

package
testing +
research

MULTISENSORY EVALUATION OF AIP SOLUTIONS

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 **cost**
EUROPEAN COOPERATION
IN SCIENCE AND TECHNOLOGY



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Horizon 2020

PACKAGE TESTING & RESEARCH

Package Testing & Research is a trusted partner in packaging research.

We strive to produce case relevant knowledge quickly and easily, and to develop the right research tools for gathering essential data. Our expertise is useful in varying stages of packaging processes, especially including the design process. Specifically, PTR combines an understanding of the packaging sector's operations with consumer insight and research knowhow.

PTR has a set of toolkits catering to varying challenges and abilities, for adaption to specific requests.



PACKAGING VALUE CYCLE

INVESTMENT

RETURN

Why?

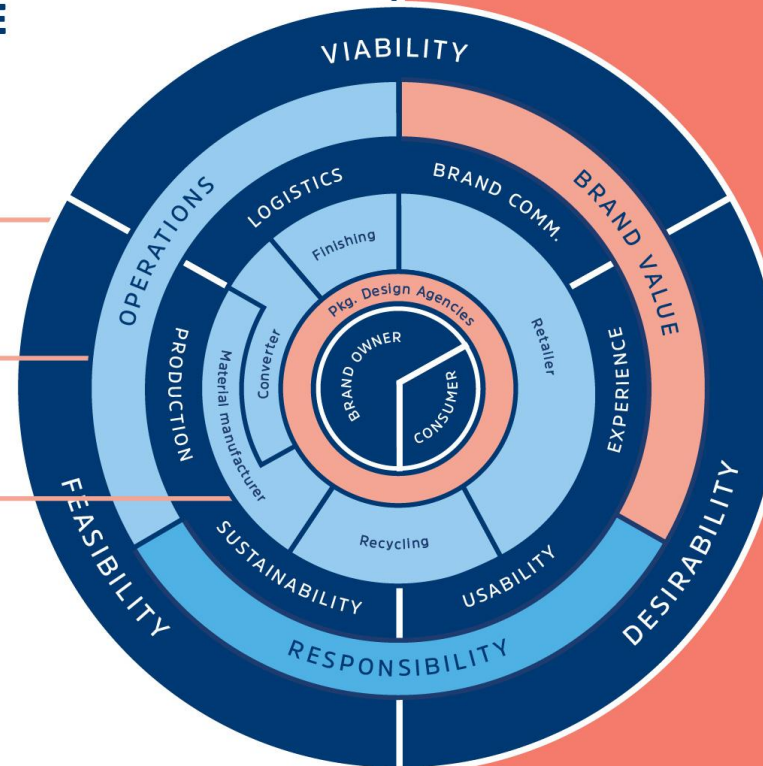
Forces that influence packaging development.

What?

Aspects of packaging that contribute to value.

How?

Actors in the packaging value network.



rTr

MULTI-SENSORY CONCEPT TESTING



Eye-tracking and EEG



Concept testing



Sensory evaluation

TEST YOUR IDEAS IN LOCAL OR GLOBAL MARKETS,
UNDERSTAND THE MARKET AND YOUR POSITION.



TEST DIFFERENT SALES PROMOTION MATERIALS IN A REAL SHOPPING ENVIRONMENT,
UNDERSTAND WHAT DRIVES SHOPPERS' PURCHASE DECISIONS.



CHARACTERISTICS OF VALUE

Packaging value for the consumer

Is based on subjective assessment,
package value is always determined by the consumer, not the brand owner or designer.

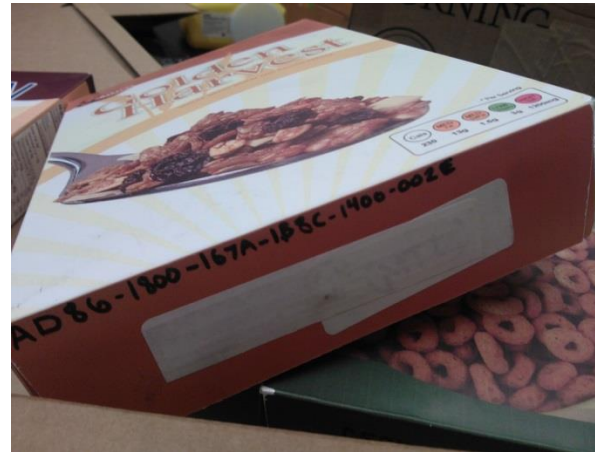
Implies interaction between the consumer and the packaging,
testing should be always conducted with concrete prototypes.

Is comparative,
control samples (1-2) should be included in the test design, if available.

Is context specific,
the use situation has to be carefully defined for the participants.

Includes a preference judgement,
has a strong relationship with both preference and willingness-to-pay.

RAGHAV SUNDAR (MSU) "INVESTIGATING THE EFFECT OF COLOR AND ICON ON INFORMATION PROCESSING BEHAVIORS RELATED TO FRONT OF PACKAGE NUTRITION LABELS"





SNAPSHOT OF YOUR VALUE

VALUE TOOLKIT

Measure and visualize package value

Value Toolkit is a consumer research tool for measuring and visualizing perceived value in packaging.



VALUE TOOLKIT

Main specifications

Powerful, easy, and inexpensive to use,
does not require a large number of respondents.

Low contextuality,
suitable for evaluating a wide range of product packaging.

Versatile,
suitable for evaluating value at different stages of the design process.
(Such as brief, ideation, prototyping and launching.)

Visual output,
results are concise and easy to understand.

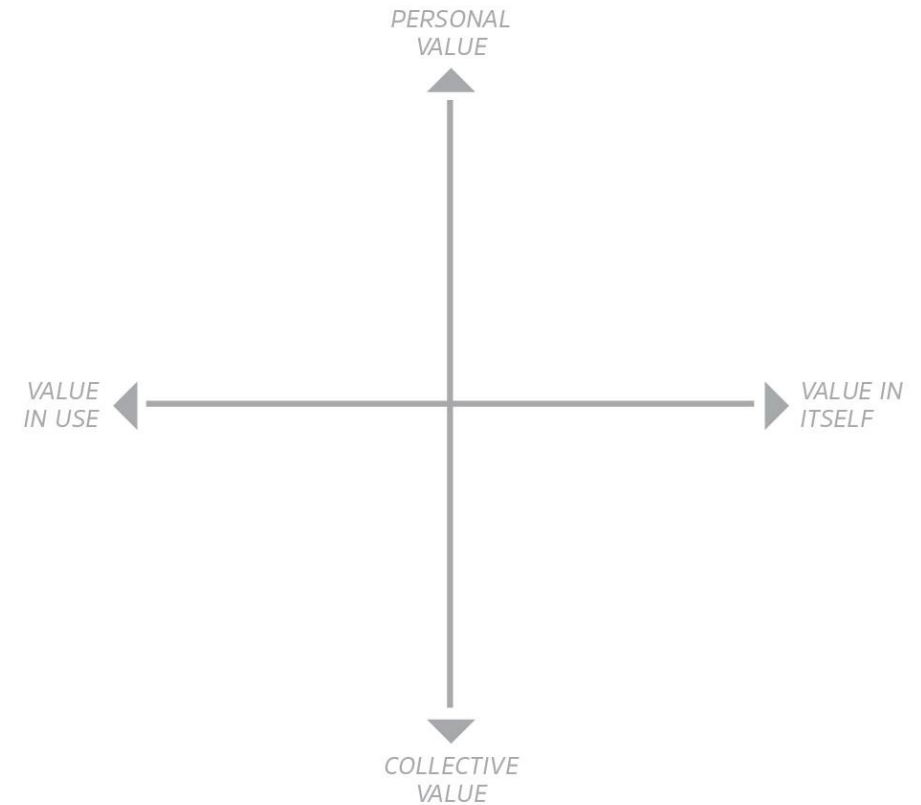
VALUE TOOLKIT

Value Toolkit Framework (Holbrook 1999)

Value is determined by two dimensions.

The first dimension ranges from the value of packaging in use (extrinsic value) to packaging valued in itself (intrinsic value).

The second dimension ranges from personal to collective value.



