



Behavioural study on strategies to improve the effectiveness of product recalls

Technical Annex

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Contact: Anna Jassem

E-mail: JUST-E4@ec.europa.eu

European Commission
B-1049 Brussels

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Authors

Dr Ashwini Natraj, Wouter Landzaat, Dr Charlotte Duke, James Suter, Julia Rzepecka, Angelo Legge, Roberto Sigismondo, Aneta Sadlik, Dr Femke de Keulenaer, Daan Bijwaard, Dr Sara Kettner, Marlene Muensch

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This document provides additional materials in support of the main report for the behavioural study on strategies to improve the effectiveness of product recalls.

This annex is organised as follows:

- Annex 1 provides a summary of the methodology of tasks conducted in preparation of the survey and experiments (preparatory tasks; literature review, desk research, stakeholder engagement and focus groups);
- Annex 2 provides a summary of the methodology underlying the consumer survey and behavioural experiments;
- Annex 3 provides a summary of the economic assessment of products remaining in consumers' hands;
- Annex 4 to Annex 8 provide material in support of the methodology of the preparatory tasks of the study;
- Annex 9 to Annex 11 provide material in support of the methodology of the consumer survey and behavioural experiments;
- Annex 12 provides results of the industry survey;
- Annex 13 provides supplementary results to consumer survey; and,
- Annex 14 provides supplementary results of the behavioural experiments.

Annex 1 Methodology of tasks conducted in preparation of the survey and experiments

A1.1 Literature review

The literature review was the starting point of the secondary data collection for this study. We analysed sources from the 27 EU Member States, the UK, EFTA countries (Norway and Iceland) and selected third countries with highly developed recall practices (the US, Australia, Canada and New Zealand). Furthermore, sources from European level and international organisations (for example from the EU and OECD) were included. To the extent possible, the literature review was conducted in the national language of the country concerned, thereby increasing the likelihood of finding the most pertinent information.

The literature review was conducted in two phases. The first phase included a preliminary screening of sources in databases of academic journals (e.g. JSTOR), the websites of competent national authorities and other online sources (e.g. independent reviews, briefing papers, codes of practice, newspaper articles). We used key word searches (e.g. "recall notice", "registration scheme", "market practices + product registration + recall") to identify potential sources. Additional relevant documents were shared by the project experts and the Commission. The study team created an online database with basic information such as the title of the source, its author, year of publication, the type of source, a short summary and an initial assessment of the source's relevance. Throughout the pre-screening of literature, a total of 297 sources were identified.

For the sources selected for full analysis, national researchers followed a more extensive set of questions. Each researcher populated a database for the core team to easily identify the most relevant pieces of information for each of the project's research questions (see Annex 4). This approach allowed for a more structured analysis of a large amount of documentation in different languages and is in line with Rapid Evidence Assessment methodologies.

A1.2 Desk research

A1.2.1 Desk research on product recall campaigns

The purpose of the desk research on recall campaigns was:

- to map prevailing market practices on recalls; and,
- to identify best practices.

The national researchers were asked to identify recall campaigns in the 11 countries in scope (Belgium, Bulgaria, Croatia, Czechia, Denmark, Germany, Ireland, Latvia Portugal, Spain and the US) and provide a detailed description of the recall campaigns in accordance with a data collection template (see Annex A5.1). All findings were then stored in a centralised database to allow systematic grouping of data and the identification of common practices. The core team performed analysis of 55 recalls¹ across various product categories.

In each country, five recent recall campaigns were selected according to criteria such as:

- the type of product;
- the reason for the recall;
- the product end-user; and,
- the risk level.

¹ A total of 107 recall campaigns were identified and screened, of which 55 were selected for the full analysis.

The aim was to ensure a diversity across product categories. As indicated by the consultative group of experts, the research team included insights on the availability of information in the national language and the adoption of procedures for handling complains by the manufacturer. Therefore, campaigns meeting these criteria were prioritised within the selection process. In general, the intention was to identify best-practice examples that include the highest level of details. We used various sources to identify the campaigns, such as EC Safety Gate, manufacturers’ websites and online news articles, and selected the ones that offered most comprehensive information about campaigns. The sample of recall campaigns presented in the report is limited and thus unlikely to be statistically representative. The following table provides an overview of the recall campaigns per product category.

Table 1: Number of recall campaigns per product

Product category	Number of recall campaigns
Electrical appliances	25
Durable children’s articles and equipment	12
Automotive	6
Communication devices	3
Toys	3
Other	3
Furniture	2
Cosmetics	1

Source: VVA

Market practices for recall campaigns

Nearly half of the recall campaigns (49%) concerned products with a long lifespan and 40% of products with a medium lifespan. The majority of recalled products posed high risk to consumers (over 63% pose serious risk). In terms of product users of the recall campaigns in scope of the analysis, 40 campaigns concerned adults and 15 related to products used by children.

The majority of recall campaigns were issued by international companies. Some of the campaigns from these international companies were carried out in a similar manner in several EU countries (e.g. Phillips baby monitor, Chicco baby car seat, Bosch and Siemens washing machine and several examples from the automotive sector).

It should be noted that limited quantitative data, such as cost of the recall to a company or proportion of affected products retrieved, was collected about the analysed recall campaigns due to its sensitive nature. The exceptions are recalls conducted in the US, where ex-post evaluation of the recall effectiveness (e.g. recall cost, share of products returned, reported incidents and injuries, total of recalled products) tend to be publicly available. In the US, quantitative data was collected for companies such as Takata², Fisher-Price³ and Samsung⁴.

² NHTSA, Takata Recall Spotlight, available at: <https://www.nhtsa.gov/equipment/takata-recall-spotlight#completion-rates>

³ CR, Fisher-Price Rock 'n Play Sleeper Should Be Recalled, Consumer Reports Says, available at: <https://www.consumerreports.org/recalls/fisher-price-rock-n-play-sleeper-should-be-recalled-consumer-reports-says/>

⁴ CPSC, Samsung Recalls Top-Load Washing Machines Due to Risk of Impact Injuries, available at: <https://www.cpsc.gov/Recalls/2016/samsung-recalls-top-load-washing-machines>

A1.2.2 Desk research on product registration

The purpose of this task was to identify product registration market practices used by manufacturers and online retailers and to assess what is their relative effectiveness.

The core team analysed 40 registrations in ten countries: Belgium, Bulgaria, Croatia, Czechia, Denmark, Germany, Ireland, Latvia, Portugal and Spain. The screening process allowed the team to check registration availability among international and national companies. The intention was to identify companies offering registration schemes in each country, which would then be subject to full analysis by national researchers. Similar to the recall campaigns analysis, registrations schemes with the highest level of details were selected for the analysis. The sample of the registrations presented in the report is limited and thus should not be treated as statistically representative. The following figures were collected:

- 280 international and national companies and national organisations (market authorities and industry associations) were screened across ten countries⁵.
- 108 companies offered a product registration scheme across ten countries⁶.
- 40 product registration schemes were included in the full analysis (four per country).

Based on the findings, there were very few registration schemes supported by public initiatives, such as national market authorities and national industry associations. The only two cases identified were in the UK with the website “Register My Appliance” from the Association of Manufacturers of Domestic Appliances, and “Electrical Safety First”, a campaigning charity working closely with the UK government and consumer safety organisations.

The table below presents the number of companies screened and the number offering product registration for each product category.

Table 2: Registration schemes per product category

Product category	Number of companies screened	Number of companies with registrations	Share of companies with registration
Domestic electrical appliances	94	59	60%
Communication devices	39	27	69%
Domestic electrical appliances & Communication devices	35	13	37%
Durable children’s articles and equipment	60	9	15%
National market surveillance authority / Industry association	52	0	0%

Source: VVA

⁵ In limited cases the same company was screened more than once by country researchers due to the problems with identifying product registrations schemes in their country. This was the case in particular in small member states.

⁶ The total of 108 companies with registration includes – in limited cases – registration offered by the same company in different countries. When double-counting of the same company is removed, the total of companies with registration is 85.

Market practices for product registration

The vast majority of the registration schemes identified for this study were offered by manufacturers (106) and only two were offered by retailers.

Among the companies with registration schemes, 99 schemes are available for domestic electrical appliances and communication devices. Product registration for durable children's articles and equipment is not frequent in the EU. Among 60 manufacturers and retailers screened within this product category, only nine offered product registration. Additionally, some US companies offered product registration on their local websites, but they were not available for consumers in the EU (e.g. US-based address for registration was mandatory).

Registration is only infrequently offered by online retailers. Retailers often offer options to set up online account to track purchases and receipts, or to collect loyalty points (e.g. in Czechia, Bulgaria). However, there is no link to product safety within this process and no actual product registration is available. Among 58 retailers screened across 10 countries, only two retailers (Currys in Ireland and Pevex in Croatia) offered product registration on their websites.

A1.3 Stakeholder engagement

A1.3.1 Semi-structured stakeholder interviews

As part of the primary data collection exercise, a series of interviews were conducted with experts in the field of product recalls and registration. Interviews included experts at the international, European and national levels⁷ representing the following key stakeholder groups:

- industry associations;
- market surveillance authorities;
- consumer organisations;
- companies;
- academics; or,
- other experts in the area.

All interviews across different types of stakeholders were centred around three core areas:

- 1) communication around product recall and the recall procedure itself;
- 2) product registration and the process of contacting consumers; and,
- 3) the economic impact of recall campaigns.

Within these broader areas, questions were tailored to different types of stakeholders. Interview were conducted, in most cases, in the interviewee's national language.

Each interview lasted around an hour and were semi-structured. As such, the interviews followed the outline of an interview guide, but the depth with which any question in the guide was addressed depended on the knowledge of the interviewee. The complete list of conducted interviews can be found in Annex A6.6.

A1.3.2 Industry survey

Stakeholder engagement for this project also included an industry survey. The survey comprised a total of 35 questions. The questions focused on current practices on product recall, as well as product registration and other methods of identifying customers in case of a product recall. The survey included routing logic outlining "root" and "branch" questions in the survey⁸. Additionally, except for screening questions, no questions were

⁷ Individuals from all ten countries in scope (Bulgaria, Croatia, Czechia, Denmark, Germany, Ireland, Latvia, Portugal and Spain) were included, as well as some experts from third countries (e.g. Australia and Canada).

⁸ "Branch" questions are questions only asked of respondents providing a specific answer to a "root" questions.

compulsory to answer. Making questions compulsory may discourage some respondents from participating. As such, respondents may not have answered all 35 questions. The survey took around 20 minutes to complete.

The industry survey was designed in English, and subsequently translated into French, German, Spanish and Bulgarian. The survey was translated to ensure that respondents lacking fluency in English could still complete the survey. The online platform Surveygizmo was used for respondents to complete the survey.

The survey was disseminated via a number of channels. First, it was sent to a list of around 900 contacts compiled by VVA based on existing contacts as well as desk research conducted by national researchers. Country lists were compiled by national researchers for the main ten countries in scope⁹. The list of contacts included multinational and national level manufacturers, retailers and wholesalers operating in the following sectors:

- apparel & footwear;
- automotive;
- chemicals;
- cosmetics;
- consumer electronics;
- e-commerce;
- fitness and health;
- food retails;
- furniture;
- household appliances; and,
- toys.

The following countries were included in the long list of contacts: Austria, Belgium, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Italy, Luxembourg, Netherlands, Poland, Portugal, Romania, Slovakia, Spain and Sweden.

Following the initial circulation, several reminders were sent to the long list of contacts to maximise participation rates. At this point, the survey was also circulated by industry associations among their members. Finally, with the support of the European Commission, the survey was promoted in the Safety Gate weekly reports, as well as through other dissemination activities by the Commission.

Fieldwork for the survey was conducted between the 26th of May and the 31st of August 2020. In total, 500 raw responses were received. After filtering out double responses for the same participant¹⁰, dubious responses and incomplete responses¹¹, 150 final responses were retained. Some of the characteristics of the sample are outlined in more detail below:

- The largest shares of respondents operated in Germany (40%), the UK (40%) and/or France (33%). This was closely followed by Belgium (31%), Italy (30%) and the Netherlands (30%).¹²
- The largest share (49%) of respondents noted the "other" category as relevant for their company, although several mentioned cosmetics and healthcare, food sector, electrical components and home decor as products they sold. Around 35% sold toys or games for children, 27% sold domestic electrical appliance, 23% sold clothing and footwear and 19% sold communication devices.

