemmen, Sander de Leeuw
 - Wageningen University

Unawareness

- Food label containing several sources of information
 - Currently too many labels on products
 - 82% find it important to have information on food waste in a food label
- One food label combining:
 - Nutritional values (Open Food Facts Dataset)
 - Greenhouse gas emissions (National Institute of Public Health and Environment)
 - Food waste at consumer level (Netherlands Nutrition Centre)

Labels

- Food score
 - Strict
 - Relative
 - Balance



Strict:



Relative:



Balance:



Strict:



Relative:



Balance:

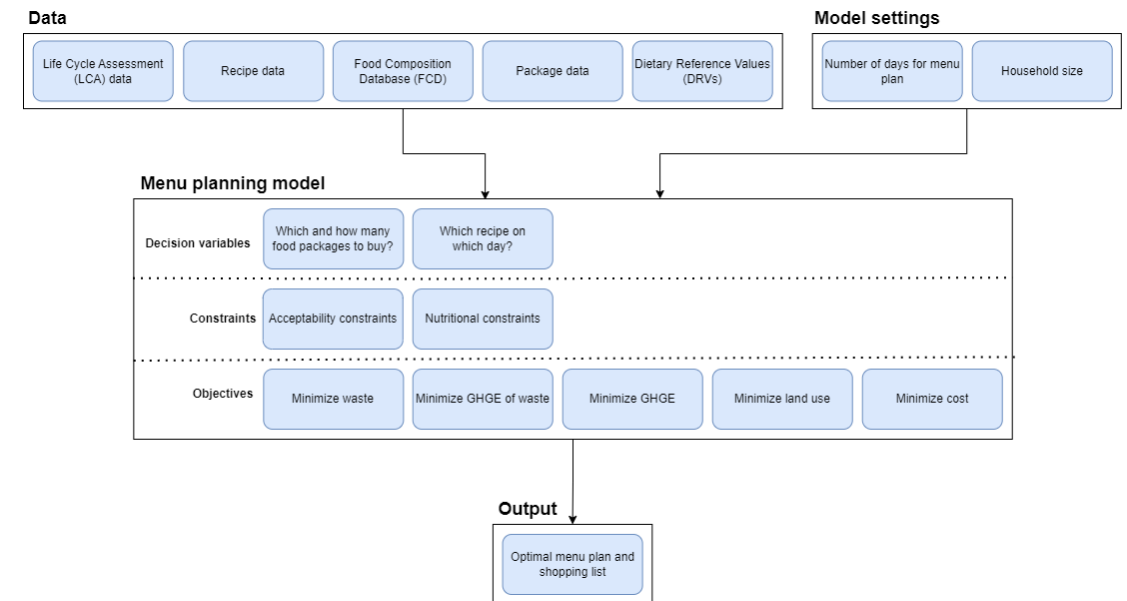


Survey results

- Questionnaire:
 - 52% found relative label most understandable, followed by 30% balanced and 18% strict
 - 75% think they would reduce their food waste due to the label
 - 84% would more likely buy food in case our label indicates the product to be good

Meal planning approach

- Poor planning is a reason of household food waste
- Formulate menu plans and shopping lists by selecting combinations of recipes based on retail package sizes to minimize:
- Food waste, Greenhouse gas emissions, costs



Example

- Menu plan

Meal plan A	
Day 1	Kruidige rijst met tofu en abrikozen
Day 2	Linzensalade met walnoten en rucola
Day 3	Bulgur met groente, tofu en noten
Day 4	Notenrijst met aubergine

Estimated impact – meal plan A	
Greenhouse gas emissions	1412.64 grams CO2 eq
Waste	2 grams
Cost	2.47 euro

Shopping list - meal plan A			
Package name	pack_br_gr	price_unit	buy
AH Aubergine	400	1.39	4
AH Chinese kool	780	1.69	2
AH Linzen	400	1.35	2
AH Cherrytomaten	250	1.09	2
AH Radijs	100	0.99	2
AH Rucola	85	1.09	2
Vivera Gerookte tofu	200	2.09	2
AH Gedroogde abrikozen	250	2.99	1
AH Basis vloeibaar	750	1.99	1
AH Tomatenblokjes gesneden	400	0.69	1
AH Biologisch Volkoren bulgur	400	1.39	1
AH Zilvervliesrijst	1000	1.85	1
AH Walnoten ongebrand	500	7.39	1
AH Rozijnen zongedroogd	750	1.95	1
AH Wokgroente Chinees	400	2.39	1
AH Wokgroente Japans champignons peultjes	400	2.49	1
AH Ongebrande cashewnoten	500	6.19	1
AH Natuurazijn wit	1250	0.45	1
AH Pijnboompitten	150	7.48	1
AH Olijfolie mild	1000	6.59	1
Coppelia Zonnebloemolie	2000	7.49	1
AH Uien	2000	1.79	1
AH Verse geitenkaas naturel 45+	125	1.99	1
AH Biologisch Vegan tofu naturel	375	1.49	1

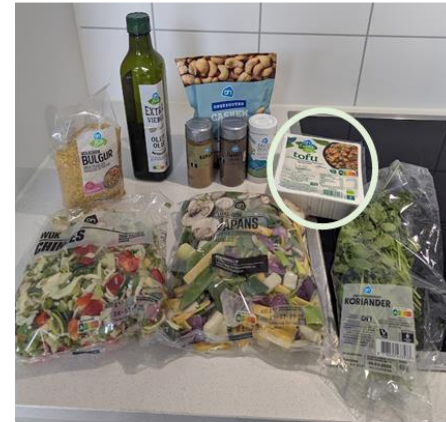
Example



Day 1



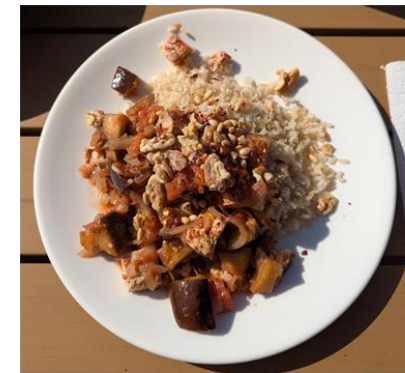
Day 2



Day 3



Day 4



About

Informing and nudging consumers to make better choices through reverse (dietetics) and forward (FLW, sustainability, affordability) optimization. [Read more](#)

Meal plan


Products

Recipes

What is needed?

- Funding needed for:
 - Technical team for creating application for the meal planning model
 - Development
 - Maintaining
 - Test in real-life with supermarkets
 - Labels
 - Meal planning model

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