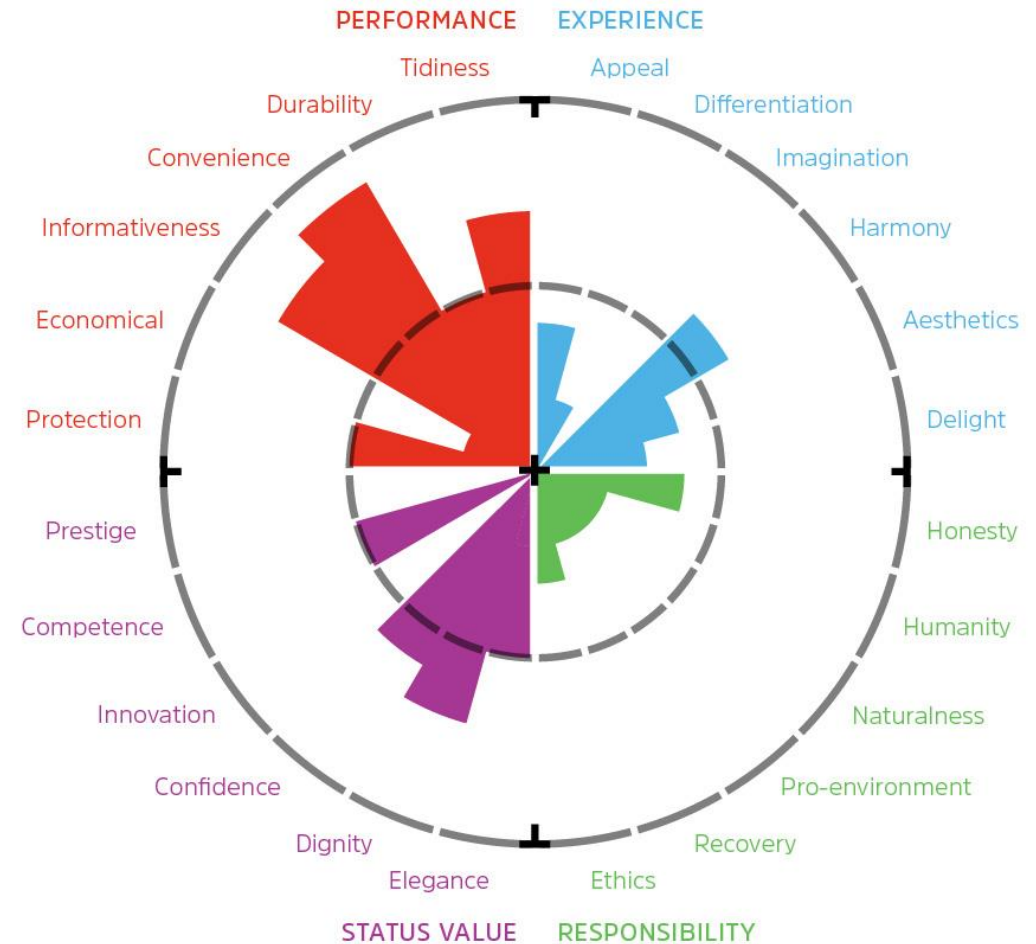
VALUE TOOLKIT

Value Toolkit Output

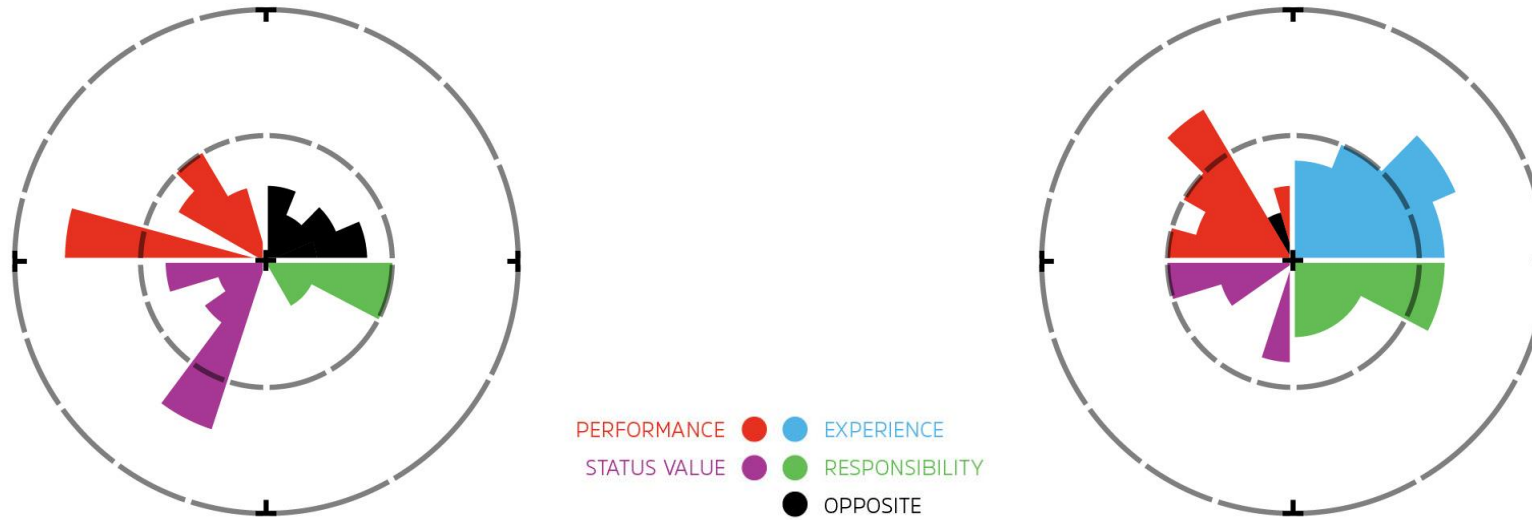
The results of the concept evaluations are calculated for each subdimension.

Results for *Performance* are presented in red, *Experience* in blue, *Responsibility* in green, and *Status value* in purple. *Opposite* evaluations are presented in black.

The outer circle represents 100% and inner circle 50% of the respondents. The mean scores for each subdimension are calculated by subtracting the percentage of enforcing and opposite attributes applied to describe the concept.



VALUE TOOLKIT



Benchmarking

The results for different concepts and packaging are easy and quick to compare.

VALUE TOOLKIT

Packaging	1st Impr.	2nd Impr.	Diff.
Packaging 1	2,52 €	2,66 €	0,14 €
Packaging 2	2,33 €	2,32 €	-0,01 €
Packaging 3	2,28 €	2,30 €	0,01 €

Packaging	1st Impr.	2nd Impr.	Change
Packaging 1	67 %	67 %	0 %
Packaging 2	0 %	8 %	8 %
Packaging 3	33 %	25 %	-8 %

Preference and willingness-to-pay

The participants are asked to state their preference and willingness-to-pay based on first and second (after evaluation) impression. The changes in preference and willingness-to-pay will indicate whether the package increases or decreases the perceived value of the product.



CASE: CHILL GUARD

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IMPLEMENTATION OF THE STUDY

The study was conducted in K-Citymarket Klaukkala 2.8.2013.

When customers purchased fish fillets from the service counter, the products were packed in cold gel (2x200 g) and with time-temperature indicators.

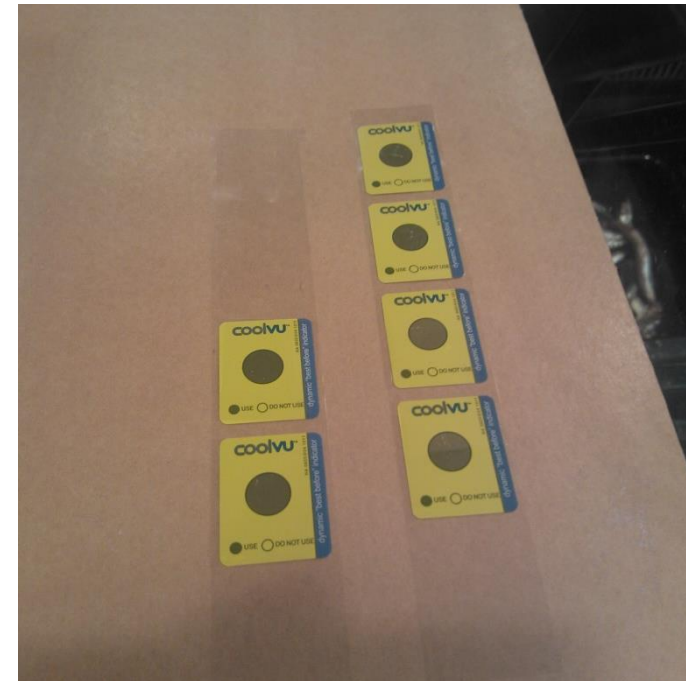
The participants took part in a draw to win a gift voucher worth of 50 euros to the K-Citymarket store

Total of 60 customers, and 70 sold packages

Final N=45 (response rate 75%)