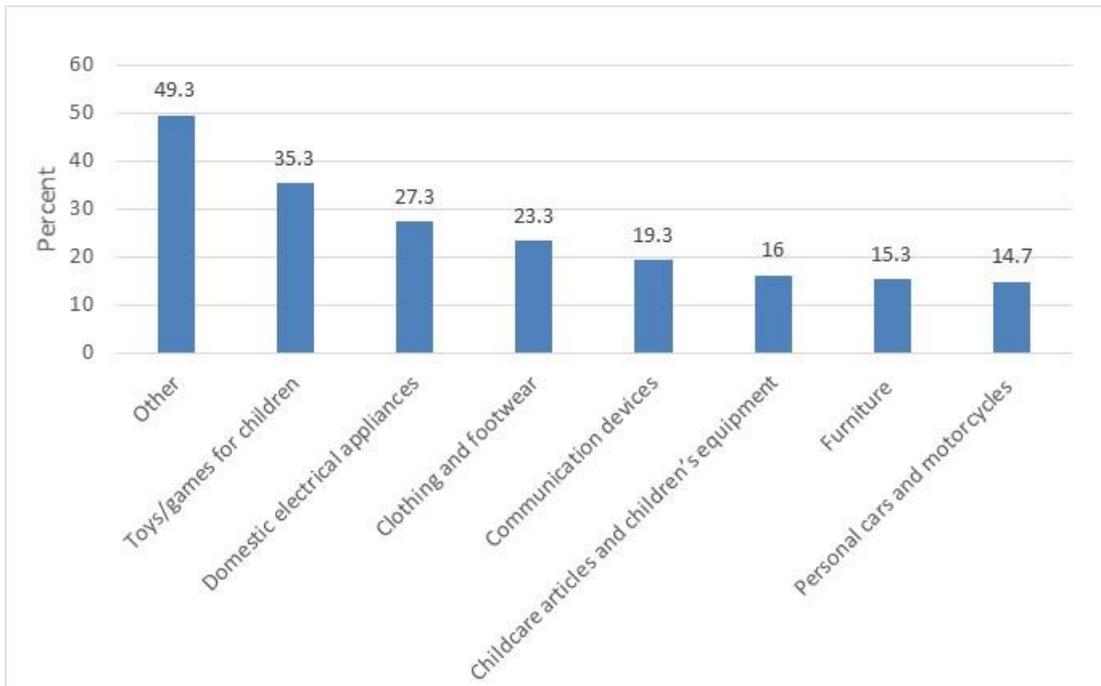
⁹ Belgium, Bulgaria, Croatia, Czechia, Denmark, Germany, Ireland, Latvia, Portugal and Spain

¹⁰ Double entries were identified by sorting raw responses by IP address. If multiple responses were received on the same IP address, only the most recent response was retained.

¹¹ Responses were incomplete if they did not complete all screening questions or the first question in Part 1 of the survey (Q6: Do you offer your customers the possibility to register their products?).

¹² Multiple answers were possible to allow for multinational operators. As such, percentages sum to more than 100%.

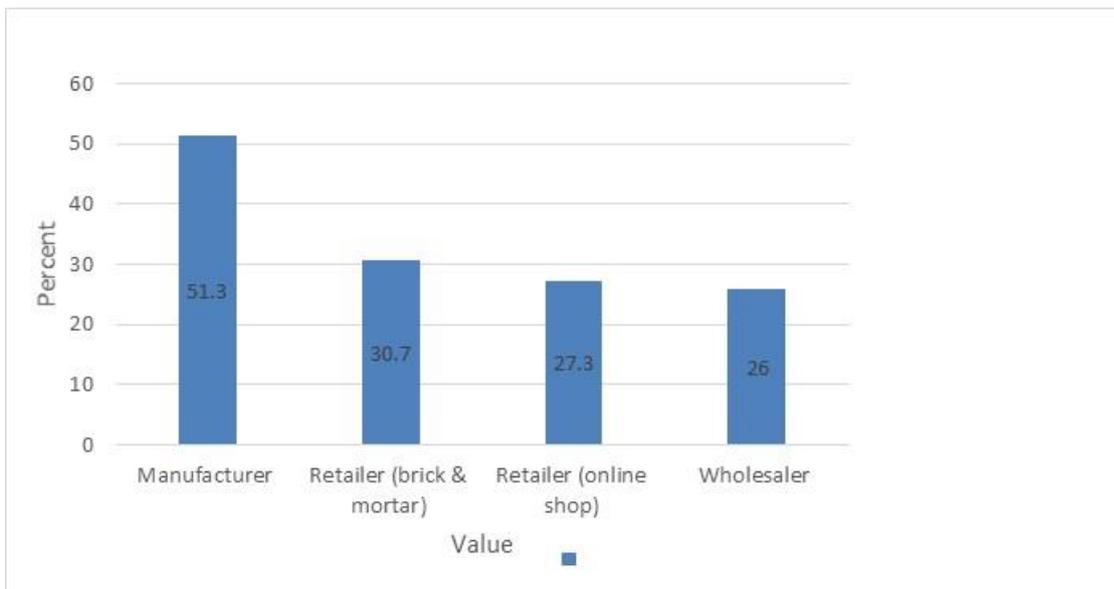
Figure 1: Products sold by respondents



Note: multiple were possible. As such, percentages sum to more than 100%. N = 150.
Source: Industry survey

- The majority of stakeholders that participated in the survey represented manufacturers (51%), followed by brick & mortar retailers (31%) and online shops (27%). The wholesalers were the least represented (26%) among survey participants. Several respondents indicated that they represent more than one stakeholder type. There were 21 stakeholders that were only retailers (brick & mortar), 19 that were only online retailers and 16 that were only wholesalers.

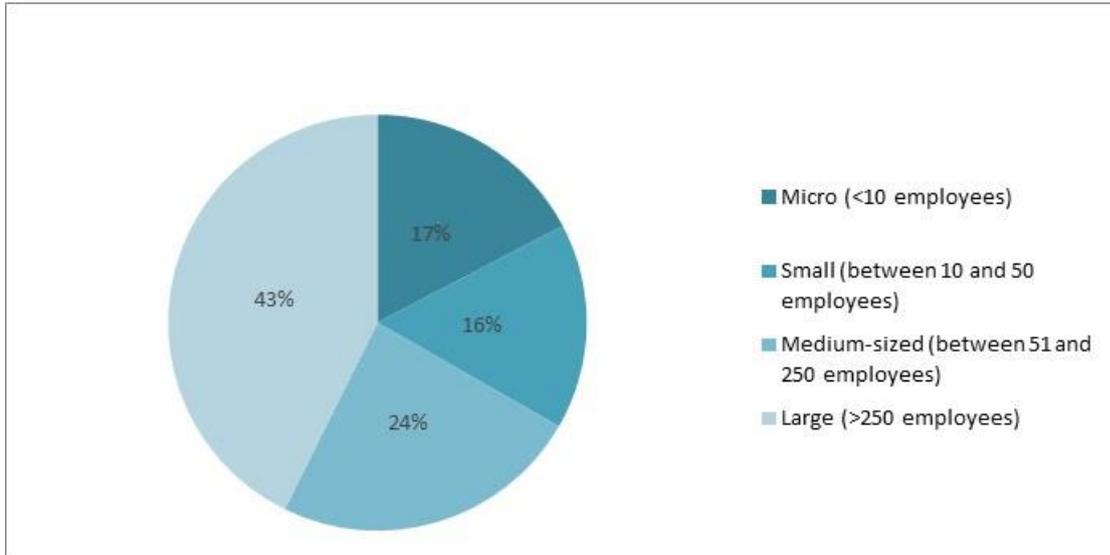
Figure 2: Stakeholder type



Note: multiple were possible. As such, percentages sum to more than 100%. N = 150.
Source: Industry survey

- 43% of respondents represented large companies (over 250 employees), 24% represented medium-sized companies (51-250 employees), 16% represented small companies (10-50 employees) and 17% represented micro-organisations (fewer than 10 employees).

Figure 3: Company size



N = 150.

Source: Industry survey

Annex 7 provides the questions included in the survey. Annex 12 provides the results of closed questions in the survey.

A1.4 Consumer focus groups

The focus groups (FGs) covered four countries: Bulgaria, Germany, Ireland and Portugal. In total, eight FGs were conducted, two in each country. In all countries, one FG was conducted with people of a high educational level, and one with participants of a lower educational level. In each group, the aim was to include a balanced mix of men and women, aged 25 to 60 years old (this age range was set in order to ensure that the age gap between participants was not too wide, bearing in mind the need to maximise communication and participation). For the low education FGs, recruitment focused on vulnerable consumers. Consumers could be considered vulnerable because they were unemployed, because they had a low level of education, or because they did not purchase products online. All participants were recruited using free-find recruitment techniques, by experienced recruiters for group discussions. Participants received an incentive for participation. The table below provides an overview of the FG participants per country, their education group, gender and age.

Table 3: Profile of focus group participants

Country	Education group		Gender		Age		
	Low	High	F	M	25-35	36-50	51-60
BG	4	5	4	5	3	4	2
DE	5	5	5	5	3	3	4
IE	4	7	5	6	4	5	2
PT	5	5	5	5	4	3	3

Source: Focus groups

The FGs took place online, using a webcam. The participants connected using the online meeting platforms Adobe Connect (Bulgaria and Portugal) or Zoom (Germany and Ireland), both of which allow for video and audio interaction to engage participants in the discussions. In light of the COVID-19 outbreak, it was not possible to conduct face-to-face groups in the four countries during the first weeks of May. Focus group discussion via webcam are very similar to face-to-face discussions. They lend themselves to the same topics and we can build a similar group dynamic as in face-to-face groups. An advantage of online focus groups is the possibility to, more easily, include people from a range of

geographies, not being limited to participants living in larger cities (where face-to-face group discussion facilities tend to be located). Of course, online focus groups also have some limitations. For example, the options for providing stimuli, such as showing actual product samples, are more limited compared to face-to-face focus groups. However, this had no impact on the focus groups for the current study, where speech bubbles, product registration messages and example recall notices were used as visual stimuli to guide the discussion. The stimuli were designed in Microsoft PowerPoint and could easily be shown to participants via the platform.

Building rapport with the participants can be more challenging online compared to face-to-face, and not everyone is as comfortable appearing on camera. However, no such challenges were reported by the moderators for the focus groups conducted in the context of this study. Moreover, the potential drawbacks are at least partly offset by advantages in other areas. For example, many online focus group participants have noted to Ipsos moderators that they speak more freely in the secure environment of their home.

Moderation and discussion guide

In order to obtain detailed information on each topic, but avoid respondent fatigue at the same time, each group discussion lasted around 90 minutes. All FGs were moderated by a senior qualitative researcher, one in each country, employed by Ipsos. Moderators were mother-tongue speakers and highly experienced in conducting group discussions (via webcam). All sessions were conducted in the national language of the respective country.

All groups were structured around a discussion guide. The purpose of this guide was to ensure commonality between the groups while at the same time providing enough flexibility for the moderator to follow up on interesting or unexpected issues raised by participants. The guide is available in Annex 8.

Annex 2 Methodology of the consumer survey and experiments

A2.1 Design of the consumer survey

The aim of the consumer survey was to investigate consumers' attitudes and awareness with respect to product recalls as well as their experience with product registration and recalls. Additionally, behavioural drivers and barriers as well as cognitive factors that may explain consumers' behaviour in the experiment were explored.

The following aspects summarise the different sections of the consumer survey:

- 1) **Awareness, perception and attitudes regarding product safety:** Consumers were asked about their perception of products being safe and whether product safety was a relevant aspect for purchasing decisions compared to other purchase-relevant attributes. Furthermore, their trust level in different institutions potentially communicating a recall were elicited.
- 2) **Experience with product registration:** Consumers were asked to indicate whether they registered a product they own (real scenario) or, in case they did not own a product, whether they would register it (hypothetical scenario). Thereafter, they had to indicate the reasons for their actual / anticipated behaviour.
- 3) **Experience with product recalls:** Firstly, survey participants had to indicate whether they have been affected by a recall in the past. Depending on their reply, they were assigned either to a real scenario – where they reported their actual behaviour in response to a recall – or to a hypothetical scenario – where they were asked about the anticipated behaviour. Thereafter, participants indicated the reasons for their actual / anticipated behaviour. Furthermore, the overall likelihood of reacting to a recall was elicited over different product types.
- 4) **Behavioural drivers and barriers:** These questions served the purpose to enhance and explain results on the behaviour measured in the experiment. Therefore, several questions were asked on trust, commitment, present bias and norm conformity.
- 5) **Further attributes:** These questions similarly serve the purpose of enhancing results of the experiment behaviour. Questions included digital literacy as well as cognitive abilities.
- 6) **Socio-demographic aspects:** Lastly, socio-demographic attributes such as age, gender, education and financial status were elicited.

The complete consumer survey instrument can be found in Annex 9. Overall, 10,013 participants completed the survey. The survey used the same sample as the behavioural experiment described below.

A2.2 Design of the behavioural experiments

Two behavioural experiments were conducted in support of the report: a product recall and product registration experiment. The recall experiment looked at consumer behaviour when faced with a product recall notification. The registration experiments looked at consumer behaviour in relation to product registration for the purpose enabling an efficient recall procedure if necessary. All respondents completed both experiments, in a randomly assigned order, and received an incentive payment for completing the experiments based on their behaviour in the experiments. The experiments were carefully designed to ensure that participating in a recall or registering a product was **not** the default option, mimicking real life.

