OPEN EVIDENCE

Consumer research study to identify new ways of expressing date marking that meet consumers' information needs whilst minimising food waste

Presentation of results
20 October 2022
Dr. Frans Folkvord

LSE

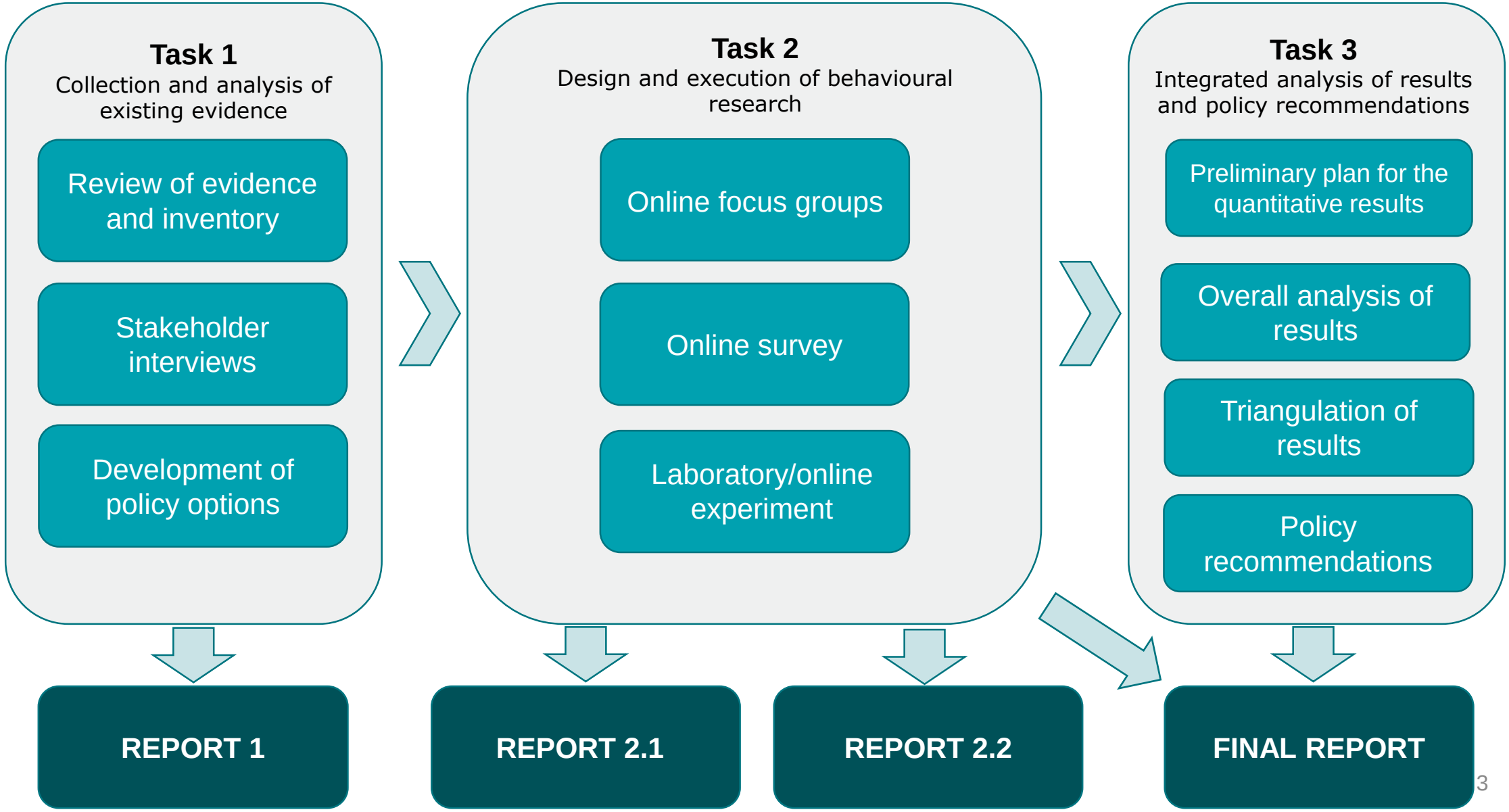
BDI Research
A SCHLESINGER COMPANY

OPEN EVIDENCE

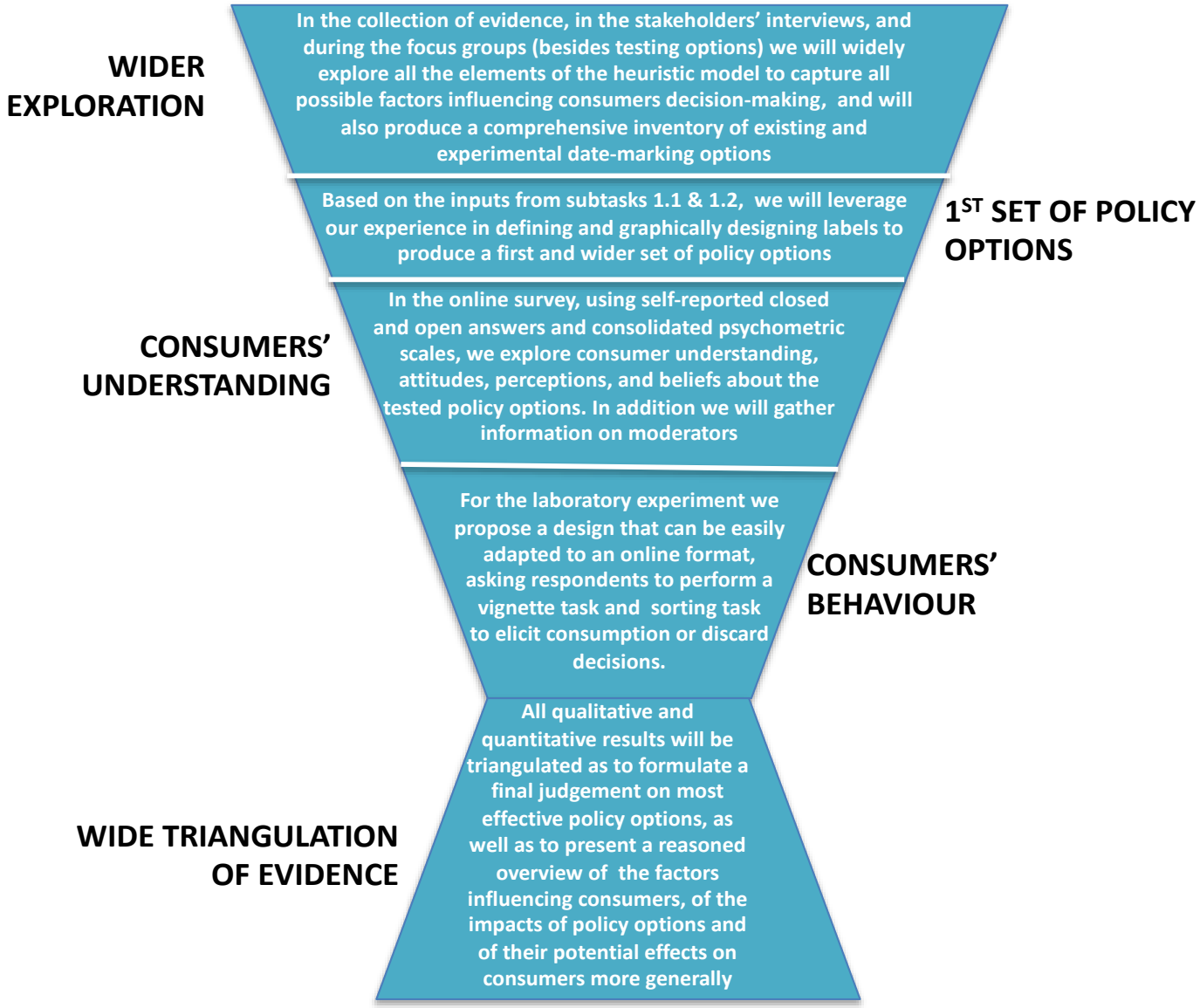
The three specific objectives of this study were:

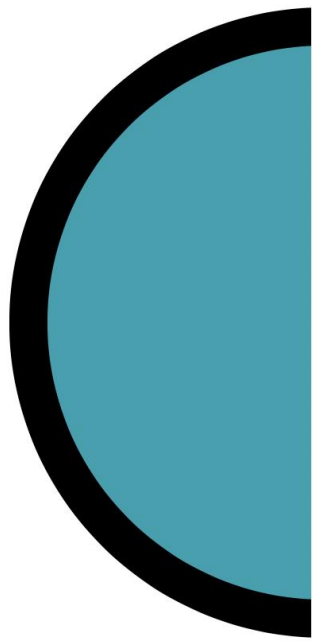
(1) to better understand how current date marking rules and their implementation affect consumers' decisions to consume/use or discard foods;
(2) to identify new ways of expressing date marking (e.g., in terms of terminology, format, visual presentation) that meet consumers' information needs regarding food safety (health) and quality whilst minimising food waste behaviour;
(3) to test the effectiveness of these new ways of expressing date marking (vs. the current one) in preventing food waste linked to consumers' misunderstanding of the meaning of these dates.

Overall Approach



Overall Approach





Task 1

Task 1 - Collection and analysis of existing evidence

List of activities to be conducted

Sub-Tasks

- **1.1 Review of behavioural factors influencing consumers' perceptions and behaviours.** We conducted a state-of-the-arts literature review, assessing both academic and grey sources.
- **1.2 Inventory of expressions of date marking.** We build an inventory of all the expressions of date marking
- **1.3 Stakeholders in-depth interviews** (N=57) from various backgrounds (e.g., policy makers, academic, industry)
- **1.4 Development of policy options.** Based on the findings, we identified the main policy concerns and accordingly proposed a set of possible policy options that were tested in the following Task.

Objectives

- Collect evidence on consumer behaviour on food waste linked to date marking.
- Identify the policy options to be tested in the experimental phase.
- Gather information to fine-tune and establish the methodology for the next Tasks.

Task 1- Conclusions for the development of policy options

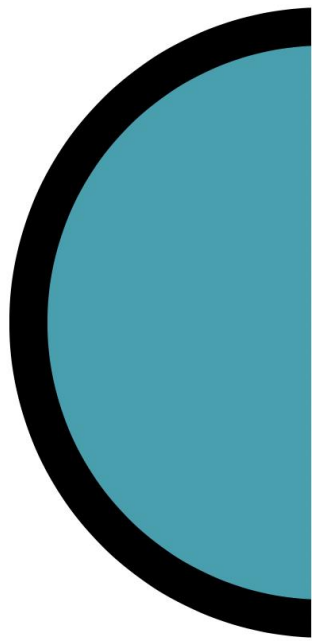
Principles of policy options for date marking

(1) Increase salience of information using, wherever possible, **simple graphic elements** (i.e., colour);

(2) Text and graphic should be simple and clear, people have been shown to think that '*if it is hard to read then it is hard to do*' (Song & Schwarz 2008);

(3) Avoid any **complex numerical information**;

(4) Avoid as far as possible the **use of different formats** (across countries / industries / products), because they reduce familiarity and credibility.