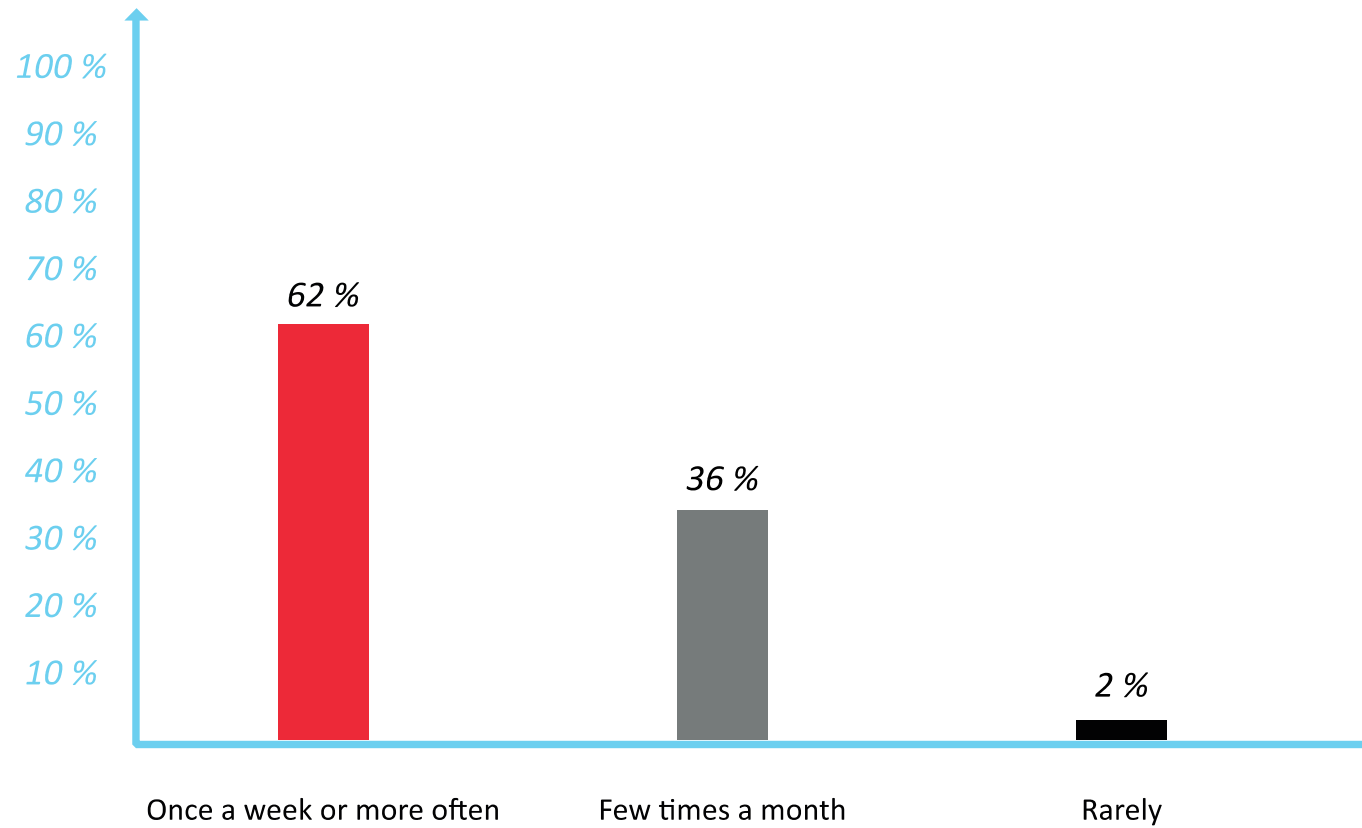
- QR code N=7
- Online N=2
- Phone interviews N=36

COLD GELS AND TIME-TEMPERATURE INDICATORS



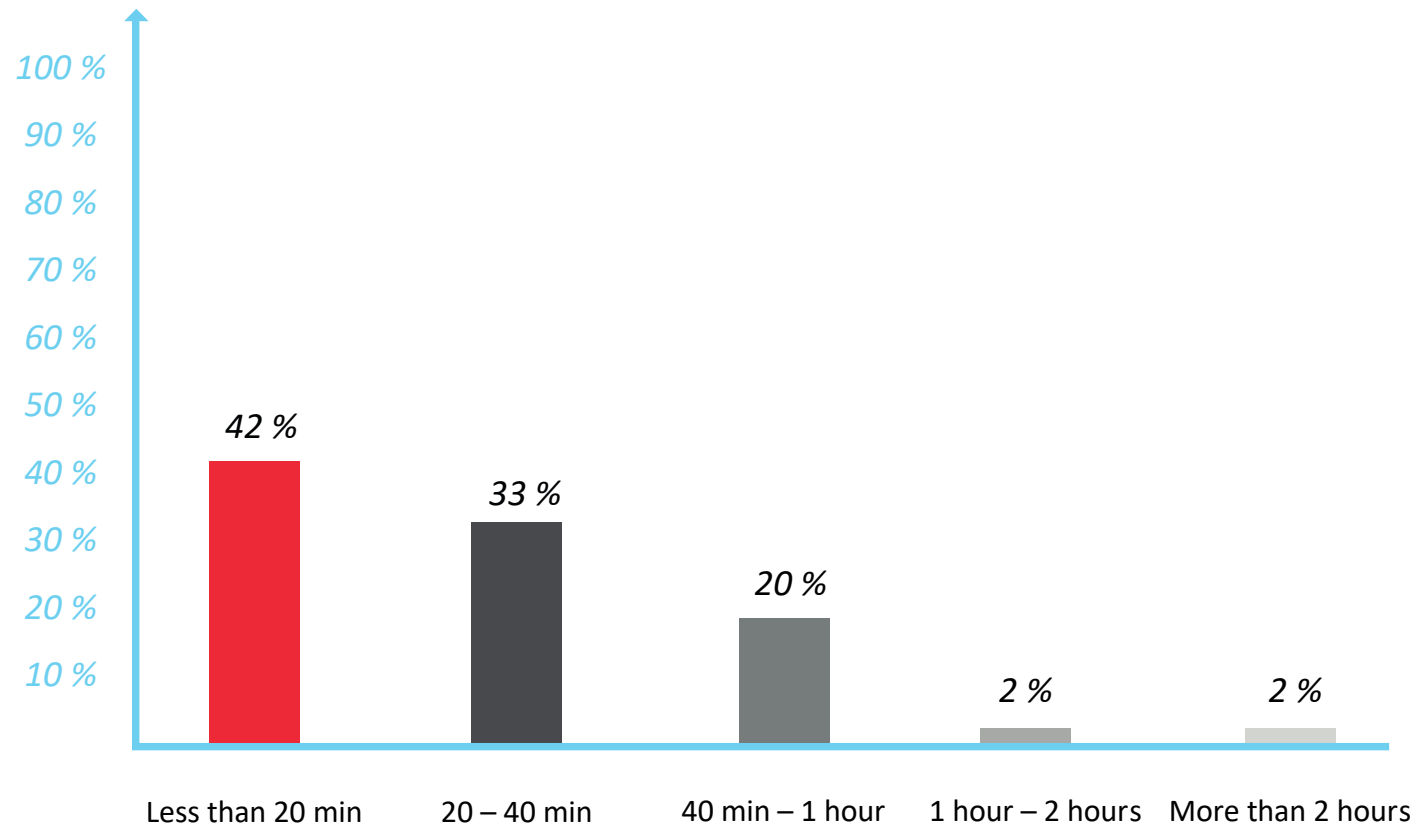
OVER 60% OF THE RESPONDENTS PURCHASED FRESH FISH WEEKLY

How often do you buy fresh fish from the service counter?
(N=45)