This section briefly describes the main elements of the two experiments below. Detailed scripting instructions for the experiments are included in Annex 10. The experiments preceded the consumer survey in order to avoid a bias in measuring experiment behaviour.

A2.2.1 Recall experiment

The recall experiment contained four separate stages:

- a **pre-experiment stage**;
- a background task stage (**stage 1**);
- a recall notification stage (**stage 2**); and,
- a recall response stage (**stage 3**).

In the **pre-experiment stage**, respondents were given instructions about the task ahead and incentives. Respondents were given an endowment of three products, to be treated as if they owned them, and were instructed to answer questions about these products. Furthermore, respondents were told that they would receive 'benefits' from owning the products in their endowment at the end of the experiment, but only if they were in good shape. Respondents could earn additional rewards in the experiment, based on their actions.

In **stage 1**, respondents were given a set of five questions about their endowment. They were rewarded for each question answered correctly. The questions – unrelated to product recall or safety – served as a distraction task, mimicking the fact that people's attention is not on product safety or product recalls while going about their normal lives. During the tasks, respondents were prompted with a recall notification message. Depending on the treatment (see below), respondents either received a direct notification of recall or a generic recall notification.

Respondents who received a direct notification, received an e-mail notification stating a recall notification had been issued for one of the products in their endowment. Respondents who received a generic notification, saw a banner ad in the distraction task showing a generic call for action for a product. Both are shown in the figure below. If respondents clicked either on the e-mail notification or the banner, they moved to stage 2.

Figure 4: Recall notifications in stage 1

a) Direct notification

In the next task, we ask you to answer some questions about the products you own. Remember that can earn points by providing the correct answer.

Products you own

Hatchback	Sweater	Washing machine
Find out more	Find out more	Find out more

Which of the products you own did you purchase most recently?

- Hatchback
- Sweater
- Washing machine

Which of the products you own has electronic parts?
(Note: there are two possible correct answers, choose one)

- Hatchback
- Sweater
- Washing machine

Which of the following products you own is the most expensive?

- Hatchback
- Sweater
- Washing machine



YOU RECEIVED AN EMAIL

From: product-recall@waterfall.eu

Subject: PRODUCT RECALL: Your Waterfall 4 Washing Machine

Click to open

✕

b) Generic notification

In the next task, we ask you to answer some questions about the products you own. Remember that can earn points by providing the correct answer.

Products you own

Washing machine <input type="button" value="Find out more"/>	Sweater <input type="button" value="Find out more"/>	Toy <input type="button" value="Find out more"/>
---	---	---

Which of the products you own did you purchase most recently?

- Washing machine
- Sweater
- Toy

PRODUCT RECALL *Waterfall 4 Washing Machine*

Click for more information



Which of the products you own has electronic parts?

- Washing machine
- Sweater
- Toy

Which of the following products you own is the most expensive?

- Washing machine

Source: Recall experiment

In **stage 2**, respondents were shown the full recall notification. This recall notification was framed as an e-mail to the respondents for respondents given a direct notification. This framing was not applied for respondents receiving generic notifications. The content of the notification was the same across both channels. Respondents needed to confirm that they wanted to learn more about the recall. If they did so, they moved to stage 3.

In **stage 3**, respondents decided how to act on the recall notification. They could either start to return, start to dispose of, or keep the product. If respondents chose to start the return or disposal of the product, they needed to further complete the procedure. The experiment ended after stage 3.

Incentives

Two components of the recall experiment were incentivised. Firstly, the questions included in stage 1 had unambiguously correct answers, and for each correct answer respondents received a reward. This reward ensured that respondents focused on the questions, and therefore that the distraction task was appropriately distracting.

Secondly, respondents could receive a reward based on whether they returned, dispose of or kept the recalled product by the end of the experiment¹³:

- If respondents **returned** the product, they received a reward, mimicking that in real life people may be entitled to replacements or reimbursements which similarly reward people for taking part in recalls.
- If respondents **disposed** of the product, they received neither a reward nor a punishment, as they can no longer 'use' the product.
- If respondents **kept** the product, they lost their reward with a certain probability¹⁴, mimicking that in real life harm caused by faulty products is probabilistic; faulty products may not cause harm with certainty.

¹³ Note that all respondents who dropped out of the experiment at any stage before the decision to return, dispose or keep the product, automatically kept the product.

¹⁴ Between 3% and 5%, depending on the product.

Outcome measures

The main outcome measures of the product recall experiment were:

- whether respondents either clicked on the banner add or the e-mail notification of the product recall campaign in stage 1¹⁵;
- whether respondents subsequently wanted to learn more about the recall notification in stage 2, provided they engaged with it first; and,
- whether respondents completed the return task, provided they started it.

Treatments

The table provides an overview of the treatments applied in the recall experiment. Each respondent was subjected to exactly one variant for each treatment listed below.

Table 4: Treatments of the recall experiment

Treatment	Description	
Channel of notification		
Direct notification	Recall notification provided via a direct e-mail from the manufacturer.	See Figure 4a) and Figure 5a)
Generic notification	Recall notification provided as a generic ad campaign, through banner ads.	See Figure 4b) and Figure 5b)
Messaging within the recall notification		
Voluntary recall	Recall notification headlined as "voluntary". Language around the severity of risk is mild, and laid out in a dense and complex way. No graphical elements used in the notification.	See Figure 6a)
Safety	As "Voluntary", but the notification is headlined as "Important safety announcement".	See Figure 6b)
Regular recall	Same as "Safety", but the notification is headlined as "Product Recall".	See Figure 6c)
Severe	Same as "Recall", but the language used to describe the risk is more severe and emphasises risk to the safety of one's family.	See Figure 6d)
Simple	Same as "Severe", but the information is laid out in a simple and intuitive paragraph structure.	See Figure 6e)
Image	Same as "Simple", but an image of the recalled product is included in the notification.	See Figure 6f)
Border	Same as "Image", but the notification the notification includes a striking red border and a hazard sign.	See Figure 6g)

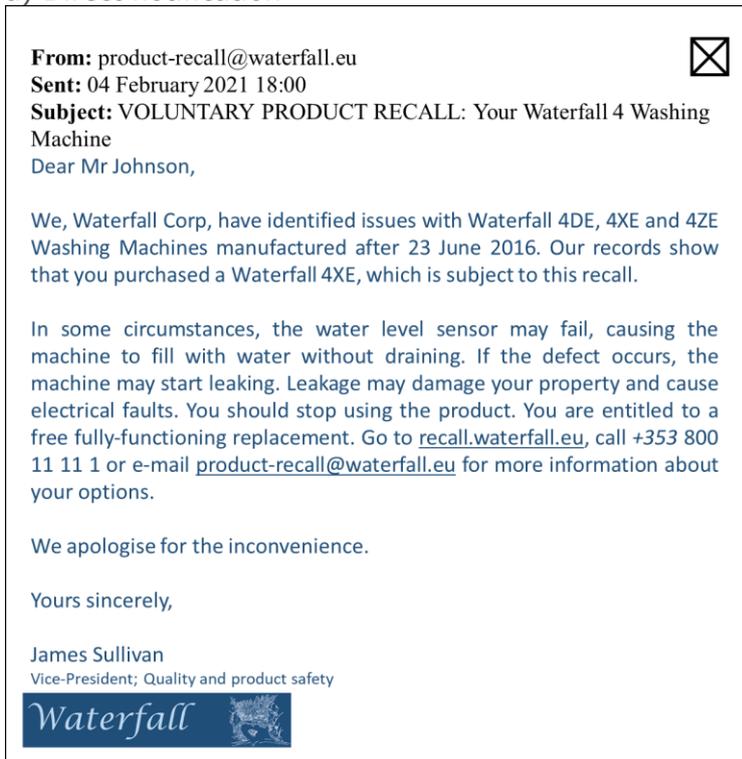
¹⁵ This is referred to in the report as "engagement with the recall notification in stage 1".

Treatment	Description	
Emotion	Same as "Border", but an appeal to social norms and emotions was added ('Most people in your situation return dangerous products to protect their loved ones.').	See Figure 6h)
Effort required to complete the return task		
Low	Information needed to complete the return procedure is pre-filled, and respondents only need to submit the form.	See Figure 7a)
Medium	Same as "low effort", except that information is not pre-filled and the respondent needs to find the information by clicking on a product information button.	See Figure 7b)
High	Same as "medium effort", plus the fact that the respondent needs to schedule a return time on a separate screen.	See Figure 7c) and Figure 7d)

Source: LE Europe

Figure 5: Recall notifications in stage 2

a) Direct notification



b) Generic notification

Products you own

Fleece sweater	Office chair	Washing machine
Find out more	Find out more	Find out more

Product Recall

Waterfall recalls the following items
 Waterfall 4DE washing machine
 Waterfall 4XE washing machine
 Waterfall 4ZX washing machine
 Sold between February 2019 and December 2019

In some circumstances, the water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine may start leaking. Leakage may damage your property and cause electrical faults. You should stop using the product. You are entitled to a free fully-functioning replacement. Go to recall.waterfall.eu, call +353 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

Click to learn more

Close this message

Source: Recall experiment

Figure 6: Messaging in the recall notification

a) Voluntary recall

Voluntary Product Recall

Waterfall recalls the following items
 Waterfall 4DE washing machine
 Waterfall 4XE washing machine
 Waterfall 4ZX washing machine
 Sold between February 2019 and December 2019

In some circumstances, the water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine may start leaking. Leakage may damage your property and cause electrical faults. You should stop using the product. You are entitled to a free fully-functioning replacement. Go to recall.waterfall.eu, call +353 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

b) Safety

Important Safety Announcement

Waterfall recalls the following items
 Waterfall 4DE washing machine
 Waterfall 4XE washing machine
 Waterfall 4ZX washing machine
 Sold between February 2019 and December 2019

In some circumstances, the water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine may start leaking. Leakage may damage your property and cause electrical faults. You should stop using the product. You are entitled to a free fully-functioning replacement. Go to recall.waterfall.eu, call +353 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

c) Regular recall

Product Recall

Waterfall recalls the following items
 Waterfall 4DE washing machine
 Waterfall 4XE washing machine
 Waterfall 4ZX washing machine
 Sold between February 2019 and December 2019

In some circumstances, the water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine may start leaking. Leakage may damage your property and cause electrical faults. You should stop using the product. You are entitled to a free fully-functioning replacement. Go to recall.waterfall.eu, call +353 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

d) Severe

Product Recall

Waterfall recalls the following items
 Waterfall 4DE washing machine
 Waterfall 4XE washing machine
 Waterfall 4ZX washing machine
 Sold between February 2019 and December 2019

The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property, and cause flooding and dangerous electrical faults leading to electrocution. You should immediately stop using the product. You are entitled to a free fully-functioning replacement. Go to recall.waterfall.eu, call +353 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

e) Simple

Product Recall

Waterfall recalls the following items
 Waterfall 4DE washing machine
 Waterfall 4XE washing machine
 Waterfall 4ZX washing machine
 Sold between February 2019 and December 2019

Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property, and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +353 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

f) Image

Product Recall

Waterfall recalls the following items
 Waterfall 4DE washing machine
 Waterfall 4XE washing machine
 Waterfall 4ZX washing machine
 Sold between February 2019 and December 2019



Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property, and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +353 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

g) Border



Product Recall

Waterfall recalls the following items
 Waterfall 4DE washing machine
 Waterfall 4XE washing machine
 Waterfall 4ZX washing machine
 Sold between February 2019 and December 2019



Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property, and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +353 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

H) Emotion



Product Recall

Waterfall recalls the following items
 Waterfall 4DE washing machine
 Waterfall 4XE washing machine
 Waterfall 4ZX washing machine
 Sold between February 2019 and December 2019



Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property, and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +353 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

Most people in your situation return dangerous products to protect their loved ones

Source: Recall experiment

Figure 7: Effort to return

a) Low

**I do not want to return my product anymore
Skip to next task**

Product return form

Please provide the information below

Brand of the product

Model

Product code

Submit

Click the buttons below to find more information about your product

Product manual

b) Medium

**I do not want to return my product anymore
Skip to next task**

Product return form

Please provide the information below

Brand of the product

Model

Product code

Submit

Click the buttons below to find more information about your product

Product manual

c) High – Screen 1

I do not want to return my product anymore
Skip to next task

Product return form

Please provide the information below

Brand of the product

Model

Product code

Click the buttons below to find more information about your product

Product manual

Schedule appointment

d) High – Screen 2

I do not want to return my product anymore
Skip to next task

Product return form

To schedule your appointment, please indicate your preferred date and time of appointment.