Task 2

Task 2 - Design and execution of behavioural research

List of activities to be conducted

Sub-Tasks

- **2.1 Online focus groups.** Where we explored the main factors influencing consumers' decision making and we explored consumers' responses to the first wider set of policy options produced.
- **2.2 Online Surveys.** In the EU27 to test consumer understanding of different date marking alternative expressions (policy options) and their possible impact on consumers' intentions.
- **2.3 Online experiment.** To test the best performing policy options in terms of their effects on the consumers' actual behavioural choices.

Objectives

- Investigate how date marking influences consumers' decisions to consume/use or discard food
- Assess the effectiveness of the proposed policy options/labels in reducing food waste.
- Triangulation of findings

Task 2.1 – Focus groups

Population	Frequent shoppers and/or responsible for meal preparation
Sample	Online: 12 participants per MS (2 sessions, each one with 6 members)
Duration	120 minutes per FG
Methodology	Online focus groups
Quotas	• Balanced male/female • 2 age groups (18-39; 40-65) • Household composition (with/without children) • 2 income levels (B and C1 / IPSOS grade classification)
Geographical coverage	Ten EU Member States (geographically balanced): 1. Romania 2. Greece 3. Lithuania 4. Poland 5. Spain 6. Slovakia 7. Hungary 8. Netherlands 9. Sweden 10. Ireland

Objectives

- Identification of the main factors influencing consumer understanding, acceptance and use of date marking.
- Exploration of the consumers' first reactions/impressions to the new set of policy options.

Selection of tested policy options in focus groups

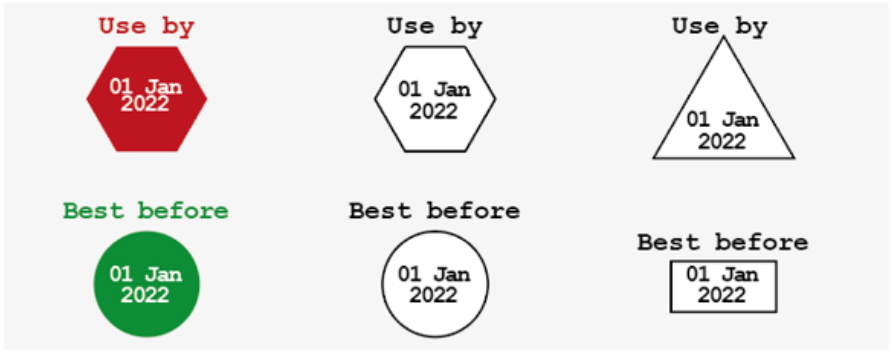
Text based options

1	Best before 01/01/2022
2	Best quality before 01/01/2022
3	Best if used by 01/01/2022
4	Best before 01/01/2022 Often good after
5	Best before 01/01/2022 then check before eating
6	Look, smell, taste after 01/01/2022
7	Check after 01/01/2022
8	Use by 01/01/2022
9	Expiration date 01/01/2022
10	Do not eat after 01/01/2022
11	Safe to eat until end of 01/01/2022
12	Consume before end of 01/01/2022

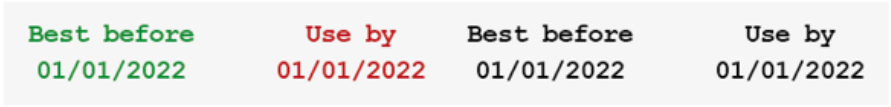
Selection of tested policy options in focus groups