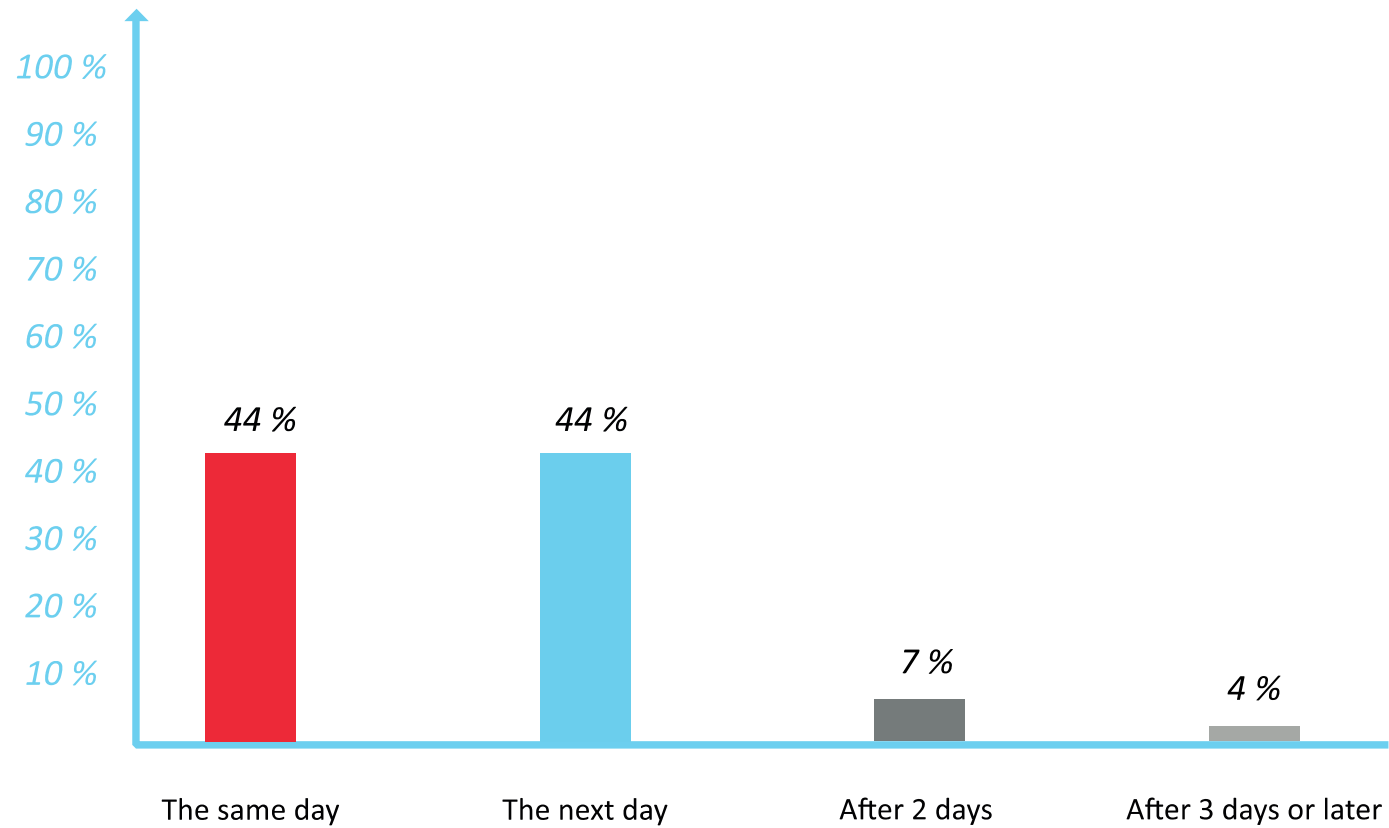
ONE IN FOUR HAD MORE THAN A 40-MINUTE-JOURNEY HOME

How long does it take from the cashier to your fridge? N=45



OVER HALF OF THE RESPONDENTS PREPARED THE FISH NEXT DAY OR LATER

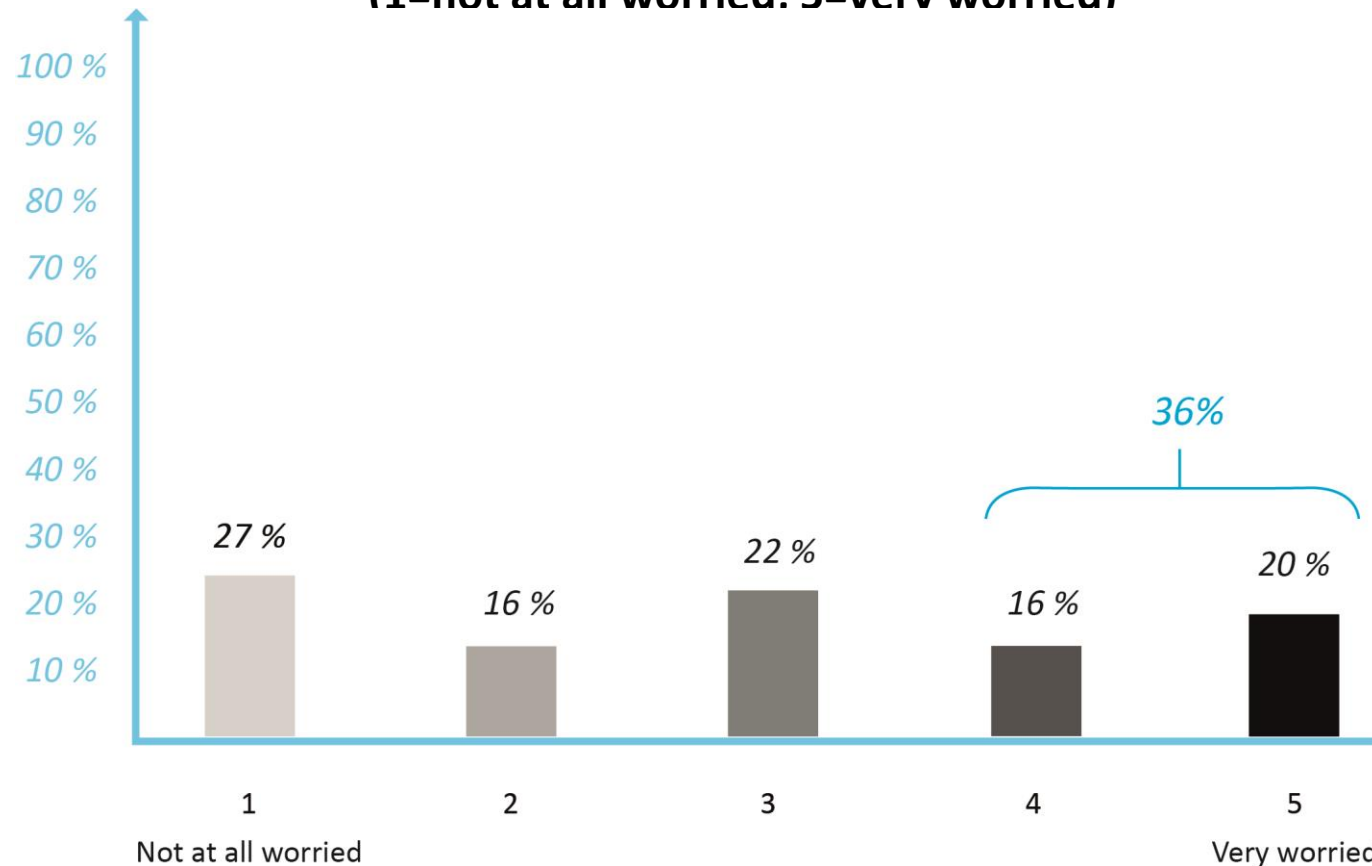
When did you prepare the fish?
N=45



THIRD OF THE RESPONDENTS HAD SOMETIMES BEEN VERY OR QUITE WORRIED ABOUT THE PRESERVATION OF THE FISH ON THE WAY HOME

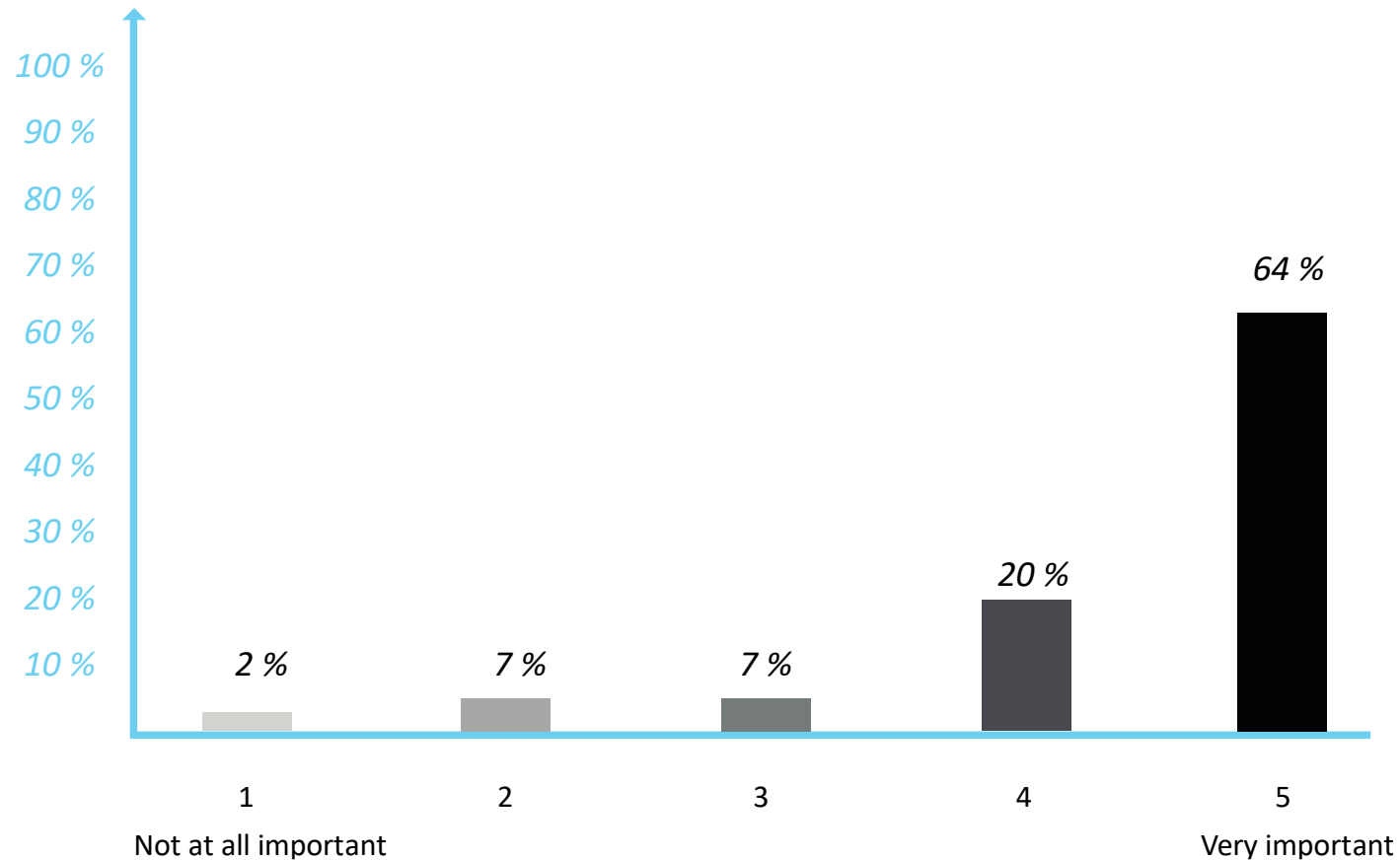
Have you ever been worried about the preservation of the fish on the way home?
(N=45)