Preferred date

- Please select -

Preferred time slot

- Please select -

Country of residence

- Please select -

Submit

Source: Recall experiment

A2.2.2 Registration experiment

As in the recall experiment, the registration experiment contained four stages:

- a pre-experiment stage;
- a Point-of-Sale stage;
- a post-purchase stage; and,
- a registration stage.

As in the recall experiment, the pre-experiment stage provided instructions to the respondents, as well as information on incentives. They were told that they had to choose to 'buy' a product of a particular type¹⁶, with two options being available. and that they had the answer questions about their choice afterwards. Respondents were told they could earn a reward in the experiment based on their behaviour, in particular based on whether they 'owned' a product in good working order by the end of the experiment.

¹⁶ Mid-market smart phone, children's high chair or toaster.

Following the pre-experiment stage, the respondents entered the **point-of-sale (PoS) stage**. Respondents were asked to purchase a product in an environment mimicking an e-Commerce environment. One-third of respondents received a prompt to register their chosen product in the PoS stage. If these respondents decided to register the product, they moved to the registration stage (see below). If they ignored the prompt to register, or following the registration phase, these respondents moved to the post-purchase stage. The other two-thirds of respondents did not receive a prompt to register and moved to the post-purchase stage after choosing their product.

In the **post-purchase stage**, respondents were asked to answer questions about the product they chose in the PoS stage. Each question had an objectively correct answer and respondents were rewarded for each question answered correctly. These questions were designed as a distraction, related to the chosen product but not to product registration, mimicking the fact that people tend not to think of product registration in real life after the purchase of a product. For respondents receiving a prompt to register in the PoS stage, completing these questions ended the experiment.

Respondents who did *not* receive a prompt at the PoS stage, received a prompt at the post-purchase stage. This prompt could either be given as a prompt to register with product packaging or as a general banner ad. If respondents ignored the prompt and completed the questions, the experiment ended. If respondents did decide to register the product, they moved to the registration stage.

In the **registration stage**, respondents were asked to complete a product registration form. Respondents could quit the task before completing registration. For respondents directed to this stage from the post-purchase stage, the registration stage concluded the experiment. For respondents directed from the PoS stage, the registration stage was followed by the post-purchase stage.

Incentives

As in the recall experiment, the registration experiment incentivised two components. Firstly, the choice of product in the PoS stage and the questions in the post-purchase stage were incentivised. Both the product choice and questions had unambiguously correct options or answers. Respondents were rewarded for answering correctly. As in the recall experiment, the incentives ensured that the distraction task was appropriately distracting.

Secondly, respondents could avoid losing points by registering their product. For all respondents, it was randomly determined whether their product received a negative shock. This negative shock simulates the development of a fault at some point in the future which may be subject to a recall. Depending on respondents' decisions, the incentive payments were as follows:

- If the product was **not** subject to a shock, respondents received an additional reward;
- If the product was subject to a shock, there were two possible scenarios:
 - If respondents did register the product, respondents received the same reward;
 - If they did not register the product¹⁷, respondents earned the reward minus a negative shock penalty¹⁸.

The rationale behind this scheme is that product registration may improve the effectiveness of product recall procedures, and therefore may alleviate some harm caused by faulty products.

¹⁷ This includes respondents who did not enter the registration stage, or who did not complete the registration.

¹⁸ Note that the negative shock penalty never exceeded the additional reward. As such, respondents could not lose points during the experiment.

Outcome measures

The main outcomes of the product registration experiment were:

- whether respondents started the product registration procedure; and,
- whether respondents completed the registration procedure, provided they started it.

Treatments

The table below provides an overview of the treatments applied in the registration experiment. As in the recall experiment, each respondent was subjected to exactly one variant for each treatment listed below.

Table 5: Treatments of the registration experiment

Treatment	Description	
Timing of the prompt to register		
Point-of-Sale	Prompt to register provided at the point of purchase.	See Figure 8a)
With package	Prompt to register provided with packaging of the product during the post-purchase stage. This was operationalised as a pop-up on the screen showing a list of content included in the packaging of the purchased product. This list of content also included the prompt to register.	See Figure 8b)
General prompt	Prompt to register products during the post-purchase stage provided as a generic banner ad, mimicking general awareness campaigns on websites.	See Figure 8c)
Content of the prompt to register		
Baseline	Generic prompt to register coming from the manufacturer of the product. The language does not include any information on product safety.	See Figure 9a)
Safety	Same as "Baseline", but the prompt explicitly links product registration with product safety.	See Figure 9b)
No marketing	Same as "Safety", but assurances are added that information is not used for marketing purposes following EU personal data regulation.	See Figure 9c)
Public authority	Same as "No marketing", but the prompt to register originates from a public authority rather than the manufacturer.	See Figure 9d)
Warranty	Same as "Public authority", but an additional incentive to register is provided in the form of registration activating extended warranty.	See Figure 9e)

Treatment	Description	
Strong	Same as "Warranty", but stronger language is used to describe product risk.	See Figure 9f)
Effort required to complete the registration task		
Low	Information needed to complete registration is pre-filled, and respondents only need to submit the information.	See Figure 10a)
Medium	Same as "low effort", except that information is not pre-filled and the respondent needs to find the information by clicking on a product information button.	See Figure 10b)
High	Same as "medium effort", except that more information is required and the respondent needs to click on two product information buttons to find the information.	See Figure 10c)

Source: LE Europe

Figure 8: Timing of the prompt to register

a) Point-of-Sale

WarehouseShop [My basket](#) | [My account](#) | [Log out](#)

Congratulations! **You selected a: Odyssey X20 Smart Phone**



€366

Screen: 6.5" Full HD Touchscreen

Camera: 12MP (back)/5MP (front)

Storage: 32GB

Battery: 4000 mAh

CLICK HERE TO PROCEED TO CHECKOUT

Please register your product; Odyssey would like to let you know about exclusive offers!

CLICK HERE TO PROCEED TO CHECKOUT AND REGISTRATION

b) With package

In the next task, we ask you to answer some questions about the product you just chose as if answering an online quiz. Remember that you can earn points by providing the correct answer.

c) General prompt

In the next task, we ask you to answer some questions about the product you just chose as if answering an online quiz. Remember that you can earn points by providing the correct answer.

Source: Registration experiment

Figure 9: Content of the prompt to register

a) Baseline

Please register your product; Odyssey would like to let you know about exclusive offers!

b) Safety

Please register your product so that Odyssey can contact you if your product presents a safety risk or other defect.

c) No marketing

Please register your product so that Odyssey can contact you if your product presents a safety risk or other defect.

Following EU data privacy regulations, the personal information you provide for this purpose cannot be used for marketing purposes.

e) Warranty

The Product Safety Authority recommends that you register your product so that Odyssey can contact you if your product presents a safety risk or other defect.

Registering your product activates your extended warranty- don't miss out!

Following EU data privacy regulations, the personal information you provide for this purpose cannot be used for marketing purposes

d) Public authority

The Product Safety Authority recommends that you register your product so that Odyssey can contact you if your product presents a safety risk or other defect.

Following EU data privacy regulations, the personal information you provide for this purpose cannot be used for marketing purposes.

f) Strong

The Product Safety Authority recommends that you register your product so that Odyssey can contact you if your product presents a safety risk or other defect.

Registering your product activates your extended warranty – don't miss out!

Following EU data privacy regulations, the personal information you provide for this purpose cannot be used for marketing purposes.

Register your product to help protect yourself and your loved ones.

Source: Registration experiment

Figure 10: Effort to register

a) Low

I do not want to register my product anymore. Skip to next task.

Odyssey registration form

Please provide the information below

Brand of the product

Model

Product code

Submit

Click the buttons below to find more information about your product

PRODUCT INFORMATION

b) Medium

I do not want to register my product anymore. Skip to next task.

Odyssey registration form

Please provide the information below

Brand of the product

Model

Product code

Submit

Click the buttons below to find more information about your product

PRODUCT INFORMATION

c) High

I do not want to register my product anymore. Skip to next task.

Odyssey registration form

Please provide the information below

Brand of the product

Model

Product code

Date of purchase

Retailer/Seller

Submit

Click the buttons below to find more information about your product

PRODUCT INFORMATION

PAYMENT INFORMATION

Source: Registration experiment

A2.2.3 Lab experiments

In addition to the online experiment, lab experiments were carried out in Germany and Bulgaria, with 120 respondents in each country. The lab experiments, followed by follow-up 30-minute focus groups, were designed to obtain qualitative information from more vulnerable consumers in relation to product recalls, as previously identified by the European Commission. This provided a richer understanding of the impact of changes to recall notification and prompts to register on those most at risk of harm.

The lab experiments followed the same structure as the online experiments outlined above. However, owing to smaller sample sizes, fewer treatments were included in the lab experiments.

The table below provides an overview of the treatments applied in the lab experiments.

Table 6: Treatments in the lab experiments

a) Recall experiment

Treatment	Description	
Channel of notification		
Direct notification	Recall notification provided via a direct e-mail from the manufacturer.	See Figure 4a) and Figure 5a)
Generic notification	Recall notification provided as a generic ad campaign, through banner ads.	See Figure 4b) and Figure 5b)

b) Registration experiment

Treatment	Description	
Timing of the prompt to register		
Point-of-Sale	Prompt to register provided at the point of purchase.	See Figure 8a)
General prompt	Prompt to register products during the post-purchase stage provided as a generic banner ad, mimicking general awareness campaigns on websites.	See Figure 8c)

Source: LE Europe

The layout, graphical elements and the content of both recall notifications and prompts to register were already included in the focus group discussion of the preparatory tasks. Therefore, they were excluded from the lab experiments. Furthermore, the lab experiments focused on channel of recall notifications and timings of registration prompts as this was perceived to be more policy relevant. As a consequence, the lab experiment also did not include effort to recall or register.

A2.3 Implementation of the consumer survey and behavioural experiments

A2.3.1 Online survey and experiments

A pilot study of the survey and experiments was conducted in Ireland¹⁹ between 13 and 18 August 2020 with 200 respondents. The pilot was designed to investigate if respondents had any difficulties with the experiment tasks or with answering the survey questions. Following the pilot, a limited number of changes were implemented to improve the experiment tasks and survey questionnaire for the main stage.

In total, 10,013 respondents completed the online experiment and survey between 24 September and 7 October 2020. Respondents in each country were randomly drawn from online panels based on available profile data (age, gender and geographic region) and pre-defined sub-sample sizes (i.e. quota) based on official population statistics published by Eurostat (2020).

¹⁹ The pilot was conducted in Ireland since the master version of the survey and experiments were developed in English.

Respondents completed the experiments in their native language. The survey and experiments were translated in the local language(s) of each country by the consortium. Euro values of prices used in the experiments were converted to local currencies, where relevant.

Table 7: Sample composition per country: unweighted gender and age distribution

Country	Number of completes	Gender distribution (% unweighted)		Age distribution (% unweighted)				
		Men	Women	18-29y	30-39y	40-49y	50-59y	60+y
BE	1003	49%	51%	15%	15%	18%	19%	33%
BG	1000	48%	52%	13%	25%	22%	21%	19%
HR	1001	49%	51%	18%	21%	20%	16%	25%
CZ	1000	50%	50%	16%	16%	19%	15%	33%
DE	1000	49%	52%	14%	18%	15%	20%	33%
IE	1000	51%	50%	16%	20%	22%	17%	26%
DK	1003	50%	50%	19%	13%	17%	17%	34%
LV	1003	37%	63%	12%	23%	22%	22%	20%
PT	1000	49%	52%	19%	17%	23%	20%	22%
ES	1003	50%	50%	14%	14%	21%	18%	33%

Source: Ipsos

“Flexible” quota were used in the sampling, meaning that some leeway was granted to achieve the target number of interviews in each sub-sample group. Any imbalance in the representativeness of the data due to the use of flexible quota was managed using post-stratification weights. Two types of weights are produced for this study: country weights and cross-national weights.

- **Country weights** adjust for gender and age distributions in each country such that the weighted data matches the Eurostat statistics (2020) population data. These weights are applied when analysing the data at individual country level.²⁰
- **Cross-national weights** adjust for country population size. These weights are applied when analysing the data across multiple countries.

Data obtained in the lab experiment was not included in the weighting procedure. As such, quantitative analysis of the survey and experiments does not include data from the lab experiments.

A2.3.2 Lab experiments

Lab sessions were organised in Bulgaria and Germany. In each country, sampling and recruitment was undertaken to complete the lab sessions with 80 vulnerable consumers with the following characteristics:

- 20 lower educated participants;
- 20 economically inactive participants (younger than 65);
- 20 consumers who do not purchase products online;

²⁰ These weights are generated using the iterative proportional fitting command `ipfweight` in Stata software package. `ipfweight` is based on the iterative proportional fitting algorithm (also known as raking) first proposed by Deming and Stephan in 1940. It performs a stepwise adjustment of weights to achieve known population margins (gender and age); the adjustment process is repeated until the difference between the known population margins and the weighted margins of the variables gender and age is minimised.