Visual based options

A



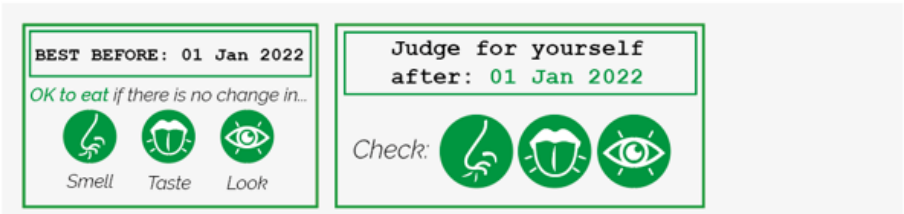
B



C

D

E



Task 2.2 – Online survey

Population	General population aged 18 to 65 years old
Geographical coverage	All EU Member States (27)
Methodology	Online (quantitative survey)
Sample size	n= 25,600 (1000 interviews per country, except small MS)
Quotas	By country, gender and age group: • 18-24 y.o. • 25-54 y.o. • 55-65 y.o.
Sampling error	±5.00% for overall data and for country-specific data. In all cases, a maximum indeterminate probability (p=q=50), for a confidence level of 95.5% is applicable for each one of the reference populations
Weighting	By country Ex-post. With ex post stratification weight based on country, age, and gender to correct for sampling bias and generalise to the national population profile.
Sampling	Random.

Selection of tested policy options in survey

Text based options

Best before
01 Jan 2022

Best quality before
01 Jan 2022

Best before
01 Jan 2022
Often good after

Best before
01 Jan 2022
After look, smell, taste

Use by
01 Jan 2022

Do not consume after
01 Jan 2022

Selection of tested policy options in survey

Visual options

Best before
01 Jan 2022

01 Jan 2022

Best before
01 Jan 2022

Use by
01 Jan 2022

01 Jan 2022

Use by
01 Jan 2022

Task 2.3 – Online Experiment

- **Online experiment**

Population	General population aged 18 to 65 years old
Geographical coverage	Eight EU Member States: • Greece • Italy • Ireland • Romania • Slovakia • Sweden • Czech Republic • Germany
Methodology	Online
Sample size	n= 6,400 (800 respondents per country)
Quotas	By country, gender and age group: • 18-24 y.o. • 25-54 y.o. • 55-65 y.o.
Sampling error	±5.00% for overall data and for country-specific data. In all cases, a maximum indeterminate probability (p=q=50), for a confidence level of 95.5% is applicable for each one of the reference populations
Weighting	By country Ex-post. Ex post stratification weight based on country, age, and gender to correct for sampling bias and generalise to the national population profile.
Sampling	Random.

Objectives

- To test policy options following the selection of most promising options from the online survey and further refinement of these options in terms of (actual) behavioural choices.
- Contribute to address specific objective (1) as a result of evidence triangulation (Task 3)

Task 2.3 – Online Experiment

- **Online experiment**

Phase 1	**Screening task** - Identical questions from the survey
Phase 2	**Main experimental tasks** - Meal preparation tasks - Vignette tasks
Phase 3	**Post Experimental questions** - Selection from the questions we used in the survey (significant factors)

- 3 meal preparation tasks per participant (yoghurt, fruit juice, and minced meat)
- 3 vignette tasks per participant

Task 2.3 – Online Experiment

Policy options tested in the experiment

- **Online experiment**

For best before¶

Control option – Best before [date]¶

Best quality before [date]¶

Best before [date]. Often good after¶

07-06-21 ¶

For use by ¶

Control option – Use by [date]¶

Do not consume after [date]¶

¶

07-06-21

- Best performing policy options in the online survey

Task 2.3 – Online Experiment

Meal preparation task

Click to select and zoom

- Short explanation of the task, to prepare a meal (e.g., breakfast with **fruit juice**, muesli bowl with **yoghurt**, and pasta with **meat**)
- Participants were told to envision themselves preparing a meal at their own home
- Experimental design 4 (PO) per product
- Three meal preparations per participant

Task 2.3 – Online Experiment

Meal preparation task

Product selection

Product selection with zoom in

- Participants could zoom in to see the date, which was blurred
- Whether they click on the date or not will be recorded, to have an indication of whether the date marking influenced the participant's decision
- Outcome variables
  - Understanding
  - Perception of taste
  - Perception of safety
  - Consumption