(1=not at all worried: 5=very worried)



64% OF THE RESPONDENTS STATED THAT IT IS VERY IMPORTANT TO SECURE THE COLD CHAIN OF FISH

How important is it to secure the cold chain of fish? (N=45)
(1=not at all important; 5=very important)



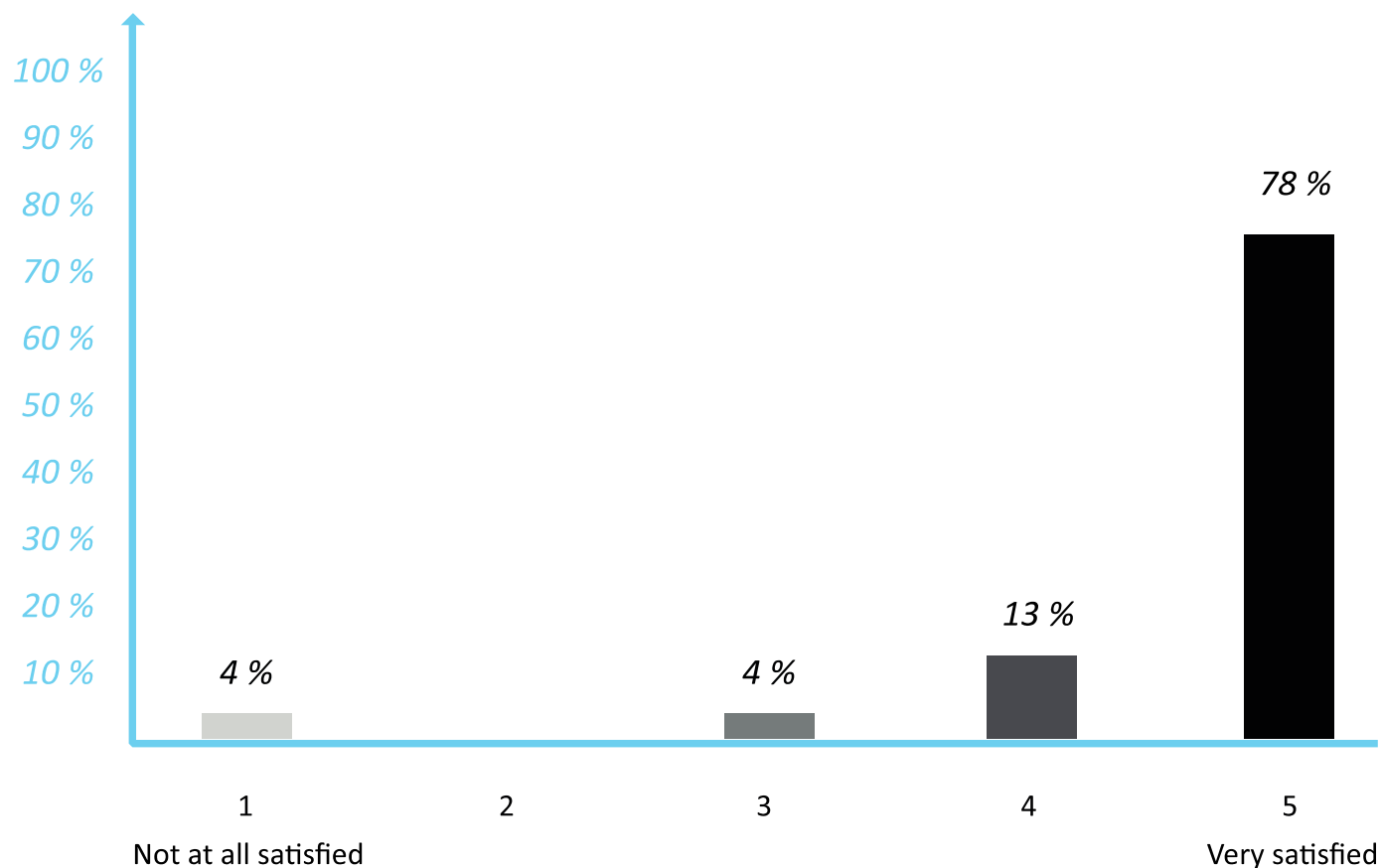


CHILL GUARD

CUSTOMER EXPERIENCES

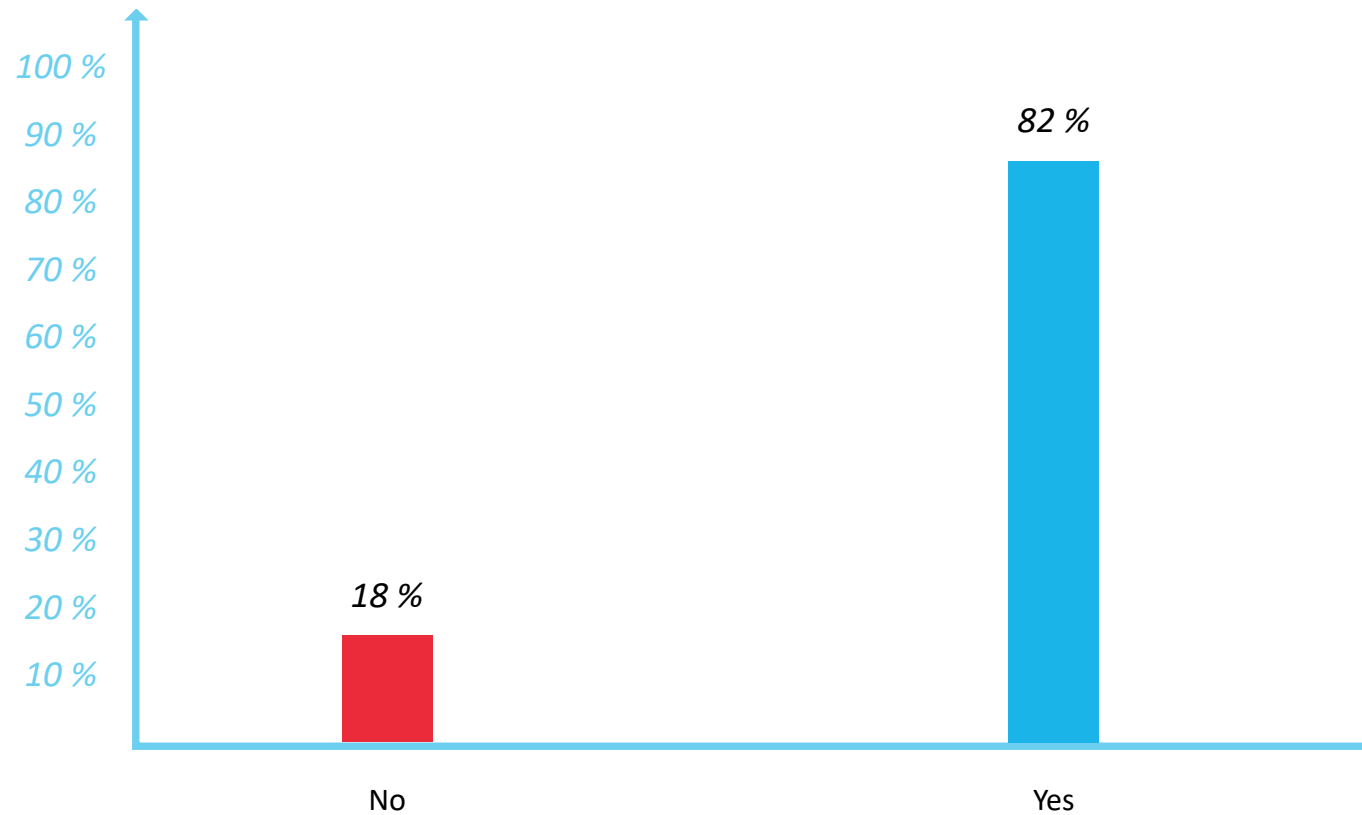
78% OF THE RESPONDENTS WERE VERY SATISFIED OF THE PRESERVATION OF FISH WITH THE CHILL GUARD