- 20 consumers in a difficult financial situation (finding it hard to keep up with bills and credit commitments).

To ensure comparability with the general population, a further 40 participants who represent the general public were also recruited. Participants for the lab experiments were recruited using free-find recruitment techniques. This approach helps ensure that we only access those fresh to the research process and so offers one of the most robust forms of qualitative recruitment.

The lab experiments were conducted face-to-face. Due to the COVID-19 outbreak, groups were organised under special hygiene regulations (plexiglass partitions, safety distance, mouth/nose protection, disinfection etc.). Moreover, in Germany, due to the COVID-19 outbreak, the average group size was reduced from 10 to 5 participants.

In Germany, in total, 24 sessions were organised between 1 and 6 October 2020. In Bulgaria, lab experiments were conducted with – on average – 10 participants per group. The first 12 sessions were organised between 24 September and 6 October, and a number of additional sessions with newly recruited participants were organised on 7 and 8 October 2020.

The table below present the final number of participants by target group.

Table 8: Number of participants in the lab sessions

Group	Number of participants	
	Bulgaria	Germany
Lower-educated group	20	19
Inactive (<65 year-of-age)	20	18
Low-income group	20	20
Consumers who do not shop online	20	20
General public	40	41

Source: Ipsos

During the lab sessions, participants first completed the online behavioural experiment individually, followed by a 30-minute group discussion based on a number of follow-up questions (see Annex 11). All but six of the participants in the lab sessions managed to complete the experiment tasks and survey questions within the foreseen time (30 minutes); six participants completed all experiment tasks, but were not able to respond to all survey questions.

Annex 3 Economic assessment of products remaining in consumers' hands

A3.1 Introduction

One of the objectives of the study was to estimate, in monetary terms, potential EU-wide cost savings due to increased effectiveness of recall campaigns. The first step to achieve this objective was to calculate the societal cost, due to injuries, caused by products subject to a recall but not returned or disposed of. The second step was then to estimate cost savings generated by improved effectiveness of recall campaigns. The behavioural experiments (described in Annex 2) found that one remedy improved the effectiveness of recall campaigns: the use of a direct channel of communication for recall notifications. As a consequence, the economic assessment focused on this remedy.

The remainder of this section is structured as follows:

- Section A3.2 discusses the methodology for estimating the EU-wide costs of recalled products remaining in consumers' hands;
- Section A3.3 presents the estimates of the EU-wide costs of recalled products remaining in consumers' hands;
- Section A3.4 discusses the methodology for estimating the economic impact of increased recall effectiveness;
- Section A3.5 presents the estimates of the economic impact of increased recall effectiveness; and,
- Annex A3.6 discusses data limitations
- Annex A3.7 provides additional details on the category matching between the study categorisation, the Safety Gate, the U.S. CPSC dataset, and the IDB-FDS data base.

A3.2 Methodology of the EU-wide costs of recalled products remaining in consumers' hands

The EU-wide cost of recalled products remaining in consumers' hands is understood as the total societal cost due to the ineffectiveness of recall campaigns. The cost for consumers is calculated as the monetary value of incidents caused by products subject to a recall which the owner has not returned or dispose of.

In order to provide an overall cost estimate, the cost model uses two elements to assess the severity of the threat posed to consumers' safety:

- the number of recalled products remaining in consumer hands; and,
- the injury potential of these products and the related monetary cost.

This can be represented mathematically as follows:

$$\sum_{q=1}^m \sum_{p=1}^n \text{units sold}_p * \left(1 - \frac{\text{units returned or dispose}_p}{\text{units sold}_p}\right) * k_{pq} * \text{cost of accident}_q$$

i.e. the societal cost of the ineffectiveness of recall campaigns is given by a sum – over all products and types of accidents – of the costs of the injuries which those products might cause, multiplied by the probability (k_{pq}) that such injuries may occur.

However, considering the data availability limitations discussed in annex A3.6, the model is simplified to:

$$\sum_{p=1}^n (\text{average number of units sold}_p * \text{notifications}_p) * \left(1 - \frac{\text{units returned}_p}{\text{units sold}_p}\right) * k$$

* average cost of accident_p

Thus, the variables included in the cost model are:

- *average number of units sold_p*: for each product category (p), the average number of units available in the EU market was estimated for the year of analysis. It was necessary to use the average number of units sold instead of the actual figure since, in the Safety Gate database, the total number of units sold for each recalled product was not always available. This assumes that, on average, there is no difference (in sales) between those products for which the total number of products sold was or was not known. To estimate the overall number of units available in the market, the average units sold (per recall notification) was multiplied by the number of notifications (*notifications_p*) in a specific year for each product category.
- $\left(1 - \frac{\text{units returned}_p}{\text{units sold}_p}\right)$: this is the correction rate, a multiplication factor ranging between 0 and 1 which indicates the share of products subject to a recall that consumers return.²¹ Data are derived from the U.S. Consumer Product Safety Commission (CPSC) and our industry survey (for the automotive sector).
- *k*: a probability factor, ranging from 0 to 1, representing the probability that an injury materialises over the lifetime of the product remaining in consumers' hands. This probability is not known at individual product level, but – for the purposes of this study – estimates range between 0.01% and 1%. This is in line with the framework of risk assessment provided in the Guidelines for the management of the European Union Rapid Information System "Safety Gate/RAPEX".
- *cost of accident_p*: the average monetary cost of the injuries caused by the products in that specific product category. This is based on an analysis of the European Injury Data Base (IDB).²²

The sections below provide a detailed description of each of the components of the cost model.

Estimating the overall number of units sold for products that are subject to a recall

The main source of data for this analysis was the Safety Gate portal. This data includes notifications of products under recall (either compulsory or voluntary).

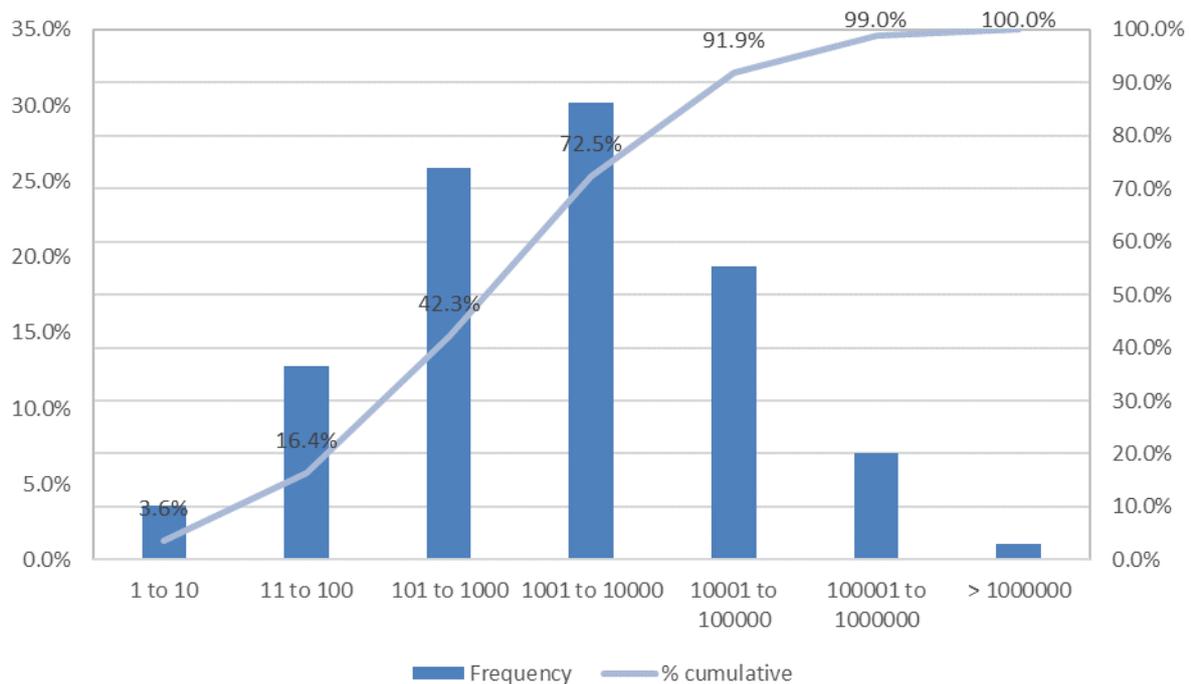
The Safety Gate dataset contains – for each recall notification – the country and the year of submission of the notification. Between January 2015 and January 2021 a total of 5,772 product notifications were reported. Safety Gate also collects data on the units sold for products under recall, but this information is only available for 60% of notifications. Specifically, the dataset provided figures on units sold for 3,442 products recalled since 2015. Excluding products sold in bulk (e.g. by the kilo) which cannot easily be expressed in "units" of a product, the average units sold per product in the cost model are based on 3,433 recall notifications.

The distribution of the number of units sold per notification is skewed; the median value is far lower than the average. The average number of units sold per recall campaign is over 54,000 units. However, only 27.5% of the recalls in the sample involved more than 10,000 units and 36 recall campaigns involved more than 1 million units sold. On the other hand, 16.4% of the recalls in the sample involved fewer than 100 units sold.

²¹ It does *not* include those that are just disposed of.

²² The European Injury Database (https://ec.europa.eu/health/indicators_data/idb_en) is a data source that contains standardised cross-national information on the external causes of injuries treated in emergency departments (EDs) in the EU. The database provides information on non-fatal unintentional injuries.

Figure 11: Number of products recalled per product recall in Safety Gate/RAPEX (2015-2019)



Source: Safety Gate

The cost model used average values per category and assumed that the number of units sold was equal to the category average, also for which information on units sold was not available. Based on the available information, it was not possible to assess the existence of selection bias, e.g. whether there were specific reasons why the number of units sold has not been reported for some products. To enable estimation of societal costs, it was assumed that no such selection bias is present, although there are reasons to believe that figures of **units sold in the Safety Gate dataset are underestimations**²³.

The table below presents the composition of the dataset by product category and the average and median values by each product category.

Table 9: Product categories in Safety Gate dataset (2015-2020)

Product category	Number of submissions with units sold	Average number of units ^[a]	Median number of units
Chemical products	21	3,264	300
Childcare articles and children's equipment	87	6,532	1,113
Clothing, textiles and fashion items	116	14,524	721
Communication and media equipment	24	63,072	3,050
Construction products	19	249,681	1,047
Cosmetics	48	17,549	1,215
Decorative articles	32	5,450	1,218
Electrical appliances and equipment	182	98,412	869
Furniture	7	6,673	117
Gadgets	2	1,620	1,620
Gas appliances and components	8	20,153	3,458
Hand tools	1	1,200	1,200

²³ When quantities are notified to RAPEX, the numbers might be incomplete and grow over time when follow-up reactions come in, hence these available figures are likely to be an underestimation. Source: Correspondence with administrators of the Safety Gate portal.

Product category	Number of submissions with units sold	Average number of units ^[a]	Median number of units
Hobby/sports equipment	61	9,919	1,653
Jewellery	32	2,232	199
Kitchen/cooking accessories	10	39,559	2,349
Laser pointers	1	50	50
Lighters	1	10	10
Lighting chains	29	3,536	126
Lighting equipment	62	3,048	469
Machinery	26	2,848	388
Measuring instruments	2	2,054	2,054
Motor vehicles	2,235	67,142	2,588
Other	37	26,546	920
Pressure equipment/vessels	3	471,834	15,482
Protective equipment	30	50,373	1,917
Recreational crafts	2	1,811	1,811
Stationery	2	34,876	34,876
Toys	353	8,553	752
Total	3,433	54,243	1,717

[a] Non-trimmed averages. In the data cleaning, some observations were checked and one data entry was amended.

Source: VVA analysis based on Safety Gate

Correction rates

Correction rates estimate how many of the products subject to a recall have been recalled successfully. Some data is available at the aggregate country level. 49% of products are returned on average in Australia, less than 10% on average in France, between 3% and 95% (depending on the product) in Switzerland and 100% in Costa Rica (OECD, 2018). Some data is available at the product level. Particularly, concerning toys, a study conducted by the American advocacy group Kids in Danger found only 10% of recalled toys were returned. According to the ACCC²⁴, between 0% and 20% were returned, and around 6% were returned according to a manufacturer interviewed during the study. Concerning motor vehicles, ACCC data registered return rates of up to 97%, while according to the US National Highway Traffic Safety Administration 2017 report, between 2010 and 2014, the average correction rate was 67%.

The industry survey also collected some data on the effectiveness of recall campaigns.²⁵ The information from the industry survey and the stakeholder engagement in general, regarding recall effectiveness was limited. Many stakeholders explained that the effectiveness of recall campaigns is rarely monitored by companies, as companies prefer to focus on communication with the customer rather than monitoring return rates. The latter largely depends on the individual's willingness to participate in a recall and is outside the control of companies.