Task 2.3 – Online Experiment

Vignette task

Mary, John, or a person (gender to match respondent's gender - 3 levels) has just returned home after a week's holiday. M/J/P is preparing a light breakfast, (a bowl of cereal with yoghurt and a cup of coffee, or a slice of ham and a bread roll and a cup of coffee, or pasteurised fruit juice and a cup of coffee)	Food categories – dairy or meat or less perishable product: 3 levels (i.e., three groups).
M/J/P notices that the PO1/PO2/PO3/PO4 (date marking labels: 4 levels)	Selected Policy Options (PO): 4 levels (3 selected policy options and the control) for each vignette. In total (including 'use by' and 'best before' dates), 8 levels (6 policy options and 2 controls).
Shows a best before date as part of the policy options on the date shown on the label or 2 days past the 'best before' date (for use by 1 day after the expiry date and on the expiry date)	Actual date: 2 levels
In M/J/P shoes, how likely is it that you would have consumed the product? **Response scale 0 -10 where 0 = I would have certainly thrown the product away, and 10 = I would have certainly consumed the product**	

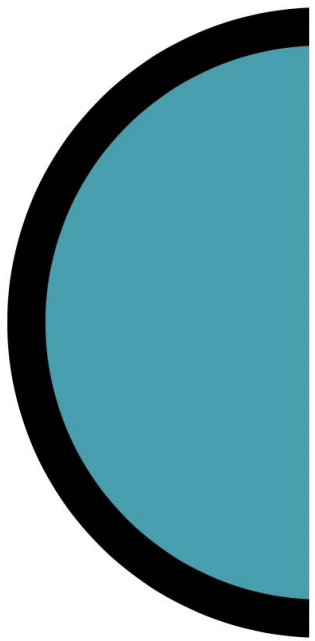
Mary has just returned home from a week's holiday. It is April 17th. She is preparing a light breakfast consisting of a bowl of cereal, yogurt and a cup of coffee. She notices that the label shows that the yoghurt is 2 days past the 'best before' date indicated on the label. She decides not to eat it.

In Mary's shoes, how likely is it that you would have consumed the product?

0 ----------10

I would have certainly thrown the product away **I would have certainly consumed the product**