How satisfied were you of the preservation of the fish? (N=45)
(1=not at all satisfied; 5=very satisfied)



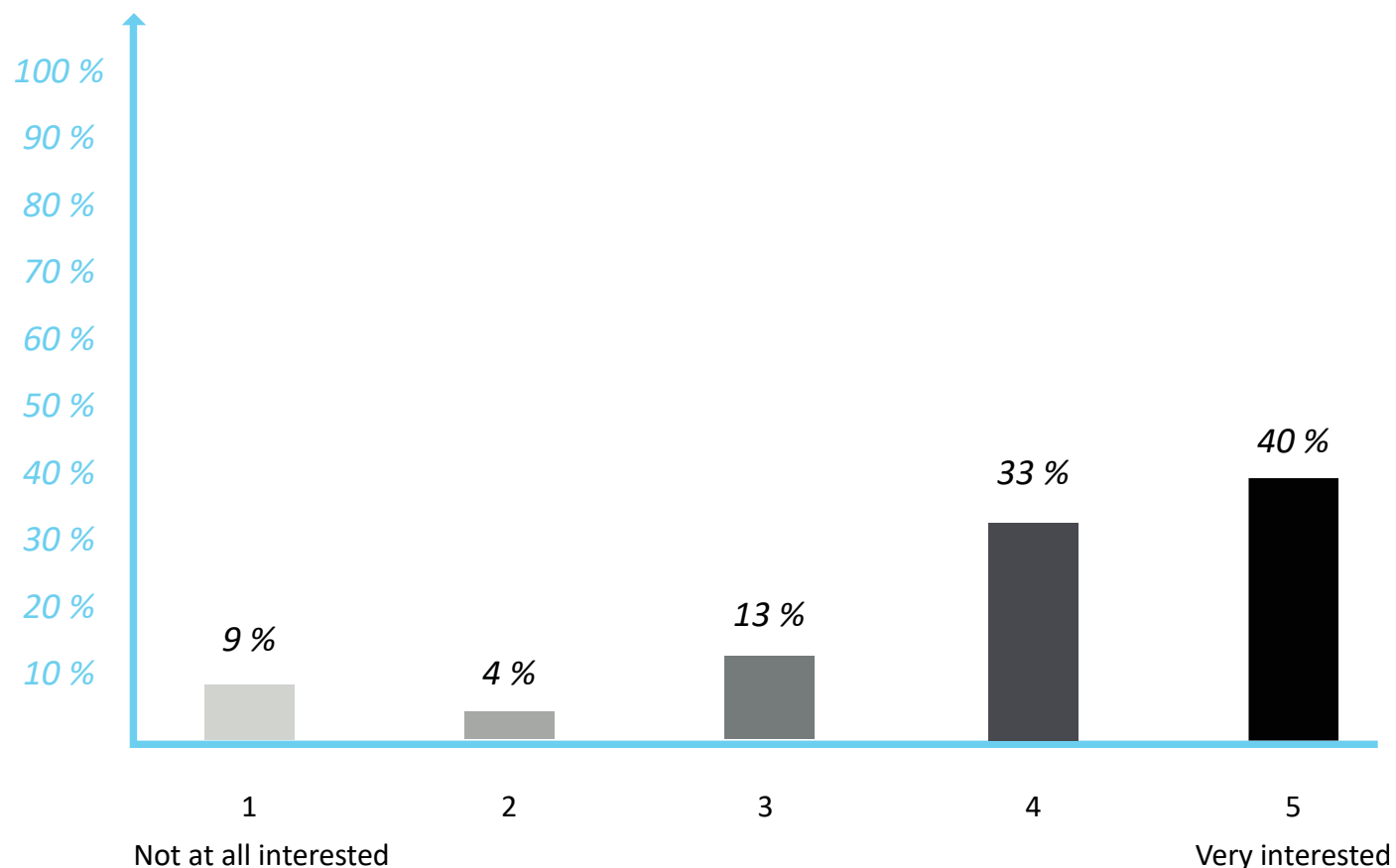
FOUR OUT OF FIVE RESPONDENTS CHECKED THE CHILL GUARD BEFORE PRODUCT USE

Did you check the chill guard before product use? (N=45)



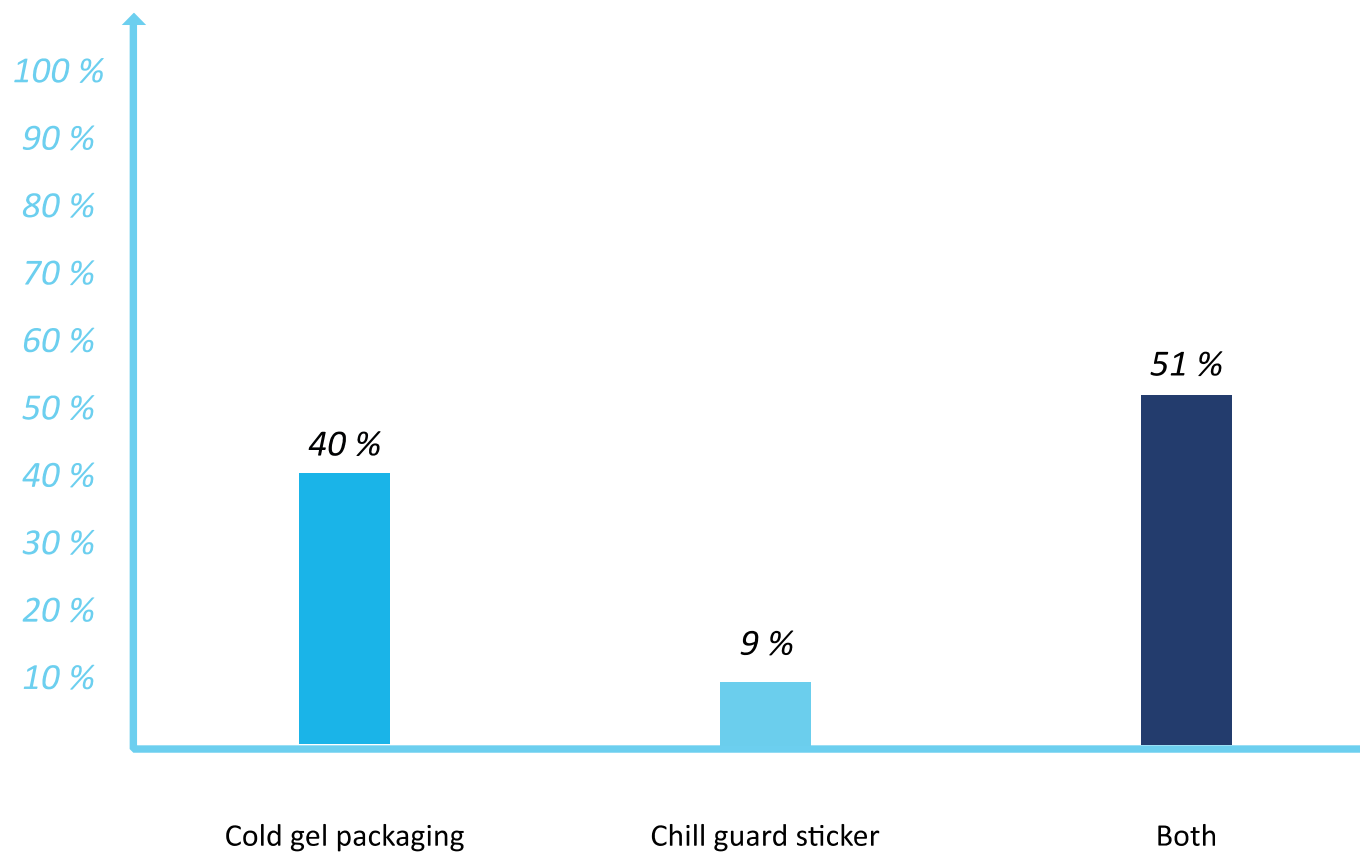
OVER 70 % OF THE RESPONDENTS WERE VERY OR QUITE INTERESTED TO USE THE CHILL GUARD