For the purposes of this study, the data provided during the workshop held by the US CPSC in 2017 proved the most useful. The correction rates provided in Table 10 are based on 865 recall reports given by businesses to the authority at the completion of the recall campaigns conducted between 2013 and 2016 in the US. The return rates for "Personal

²⁴ <https://www.choice.com.au/shopping/consumer-rights-and-advice/your-rights/articles/product-recalls-and-safety>

²⁵ Respondents were asked to provide a share of products that the company had successfully retrieved at the end of a recall campaign. The question was "Could you estimate the percentage of products that your company has successfully retrieved from consumers following a product recall over the past 5 years?". In total, 15 participants provided a response, 7 were companies in the automotive sector.

cars and motorcycle” are given by responses to the industry survey (7) and is consistent with the average return rate reported in the US by the NHTSA²⁶.

Table 10: Share of units returned (2013 – 2016)

Product category	Rate
Personal cars and motorcycle	67.0%
Personal care	29.5%
Products at Public Facilities	23.0%
Sports & Recreation	20.8%
Yard & Garden	13.0%
Home appliances & Maintenance	12.1%
Other ^[a]	10.8%
Child Products	8.9%
Kitchen	7.9%
Hobby	7.8%
Fuel and Lighters	6.4%
Toys	3.6%
Electronics	3.5%
Clothing	2.6%
Home furnishing	1.9%

[a] The remaining product categories have been categorized as ‘Other’. The return rate of this category has been assumed to be equal to the average of the other categories under CPSC.

Source: US CPSC, industry survey, stakeholder interviews

The data provided by the CPSC required mapping between the categories listed in Table 10 and the categories used in the Safety Gate dataset. This mapping was performed based on brief descriptions of the product categories in the CPSC data as shown in Section A3.7. **Error! Reference source not found.** provides detailed information on product categories included in various databases, and the mapping between databases. Whenever the CPSC categories did not match well with the Safety Gate categories, a correction rate of 10.8% has been applied, based on the average correction rate of the “other products”.

Table 11 below provides the final mapping between Safety Gate and CPSC categories and provides the number of alerts identified for each product category in 2019.

Table 11: Pairing between Safety Gate product categories and US CPSC return rates

Product Category	# Alerts 2019	US CPSC Category	Share of return CSCP/survey
Chemical products	11	Other	10.8%
Childcare articles and children's equipment	40	Child Products	8.9%
Clothing, textiles and fashion items	42	Clothing	2.6%
Communication and media equipment	5	Electronics	3.5%
Construction products	2	Home appliances & Maintenance	12.1%
Cosmetics	16	Other	10.8%
Decorative articles	17	Home furnishing	1.9%

²⁶ National Highway Traffic Safety Administration (2017), Report to Congress: “Vehicle Safety Recall Completion Rates Report”. Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13376-recall_completion_rates_rtc-tag_final.pdf

Product Category	# Alerts 2019	US CPSC Category	Share of return CSCP/survey
Electrical appliances and equipment	83	Home appliances & Maintenance	12.1%
Gas appliances and components	2	Home appliances & Maintenance	12.1%
Hobby/sports equipment	38	Sports & Recreation	20.8%
Jewellery	4	Clothing	2.6%
Kitchen/cooking accessories	10	Kitchen	7.9%
Laser pointers	11	Electronics	3.5%
Lighters	2	Fuel and Lighters	6.4%
Lighting chains	33	Home furnishing	1.9%
Lighting equipment	22	Home furnishing	1.9%
Machinery	9	Yard & Garden	13.0%
Measuring instruments	3	Home appliances & Maintenance	12.1%
Motor vehicles	508	Personal cars and motorcycle	67.0%
Other	22	Other	10.8%
Pressure equipment/vessels	1	Other	10.8%
Protective equipment	13	Clothing	2.6%
Pyrotechnic articles	7	Fuel and Lighters	6.4%
Recreational crafts	3	Sports & Recreation	20.8%
Stationery	1	Hobby	7.8%
Toys	162	Toys	3.6%
TOTAL			

Source: Safety Gate, CPSC and industry survey (for motor vehicles)

Probability of injury and risk assessment

The RAPEX Guidelines provide a framework for the assessment of risks. According to these Guidelines, a serious risk is defined by the combination of the severity of the injury (across 4 levels) and the probability of the injury. Where justified, a product recall can be initiated to mitigate identified risk. This can encompass products posing a serious risk as well as products posing a lower risk. When a product poses a ‘serious’ risk, recalls can be ordered by authorities but businesses themselves can also initiate recalls.

Ideally, the risk variable in our model would provide – for each item subject to a recall – the type of potential injury and the related probability of this injury occurring. However, no such data were identified. The Safety Gate risk assessments for each notification are bound by confidentiality rules and only available to internal users. Therefore, to estimate the overall risk probability factor *k*, assumptions were made based on the risk assessment of the RAPEX Guidelines²⁷. This risk assessment is based on both **severity** and **probability** of risk.

According to the RAPEX guidelines, the four levels of severity of injury are defined as follows²⁸:

²⁷ ANNEX Guidelines for the management of the European Union Rapid Information System ‘RAPEX’ established under Article 12 of Directive 2001/95/EC (the General Product Safety Directive) and its notification system https://ec.europa.eu/consumers/consumers_safety/safety_products/rapex/alerts/repository/content/pages/rapex/docs/Guidelines%20annex_en.pdf

²⁸ ANNEX Guidelines for the management of the European Union Rapid Information System ‘RAPEX’ established under Article 12 of Directive 2001/95/EC (the General Product Safety Directive) and its notification system (Page 85 Table 3)

- 1) Harm or consequence that after basic treatment (first aid, normally not by a doctor) does not substantially hamper functioning or cause excessive pain; usually the consequences are completely reversible.
- 2) Harm or consequence for which a visit to an emergency room²⁹ may be necessary, but in general, hospitalisation is not required. Functioning may be affected for a limited period, not more than 6 months, and recovery is more or less complete.
- 3) Harm or consequence that normally requires hospitalisation and will affect functioning for more than 6 months or lead to a permanent loss of function.
- 4) Harm or consequence that is or could be fatal, including brain death; consequences that affect reproduction or offspring; severe loss of limbs and/or function, leading to more than 10% of disability.

Since the model assesses costs due to healthcare costs, productivity loss and loss of quality of life, we limit to model to those injuries which – at least – require a visit to an emergency department or hospitalisation. Thus, the model considers levels of severity between 2 and 4 in the cost estimate.

The **probability of injury** is the probability that an injury scenario indeed materialises during the expected lifetime of the product, and does harm to the consumer. The RAPEX Guidelines distinguish between 8 levels of probability to classify overall probability, ranging from less than 1-in-a-million to over 50%. A product that is expected to cause an injury with a severity level 2 in at least 1% of cases should be considered as being a “serious risk”. The figure below summarises the risk assessment model provided by the RAPEX Guidelines.

Figure 12: Number of products recalled per product recall in Safety Gate/RAPEX (2015-2019)

Probability of damage during foreseeable lifetime of the product		Severity of injury			
		1	2	3	4
	>50 %	H	S	S	S
	> 1/10	M	S	S	S
	> 1/100	M	S	S	S
	> 1/1 000	L	H	S	S
	> 1/10 000	L	M	H	S
	> 1/100 000	L	L	M	H
	> 1/1 000 000	L	L	L	M
	< 1/1 000 000	L	L	L	L

S — Serious Risk
H — High risk
M — Medium risk
L — Low risk

Source: RAPEX guidelines

The minimum probabilities that would be categorised as a “serious” risk are:

- A level 4 severity occurring at least 0.01% of unit sold, or
- A level 3 severity occurring at least 0.1% of unit sold, or
- A level 2 severity occurring at least 1% of the units sold.

Using these minimum probabilities will lead to conservative estimates of the costs of products remaining in consumers’ hands. It should also be noted that not all recalls in EU/EEA countries are necessarily notified at the EU level³⁰.

²⁹ Accidents and Emergencies. Also known as emergency department (ER) or casualty.

³⁰ With regard to products posing a less than serious risk, notification is encouraged but not mandatory in the case of voluntary measures taken against products covered by the GPSD and in the case of both voluntary and compulsory measures taken against products subject to EU harmonised legislation. In addition, Member States

Since no information on risk probabilities or severity for each recalled product (or even product category) was identified, estimates are calculated based on a lower bound, upper bound and mid-range scenario. These scenarios change the value for k in the model described above. For the mid-range scenario, $k = 0.5\%$; for the upper bound scenario, $k = 1\%$; for the lower bound scenario, $k = 0.01\%$. Concretely, this means that the model assumes that, in the upper bound scenario, all products under recall have a probability of 1% to cause an injury to consumers, whereas this probability is 0.01% for the lower bound scenario.

The monetary cost of injury caused by the recalled product: medical costs, productivity loss and lost quality of life

The cost model partially builds on the analysis conducted for the "Study to support the preparation of an evaluation of the GPSD as well as of an impact assessment on its potential revision"³¹, which was conducted in parallel with this study. This study estimated consumer-related injuries in the EU, using the IDB, World Health Organisation estimates for healthcare costs³² and a literature review estimating the value of quality-adjusted life years (see below). The study was able to estimate:

- the number of product-related injuries per type of treatment received (based on IDB data);
- the cost of health care for product-related injuries (based on IDB data and WHO estimates);
- the cost of productivity losses due to product-related injuries per type of treatment (based on IDB data, Eurostat data on Annual net earnings and employment and ECB data on Annual working days); and,
- the loss of quality of life (based on Willingness To Pay literature and Value of Statistical Life estimates in the European Commission better regulation toolbox).

The study to support the evaluation of the GPSD estimated costs for all injuries related to consumer products. Injuries are classified by category of product and monetised as shown in Table 12 and explained below. The purpose of the model in this study was to limit the estimate only to those injuries caused by recalled products remaining in consumers' hands. The latter should be a proportion of the former.

It is not possible to determine, for each of the 11,009,833 product-related injuries in the EuroSafe Injury Database, whether the relevant product had been recalled or not. Therefore, the model uses the average cost of all injuries by category of product, whether recalled or not, for healthcare costs and productivity losses. In our model, these averages per product category are then multiplied by (1) the number of units sold and (2) the probability of them causing an injury to consumers. This probability corresponds to the values of " k ", as explained above, in the three scenarios.

The reduction in quality of life that may be experienced due to an injury is an important cost that needs to be included, alongside health care and productivity costs. In cases of severe injuries, the loss in quality of life can far exceed the sum of other costs. Quality of life can be costed for using Quality Adjusted Life Years (QALY). QALY is a measure of the health of a person in which the benefits or damages, in terms of length of life, are adjusted to reflect the quality of life. This accounts for long-term health effects, such as chemical and toxicological risks that may lead to, for example, cancer. One quality-adjusted life-year (QALY) is equal to 1 year of life in perfect health³³. The study to support the evaluation

are not required to notify corrective measures in cases where the effects of the product risk cannot go beyond the territory of the Member State.

³¹ European Commission (n.d.), Study to support the preparation of an evaluation of the GPSD as well as of an impact assessment on its potential revision, written by Civic Consulting, 2020 (ongoing at time of writing)

³² WHO Economic Analysis and Evaluation Team (2010), 'WHO-CHOICE estimates of cost for inpatient and outpatient health service delivery', pp. 1-60, available at: https://www.who.int/choice/cost-effectiveness/inputs/country_inpatient_outpatient_2010.pdf.

³³ NICE (2020), Glossary. Available at: <https://www.nice.org.uk/glossary?letter=q>

of the GPSD³⁴ estimated the loss of the quality of life due to product-related injuries based on relevant literature and VSL estimates in the EC better regulation toolbox. Using this approach, the median estimate was €125,000 per QALY across the EU for the loss of the quality of life due to product-related injuries.

Incidents involving QALY-loss are likely to be serious. As such, the model assumes that only incidents involving hospitalisation³⁵ involve a QALY-loss. In the study to support the evaluation of the GPSD³⁶, the corresponding loss in quality of life in the EU is estimated at €28.4 billion per year. The study arrived at this estimate by multiplying the number of incidents per injury type with the corresponding weight representing the QALY-loss and the monetary value per QALY. This estimate only concerns serious injuries, for which hospitalization was required. On average, a serious injury involved a cost in QALY of €14,815.03 per accident involving hospital treatment (occurring, on average, 1,916,748 per year). Not all product categories had a similar incidence of serious incidents involving a QALY-loss. Therefore, the final estimates were adjusted to account for the weight of serious injuries for each of the product categories (see the last column in Table 12).

In 2019, an 'average' accident in the EU coming from a defective product costs €769.89. This figure includes the healthcare costs for treating the injuries and the productivity losses coming from the loss of work-days due to the injury. Further accounting for the loss of quality of life for serious injuries, the 'average' accident from a defective product in 2019 costs €3,349.10. These costs have been estimated taking into account the product classification available in Safety Gate, to account for the number of recall notifications in 2019 in Safety Gate/RAPEX (please see Table 13). A measure of the average cost per accident was thus obtained for each product category.