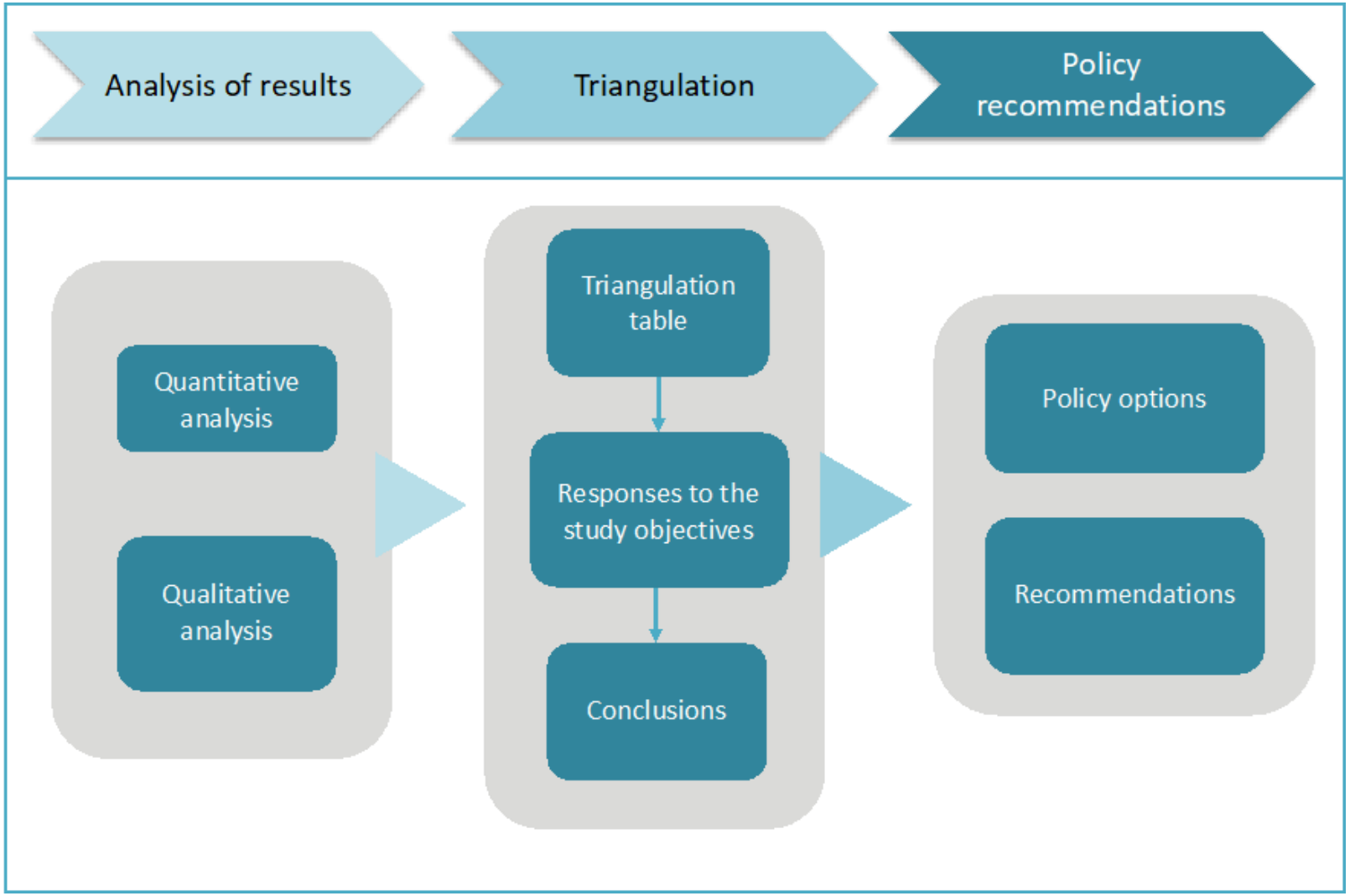
- The experimental design was 8 (Policy Options) * 2 (Dates), amounting to 16 groups of participants.
- Default as control
- Participants were randomly assigned to three vignettes

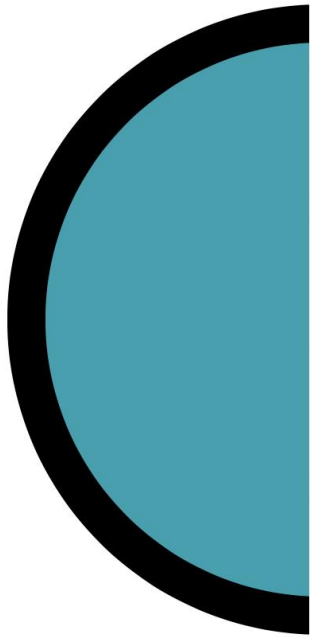


Task 3

Task 3 - Integrated analysis of results and policy recommendations

Overall approach





Main conclusions

Main Conclusions

1. **There is a considerable understanding of date marking; 49.5% of survey participants correctly interpret the labels**.
2. Participants in focus groups indicated that there is **no standard way of placing and presenting the labels and that their visibility is not always optimal**
3. The triangulation of evidence suggests that **understanding difficulties are more pronounced for the 'best before'** than for the 'use by' current labels.
4. **Different reasons for difficulties with BB date**: one of the reasons linked to translation from English
5. **Best before imposes on consumers a higher cognitive processing load** that can lead to biased interpretation and subsequent sub-optimal consumption/discard decisions.
6. **A correct understanding of the labels is linked to correct perceptions elicited by the label on quality and safety**.
7. Both the literature and the interviews show that **date marking is an important factor for reducing waste, but one among many others**.

Thank you