How interested would you be to use the chill guard? (N=45)
(1=not at all interested; 5=very interested)



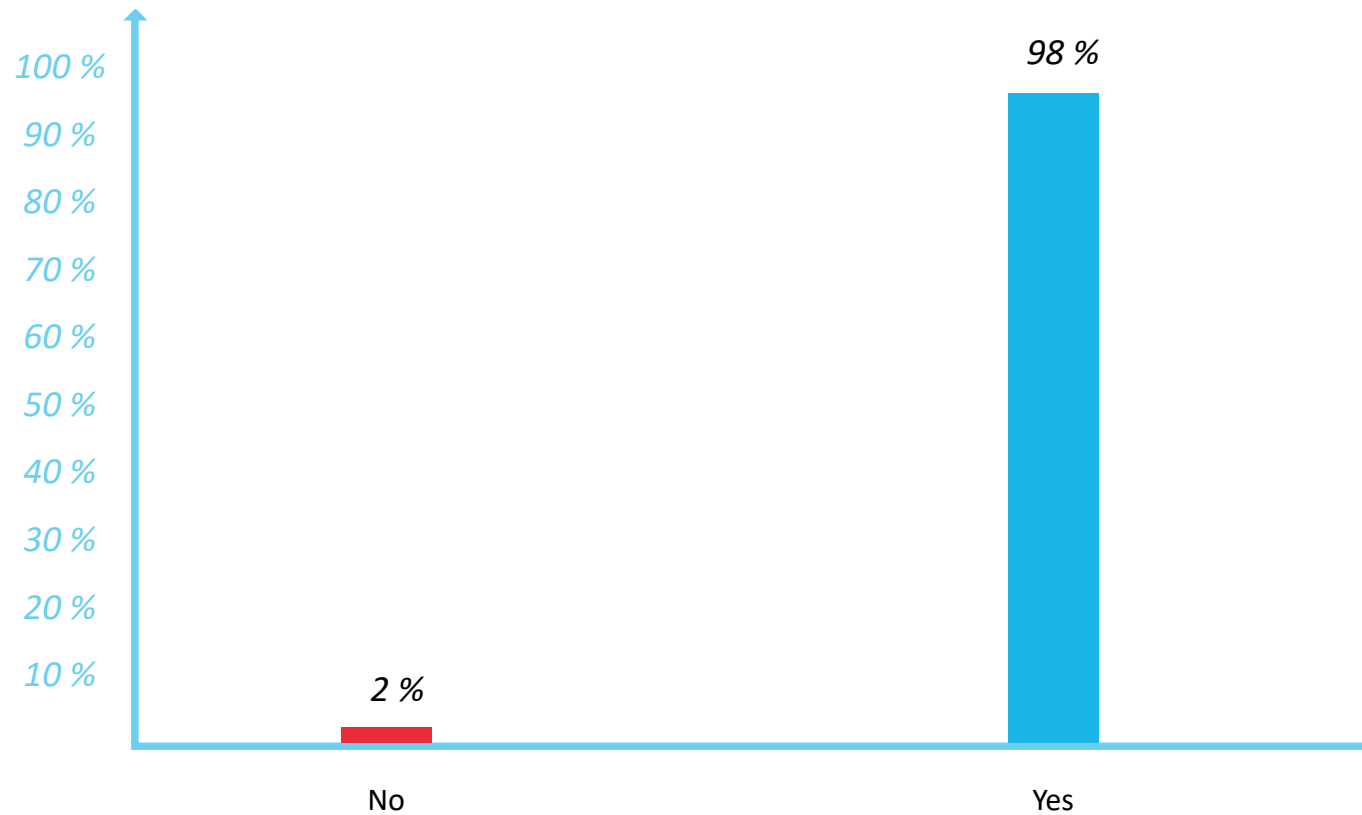
HALF OF RESPONDENTS FOUND BOTH THE CHILL GUARD STICKER AND COLD GEL PACKAGING MOST USEFUL

In the chill guard service I experienced most benefits from... (N=45)



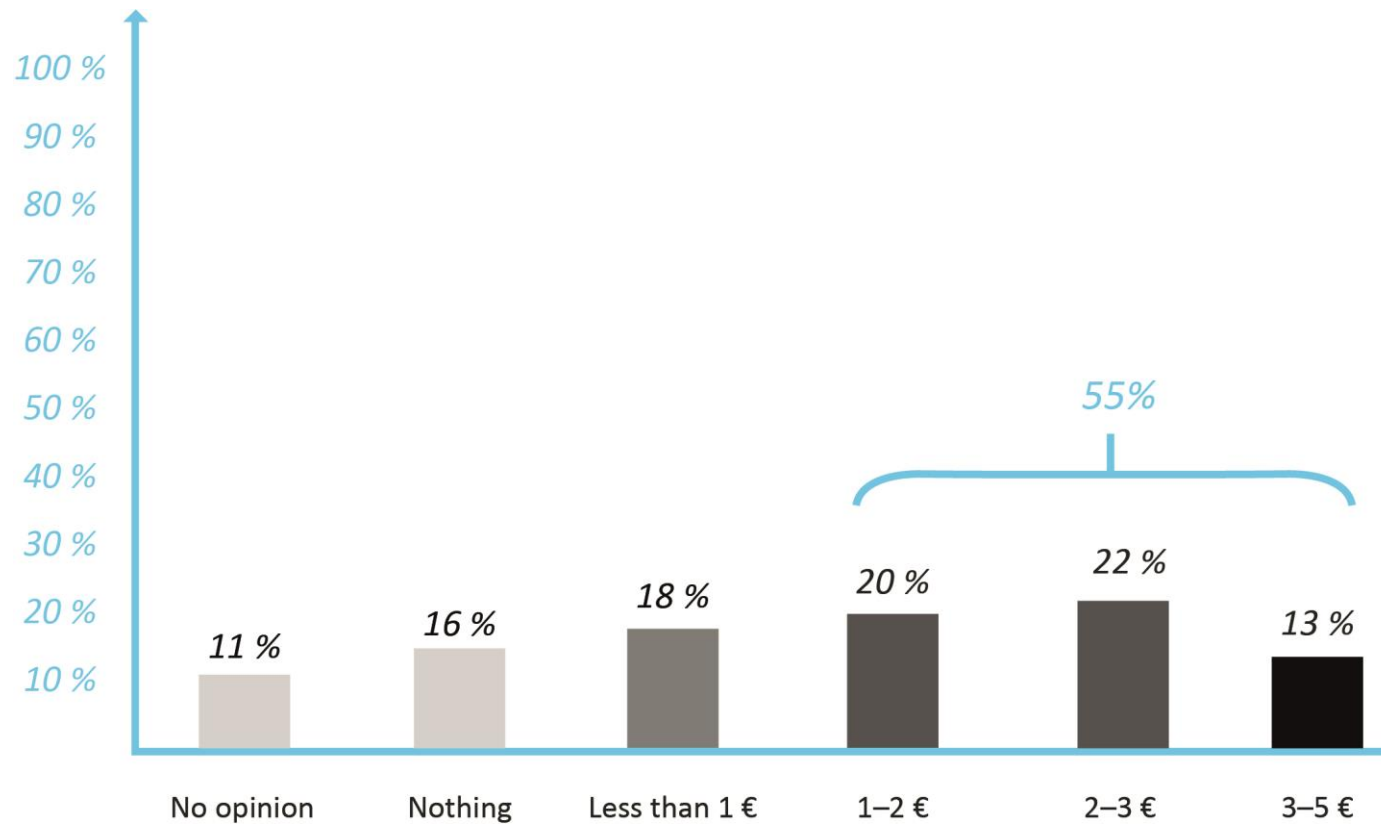
ALMOST ALL OF THE RESPONDENTS WERE PLANNING TO REUSE THE COLD GEL

Are you going to reuse the cold gel? (N=45)



OVER HALF OF THE RESPONDENTS WERE READY TO PAY AT LEAST ONE EURO FOR THE CHILL GUARD SERVICE

How much would you be willing to pay for the chill guard service? (N=45)