The costs of category "Other" has been assumed to be equal to the average across the product categories in the IDB. The following Safety Gate categories have been matched to this "other" category in the IDB:

- recreational crafts;
- pyrotechnical products;
- chemical products; and,
- other products.

The assumption that the "other" category conforms to the average across categories in the IDB is unlikely to have an impact on the final estimates. The "other" categories account for only 43 recalls out of a total of 1,067 in 2019. Some categories, such as 'Hand tools' and 'Furniture', were not included in the final cost modelling as no recalls for these product categories were recorded in the year 2019.

Statistics for motor vehicles have been taken from the EuroSafe (2016) report. This report provides data on the average number of annual road accidents and the share of road accidents that lead to hospitalisation. The later figure was used to calculate the related loss of QALY. The model assumes that the average cost of treatment for motor vehicles accidents is equal to the average costs of treatment in the IDB database. Average costs per treatment **including QALY**, on the other hand, has been estimated based on the share of treated and admitted to hospital as provided in Eurosafe (2016).³⁷

³⁴ European Commission (n.d.), Study to support the preparation of an evaluation of the GPSD as well as of an impact assessment on its potential revision, written by Civic Consulting, 2020 (ongoing at time of writing)

³⁵ 'Treated and admitted to hospital or transferred to another hospital' in the IDB-FDS dataset

³⁶ European Commission (n.d.), Study to support the preparation of an evaluation of the GPSD as well as of an impact assessment on its potential revision, written by Civic Consulting, 2020 (ongoing at time of writing)

³⁷ Estimates on Motor vehicles accidents have been based on data available on EuroSafe: Injuries in the European Union, Summary on injury statistics 2012-2014, Amsterdam 2016. (available at: https://www.eurosafe.eu.com/uploads/inline-files/EuropeSafe_Master_Web_02112016%20%28%29.pdf)

Table 12: Average costs of injury per IDB-FDS product category

Product group in IDB-FDS	Product-related injuries ^[a]	Costs of health care utilization for product-related injuries ^[b] In €	Cost of productivity losses due to product-related injuries per type of treatment ^[c] In €	Average costs per treatment (Treatment Costs + Costs of productivity losses) In €	Share of 'Treated' and 'Admitted to hospital' over the total number of product related injuries	Average costs per treatment including QALY ^[d] In €
01 CARS and MOTORVEHICLES	3,415,516 ^[e]	N/A	N/A	769.89 ^[f]	17.79% ^[g]	3,480.29
05 FURNITURE/FURNISHING	1,297,317	827,469,121	219,936,437	807.36	18.5%	3,541.41
06 INFANT OR CHILD PRODUCT	529,202	311,909,986	85,287,373	750.55	16.8%	3,244.21
07 APPLIANCE MAINLY USED IN HOUSEHOLD	207,355	84,231,132	25,581,664	529.58	11.0%	2,158.73
08 UTENSIL OR CONTAINER	476,737	122,333,328	43,167,169	347.15	6.3%	1,284.52
09 ITEM MAINLY FOR PERSONAL USE	392,257	312,775,537	80,750,466	1,003.23	23.4%	4,465.37 ^[h]
10 EQUIPMENT MAINLY USED FOR SPORTS/RECREATIONAL ACTIVITY	1,620,339	547,061,806	181,668,275	449.73	8.7%	1,734.10
11 TOOL, MACHINE, APPARATUS MAINLY USED FOR WORK-RELATED ACTIVITY	673,181	412,824,845	111,429,845	778.77	17.6%	3,389.01
14 BUILDING, BUILDING COMPONENT, OR RELATED FITTING	4,716,406	3,047,124,763	803,492,292	816.43	18.8%	3,595.68
15 GROUND SURFACE OR SURFACE CONFORMATION	962,163	892,607,403	222,366,733	1,158.82	27.6%	5,247.90
17 FIRE, FLAME, OR SMOKE	38,679	45,649,752	10,867,918	1,461.19	35.8%	6,758.43
18 HOT OBJECT/SUBSTANCE NEC	96,197	69,721,427	18,143,776	913.38	21.2%	4,049.43
TOTAL PRODUCT-RELATED INJURIES	11,009,833	6,673,709,099	1,802,691,948	769.89	17.4%	3,349.10

[a] EU27 annual average 2013-2017

[b] EU27, annual extrapolated average 2013-2017

[c] EU27, 2017

[d] Treatment Costs + Costs of productivity losses + Loss of quality of life monetized in €

[e] Data for years 2012-2014. See Eurosafe (2016).

[f] Average costs per treatment (Treatment Costs +Costs of productivity losses) for motor vehicles has been assumed equal to the average costs measures since the share of ED cases in Eurosafe for motor vehicles (81.35%) are close to the average in the CIVIC consulting estimates (79.94%). Average costs per treatment including QALY (Treatment Costs +Costs of productivity losses + Loss of quality of life monetized) has been estimated based on the share of treated and admitted to hospital in EuroSafe (2016)
 [g] 2012-2014 See Eurosafe (2016).

[h] The category 'items mainly for personal use' (which is a broad category that includes several Safety Gate/RAPEX categories, namely clothing products, cosmetics, communication and media equipment, jewellery, laser pointers, protective equipment, and stationary) has one of the highest average costs. This is due to the fact that in IDB over 23.4% of the injuries due to 'items mainly for personal use' cause hospital admissions.

Source: VVA estimates based on Civic Consulting (2020) from IDB data, Eurostat, ECB, WHO

Table 13: Average cost of injury per product category in Safety gate

Safety Gate product category	# alerts 2019	IDB product category	Treatment Costs and Costs of productivity losses In €	Treatment Costs, Costs of productivity losses and Loss of quality of life In €
Chemical products	11	Other	819.66	3,588.08
Childcare articles and children's equipment	40	06 INFANT OR CHILD PRODUCT	750.56	3,244.22
Clothing, textiles and fashion items	42	09 ITEM MAINLY FOR PERSONAL USE	1,003.24	4,465.38
Communication and media equipment	5	09 ITEM MAINLY FOR PERSONAL USE	1,003.24	4,465.38
Construction products	2	14 BUILDING, BUILDING COMPONENT, OR RELATED FITTING	816.43	3,595.68
Cosmetics	16	09 ITEM MAINLY FOR PERSONAL USE	1,003.24	4,465.38
Decorative articles	17	05 FURNITURE/FURNISHING	807.36	3,541.41
Electrical appliances and equipment	83	07 APPLIANCE MAINLY USED IN HOUSEHOLD	529.59	2,158.74
Gas appliances and components	2	07 APPLIANCE MAINLY USED IN HOUSEHOLD	529.59	2,158.74
Hobby/sports equipment	38	10 EQUIPMENT MAINLY USED FOR SPORTS/RECREATIONAL ACTIVITY	449.74	1,734.11
Jewellery	4	09 ITEM MAINLY FOR PERSONAL USE	1,003.24	4,465.38
Kitchen/cooking accessories	10	07 APPLIANCE MAINLY USED IN HOUSEHOLD	529.59	2,158.74
Laser pointers	11	09 ITEM MAINLY FOR PERSONAL USE	1,003.24	4,465.38
Lighters	2	07 APPLIANCE MAINLY USED IN HOUSEHOLD	529.59	2,158.74

Safety Gate product category	# alerts 2019	IDB product category	Treatment Costs and Costs of productivity losses In €	Treatment Costs, Costs of productivity losses and Loss of quality of life In €
Lighting chains	33	07 APPLIANCE MAINLY USED IN HOUSEHOLD	529.59	2,158.74
Lighting equipment	22	07 APPLIANCE MAINLY USED IN HOUSEHOLD	529.59	2,158.74
Machinery	9	11 TOOL, MACHINE, APPARATUS MAINLY USED FOR WORK-RELATED ACTIVITY	778.77	3,389.02
Measuring instruments	3	11 TOOL, MACHINE, APPARATUS MAINLY USED FOR WORK-RELATED ACTIVITY	778.77	3,389.02
Motor vehicles	508	Motor Vehicles	769.89	3,480.30
Other	22	Other	819.66	3,588.08
Pressure equipment/vessels	1	11 TOOL, MACHINE, APPARATUS MAINLY USED FOR WORK-RELATED ACTIVITY	778.77	3,389.02
Protective equipment	13	09 ITEM MAINLY FOR PERSONAL USE	1,003.24	4,465.38
Pyrotechnic articles	7	Other	819.66	3,588.08
Recreational crafts	3	10 EQUIPMENT MAINLY USED FOR SPORTS/RECREATIONAL ACTIVITY	449.74	1,734.11
Stationery	1	09 ITEM MAINLY FOR PERSONAL USE	1,003.24	4,465.38
Toys	162	06 INFANT OR CHILD PRODUCT	750.56	3,244.22

Source: VVA analysis

A3.3 Estimates of the EU-wide costs of recalled products remaining in consumers' hands

The results of the model provide a range of estimates by product category and for all recalls registered under the Safety Gate in 2019. These estimates account for treatment costs, costs of productivity losses and disability costs related to losses in Quality-Adjusted Life Years (QALY). The EU-wide cost of recalled products remaining in consumers' hands across all product categories in 2019 is reported below by product category in Table 14.

According to our model, the EU-wide costs of recalled products remaining in consumers' hands for 2019 was around €378 million. This estimate is a midpoint estimate assuming that for all products under recall the risk of causing injuries were equal to 0.5%. The range of estimates ranges from a lower bound of €7.5 million (assuming risk of injury is 0.01% for all products) to an upper bound of €757 million (assuming risk of injury is 1% for all products).

The most relevant product categories – where the related costs are the highest – include 'motor vehicles' (50% of the total), 'electrical appliances and equipment' (20%) and 'toys' (5.7%). This is both due to the frequency of accidents related to these product categories but also the treatment cost related to injuries caused by these products.

Table 14: EU-wide cost of recalled products remaining in consumers' hands

Product Category	Number of product alerts	Average number of units sold per product	Share of return	Number of accidents			Costs of accidents (Average Treatment Costs and Costs of productivity losses + Loss of quality of life; in €)			Share of the total (%)
				Midpoint scenario (k=0.5%)	Lower bound (k=0.01%)	Upper bound (k=1%)	Midpoint scenario (k=0.5%)	Lower bound (k=0.01%)	Upper bound (k=1%)	
Chemical products	11	3,264	10.8%	160	3	320	574,328	11,487	1,148,656	0.2%
Childcare articles and children's equipment	40	6,532	8.9%	1,190	24	2,380	3,860,913	77,218	7,721,826	1.0%
Clothing, textiles and fashion items	42	14,524	2.6%	2,971	59	5,942	13,265,629	265,313	26,531,258	3.5%
Communication and media equipment	5	63,072	3.5%	1,522	30	3,043	6,794,532	135,891	13,589,064	1.8%
Construction products	2	249,681	12.1%	2,195	44	4,389	7,891,447	157,829	15,782,894	2.1%
Cosmetics	16	17,549	10.8%	1,252	25	2,503	5,588,965	111,779	11,177,929	1.5%
Decorative articles	17	5,450	1.8%	454	9	909	1,609,249	32,185	3,218,499	0.4%
Electrical appliances and equipment	83	98,412	12.1%	35,899	718	71,798	77,496,834	1,549,937	154,993,668	20.5%
Gas appliances and components	2	20,153	12.1%	177	4	354	382,414	7,648	764,828	0.1%
Hobby/sports equipment	38	9,919	20.8%	1,493	30	2,985	2,588,365	51,767	5,176,731	0.7%
Jewellery	4	2,232	2.6%	43	1	87	194,193	3,884	388,385	0.1%
Kitchen/cooking accessories	10	39,559	739%	1,822	36	3,643	3,932,546	78,651	7,865,093	1.0%

Product Category	Number of product alerts	Average number of units sold per product	Share of return	Number of accidents			Costs of accidents (Average Treatment Costs and Costs of productivity losses + Loss of quality of life; in €)			Share of the total (%)
				Midpoint scenario (k=0.5%)	Lower bound (k=0.01%)	Upper bound (k=1%)	Midpoint scenario (k=0.5%)	Lower bound (k=0.01%)	Upper bound (k=1%)	
Laser pointers	11	50	3.5%	3	0	5	11,850	237	23,700	0.0%
Lighters	2	10	6.4%	0	0	0	202	4	404	0.0%
Lighting chains	33	3,536	1.9%	572	11	1,145	1,234,612	24,712	2,471,224	0.3%
Lighting equipment	22	3,048	1.9%	329	7	658	709,992	14,200	1,419,985	0.2%
Machinery	9	2,848	13.0%	111	2	223	377,811	7,556	755,623	0.1%
Measuring instruments	3	2,054	12.1%	27	1	54	91,781	1,836	183,563	0.0%
Motor vehicles	508	67,142	67.0%	56,279	1,126	112,557	195,866,789	3,917,336	391,733,578	51.7%
Other	22	26,546	10.8%	2,603	52	5,207	9,340,890	186,818	18,681,780	2.5%
Pressure equipment/vessels	1	471,834	10.8%	2,103	42	4,207	7,128,087	142,562	14,256,173	1.9%
Protective equipment	13	50,373	2.6%	3,189	64	6,378	14,240,714	284,814	28,481,429	3.8%
Pyrotechnic articles	7	26,546	6.4%	870	17	1,739	3,120,322	62,406	6,240,643	0.8%
Recreational crafts	3	1,811	20.8%	22	0	43	37,298	746	74,597	0.0%
Stationery	1	34,876	7.8%	161	3	322	717,926	14,359	1,435,852	0.2%
Toys	162	8,553	3.6%	6,678	134	13,357	21,666,013	433,320	43,332,025	5.7%
TOTAL (2019)	1,067			122,125	2,442	244,249	378,724,702	7,574,494	757,449,405	100%

Source: Estimates based on Safety Gate and Civic Consulting (2020) from IDB data, Eurostat, ECB, WHO and others

A3.4 Methodology of the economic impact of increased recall effectiveness

The assessment of EU-wide costs of recalled products remaining in consumers’ hands provides a baseline for the economic impact of increased recall effectiveness.