CONCLUSIONS OF THE STUDY

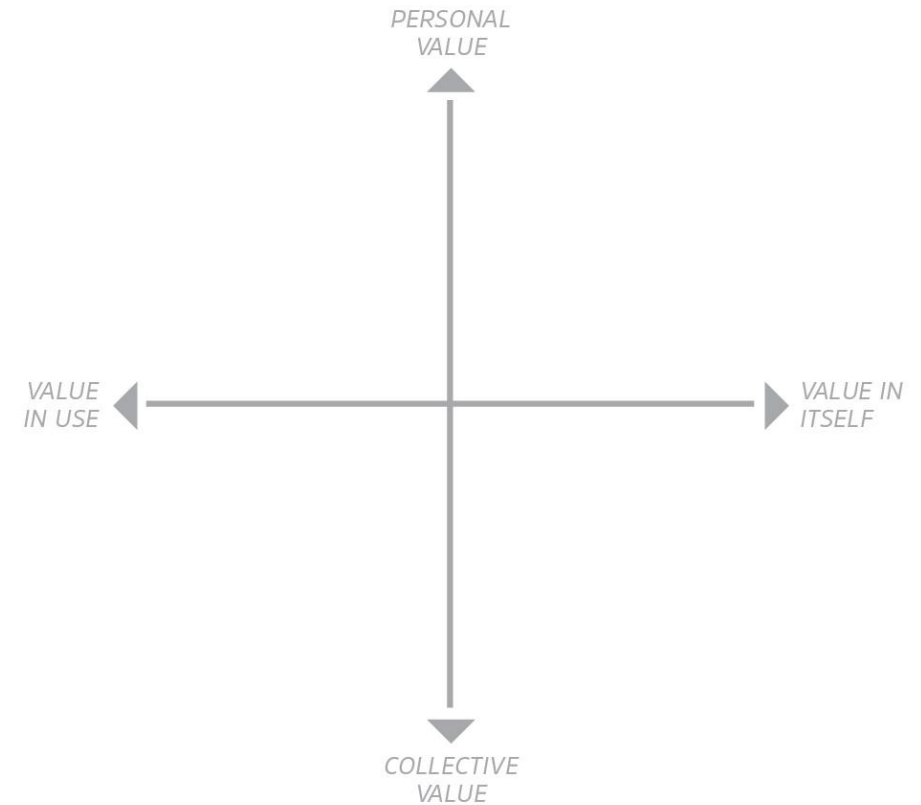
RESULTS IN THE VALUE FRAMEWORK

Value Framework

Value is determined by two dimensions.

The first dimension ranges from the value of packaging or product in use (extrinsic value) to packaging or product valued in itself (intrinsic value).

The second dimension ranges from personal to collective value.



RESULTS IN THE VALUE FRAMEWORK

Value Dimensions

The four main dimensions of value are Performance, Experience, Responsibility and Status.

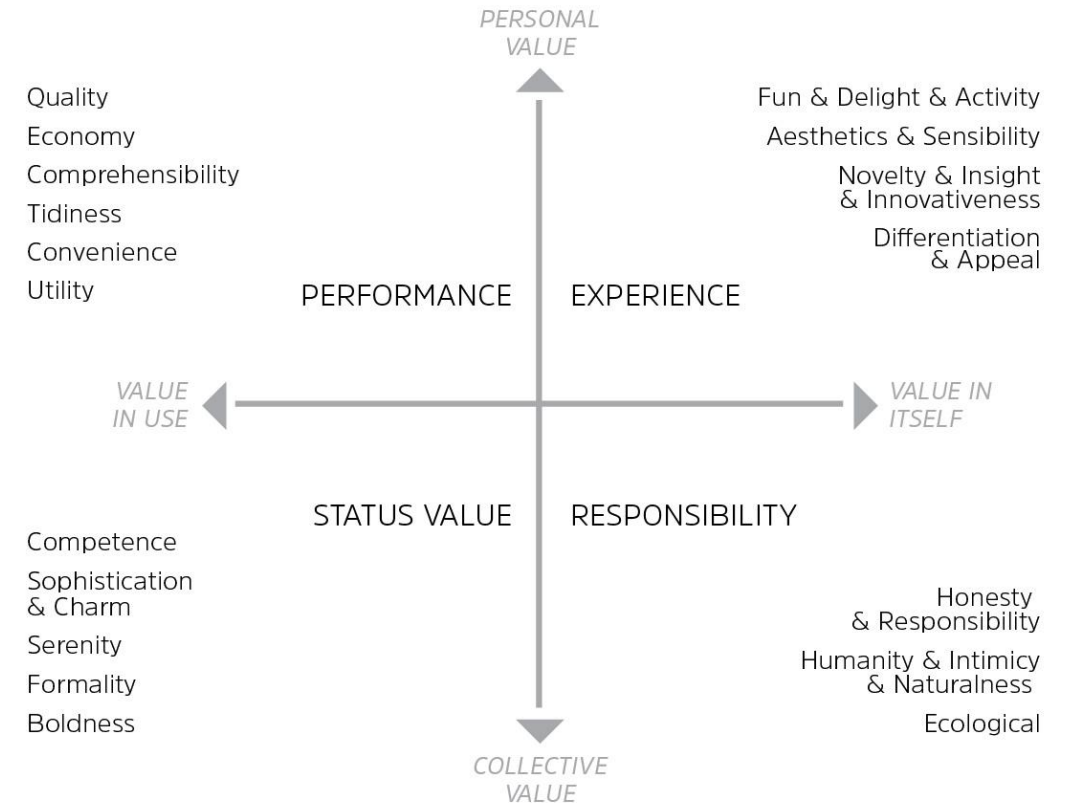
The main dimensions are divided into subdimensions, and altogether the toolkit utilizes 18 different subdimensions.

Each subdimension is measured by a minimum of 2 attributes with opposites, e.g.

Subdimension of Fun:

Happy – Gloomy

Playful – Serious



RESULTS BY THE VALUE FRAMEWORK

Benefits of the chill guard for the business

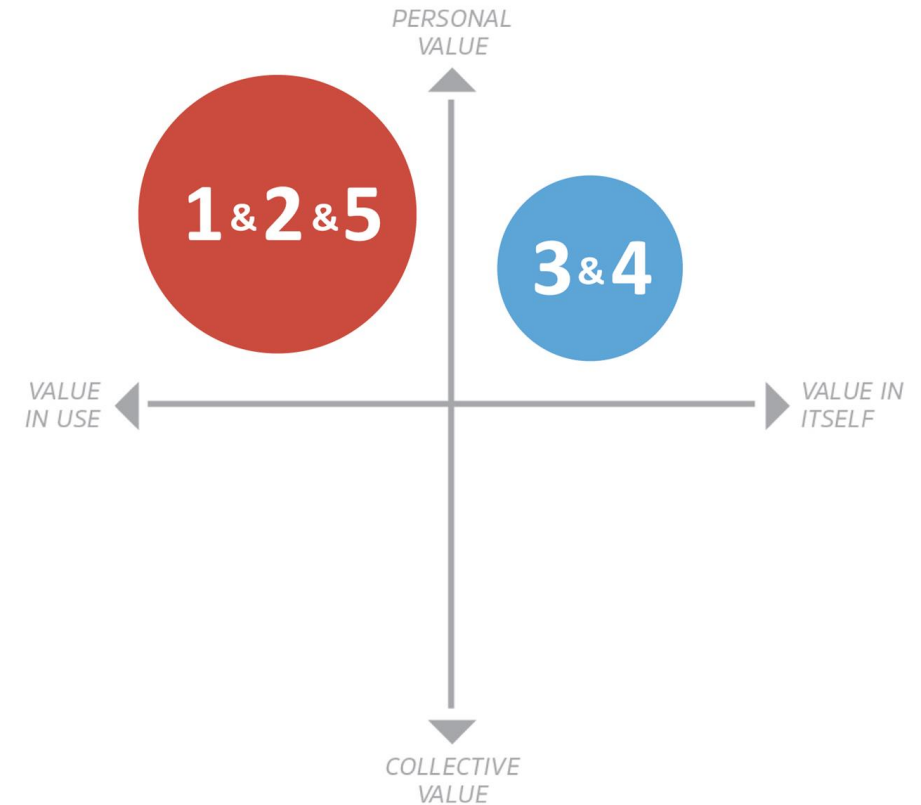
- 1** Gives customers more time to spend in the store
- 2** Guarantees the preservation of the product despite length of the cashiers' queues or the journey home
- 3** Acts as a replacement for the current ice cube and freeze bags and other temporary solutions
- 4** Improves customer service
- 5** Adds to customer satisfaction
- 6** Communicates responsibility



RESULTS BY THE VALUE FRAMEWORK

Benefits of the chill guard for the customer

- 1 Securing the cold chain and quality of the product
- 2 Adds to shelf life and freshness
- 3 Decreases time pressure inside store, while queuing, and on the way home
- 4 More opportunities in store selection (or visiting multiple stores on one trip)
- 5 Reusable cold gels



POSSIBLE FOLLOW-UP STUDIES

- Willingness-to-pay for the chill guard service
- Pawn systems (from competitive advantage viewpoint)
- Applying indicators to the retailer-packed products
- Integrating the cold gel into the packaging (for example in online stores)

The chill guard service provides businesses the opportunity to verify a responsible way of action and getting the customers to shop in stores for a longer time.