Improvements in recall effectiveness impact the correction rate equal to:

$$\left(1 - \frac{\text{units returned or dispose}_p}{\text{units sold}_p}\right)$$

By varying this rate under various scenarios, we can estimate the cost savings of more effective recalls.

The behavioural experiment tested the effects of selected remedies on the participation of consumers in product recalls. The results of the experiment are statistically significant for only one identified remedy: the use of a direct channel of communication to notify consumers that a product they own is under recall.

Table 15 below provides a summary of the results of the behavioural experiment on the remedy and provides insights on the impact of direct communication (personalised e-mail) in comparison to a generic one (banner ad). Under direct communication, and across product categories, the percentage of consumers that keep the product under recall is reduced by 10.3%. There is an increase of 9.5% of consumers returning the product and of 0.8% of consumers disposing of the product.

Table 15: Percentage of increased participation in product recalls for direct communication of product recalls

Product category	% keeping the product		Impact Of Direct Communication on		
	Direct Channel	General Channel	% returning product	% disposing product	TOTAL
Full sample	86.5%	96.8%	9.5%	0.8%	10.3%
Hatchback car	87.9%	96.3%	7.7%	0.7%	8.4%
Shape sorter toy	85.7%	98.5%	12.0%	0.8%	12.8%
Sweater	86.1%	94.5%	7.6%	0.8%	8.4%
Washing machine	84.5%	98.3%	13.1%	0.6%	13.8%
Office chair	87.9%	95.9%	7.1%	0.9%	7.9%

Source: Recall experiment

This change is not homogeneous across different categories. Washing machines are the product category with the largest increase of consumers returning or disposing the product (13.8%), while the smallest increase is related to office chairs (7.9%). In order to assess the impact of this remedy against the baseline scenario, the product categories of the behavioural experiment were paired with the categories from the Safety Gate. The exact pairing is available in **Error! Reference source not found.** in **Error! Reference source not found.**

A3.5 Estimates of the economic impact of increased recall effectiveness

To estimate the potential cost-saving effect of the remedy, in the model function we replaced the “correction rates” with the observed increase in the participation rates.

According to our estimates, based on 2019 data, the proposed remedy can reduce the number of recalled products remaining in consumers hands by over 4.6 million items. Of these, over 4.3 million items more would be returned, while the rest would be disposed of.

The EU-wide savings due to the proposed remedy, based on 2019 data, amount to over €73 million. This impact could range between €147 million and €1.4 million, depending on the probability of injury (k) considered.

This impact is not equally spread across product categories. 67% of the savings are related to Motor vehicles, 16% of the savings are related to Electrical Appliances and almost 4% to Toys. Results are presented more in detail in the table below³⁸.

³⁸ Detailed estimates are provided only for the mid-point scenario of the cost-model ($k=0.5\%$).

Table 16: Percentage of increased participation in product recalls for direct communication of product recalls

Product Category	# Alerts 2019	Number of products remaining in consumers hands			Impact of direct communication on Costs of accidents in € ^[a]	% out of the total
		Impact Of Direct Communication on returned product	Impact Of Direct Communication on disposed product	Total		
Chemical products	11	3,420	273	3,693	66,261.62	0.09%
Childcare articles and children's equipment	40	24,887	1,987	26,874	435,927.11	0.59%
Clothing, textiles and fashion items	42	46,222	4,900	51,123	1,141,410.80	1.55%
Communication and media equipment	5	30,040	2,398	32,437	724,226.61	0.98%
Construction products	2	47,567	3,797	51,364	923,442.85	1.25%
Cosmetics	16	26,746	2,135	28,881	644,812.62	0.87%
Decorative articles	17	8,825	704	9,529	168,731.66	0.23%
Electrical appliances and equipment	83	1,071,484	52,669	1,124,153	12,133,759.54	16.43%
Gas appliances and components	2	3,839	306	4,146	44,749.41	0.06%
Hobby/sports equipment	38	35,904	2,866	38,770	336,157.39	0.46%
Jewellery	4	851	68	919	20,507.65	0.03%
Kitchen/cooking accessories	10	37,682	3,008	40,690	439,194.07	0.59%
Laser pointers	11	52	4	57	1,263.09	0.00%
Lighters	2	2	0	2	22.20	0.00%
Lighting chains	33	11,116	887	12,003	129,555.36	0.18%
Lighting equipment	22	6,387	510	6,987	74,443.52	0.10%
Machinery	9	2,441	195	2,636	44,668.16	0.06%
Measuring instruments	3	587	47	634	10,740.08	0.01%
Motor vehicles	508	2,631,123	231,404	2,862,528	49,812,236.40	67.44%
Other	22	55,629	4,441	60,070	1,077,681.49	1.46%
Pressure equipment/vessels	1	44,945	3,588	48,532	822,384.92	1.11%

Product Category	# Alerts 2019	Number of products remaining in consumers hands			Impact of direct communication on Costs of accidents in € ^[a]	% out of the total
		Impact Of Direct Communication on returned product	Impact Of Direct Communication on disposed product	Total		
Protective equipment	13	62,378	4,979	67,358	1,503,886.54	2.04%
Pyrotechnic articles	7	17,700	1,413	19,113	342,898.66	0.46%
Recreational crafts	3	517	41	559	4,844.04	0.01%
Stationery	1	3,322	265	3,587	80,092.32	0.11%
Toys	162	165,680	11,399	177,079	2,872,410.73	3.89%
TOTAL (2019)	1,067	4,339,346	334,285	4,673,632	73,856,308.86	100%

[a] Average Treatment Costs (€) and Costs of productivity losses (€) + Loss of quality of life (monetized in €) in the baseline scenario (0.5%)

A3.6 Data limitations and adaptations

Measuring the societal costs of recalled products remaining in consumers' hands implies measuring the ineffectiveness of recall campaigns. As such, this assessment differs from similar studies³⁹ aimed at measuring the cost of injury. The scope of this assessment is limited to those accidents due to products that were subject to a recall campaign that the user did not return or dispose of.

The task of measuring societal costs of ineffective product recall is challenging, mostly due to the lack of data. Datasets on injuries, both in European⁴⁰ and in third countries⁴¹, do not track injuries related to products subject to recall campaigns. Our model thus relies on several sources of data to address this shortcoming. Furthermore, only limited information is available on "correction rates"; the rates of individual consumers participating to product recalls.

Limitation 1: Lack of data to determine the social cost of injuries caused by products which are subject to recalls

The most pressing methodological limitation is due to the **lack of data on the injuries caused by products that are subject to recalls**. This impedes answering the following questions:

- What kind of injuries (i.e. type and severity) might a product under recall cause?
- What is the probability that a product under recall might cause one of these injuries?
- What is the cost to society of one of such injuries, and the overall cost?

To determine whether a product should be subject to a recall, the level of risk it poses to users should be thoroughly assessed. The RAPEX Guidelines include a risk assessment model to determine the level of risk. This model combines "risk probability" and "risk severity" classifying products into 4 groups: "serious risk", "high risk", "medium risk" and "low risk".⁴² The guidelines include the probability of risk but do not predetermine the factors on which risk should be based. This is determined at the individual product level. A product, for example, may not pose a risk of severe injuries, but if faults are particularly frequent it may still be considered high risk and thus subject to a recall. In the Safety Gate database employed for this analysis, the overall assessment of risk (serious, high, medium or low) is reported for each product.

To monetise the cost of injuries, one approach could be to rely on US data provided by the NEISS and CPSC on the cost of injuries in terms of hospitalisation costs and productivity loss. However, this approach would rely heavily on US data where healthcare costs are considerably higher in comparison to EU countries⁴³ and also the average productivity per worker is different.

The cost savings model employed for this report uses data collected in the EuroSafe Injury Database (IDB). This dataset collects the injuries reported by European hospitals and provides data on the cause of injury, the treatment delivered, and other information regarding the specific accident (i.e. if it was caused by a product). From this database, injuries that were caused by consumer products were extracted, and – for each product category – an average number of accidents between 2013 and 2017 could be calculated .

³⁹ Commonwealth of Australia (2019), Improving the effectiveness of the Consumer Product Safety System, Consultation Regulation Impact Statement, Annex B, Consumer Affairs Australia and New Zealand, October 2019

⁴⁰ https://ec.europa.eu/health/indicators_data/idb_en

⁴¹ Australia's National Hospitals Data Collection (<https://www.aihw.gov.au/about-our-data/our-data-collections/national-hospitals>)

⁴² ANNEX Guidelines for the management of the European Union Rapid Information System 'RAPEX' established under Article 12 of Directive 2001/95/EC (the General Product Safety Directive) and its notification system (Page 65)

⁴³ For example, in 2019 the expenditure per capita on healthcare in the US was \$11,071 while the EU average was \$4,068 (with Germany, the Member State with the highest expenditure per capita, registering an expenditure of \$6,645 per year). Source: OECD.stat, Health expenditure and financing. Available at: <https://stats.oecd.org/Index.aspx?DataSetCode=SHA>

According to the "*Study to support the preparation of an evaluation of the GPSD as well as of an impact assessment on its potential revision*"⁴⁴ around 11 million product-related injuries were recorded each year in the EU27, and for each product category, an assessment of 'average' treatment cost has been made. In 2019, an 'average' accident in the EU coming from a defective product cost €769.89 including the healthcare costs for treating the injuries and the productivity losses coming from the loss of work-days due to the injury. When accounting also for the loss of quality of life for serious injuries, the 'average' accident from a defective product in 2019 cost €3,349.10.

Our cost model relied on these costs estimates (medical treatment and productivity loss and reduced quality of life) by category of product (see Table 12). As such, the model did not need to rely on data of injuries caused by a single product and it did not take into account costs related to deaths caused by recalled products. The estimate of overall costs by product category assumed that all products within the same category cause similar non-fatal injuries to consumers.

Limitation 2: Correction rates by product category based on European recall campaigns

Another relevant limitation of the cost model is related to the **limited availability of information on the performance of recall campaigns**. This means that the following questions are difficult to answer:

- How many products are returned to manufacturers?
- How many are disposed of?

Little data is available on correction rates (also called return rates). In most cases, these are reported at aggregate country-level and for a limited number of product categories. Moreover, the calculation of these rates does not seem to be consistent between different jurisdictions and data sources.⁴⁵ In fact, the literature provides some estimates, but these could not be used systematically for the purpose of this report. In addition, manufacturers often do not share recall effectiveness information with authorities, thus limiting the availability of public data.

In the stakeholder engagement, participants of the industry survey were asked to share observed correction rates on their recall campaigns.⁴⁶ Unfortunately, companies frequently do not monitor the effectiveness of recall campaigns in terms of returned products or are reluctant to share this information. The survey collected some insights into correction rates for the "personal cars and motorcycles" category (7 responses). For this category, correction rates range between 45% and 85% with an average of 67%. This figure is consistent with correction rates identified in the literature⁴⁷ and was thus used in the model. For "domestic electrical appliances" only three companies reported an estimate of the share of returned products with an average of around 71%. For the other product categories, only one or two responses were received and therefore are not reported.

For the purposes of this study, the most useful source regarding correction rates was provided by an analysis conducted by the US CPSC in 2017 on 865 recall campaigns conducted between 2013 and 2016 in the US. The limitation of this source was that the underlying data could not be accessed. Nevertheless, the consistency in the methodology of assessment of correction rates across product categories and the sample size made

⁴⁴ European Commission (n.d.), Study to support the preparation of an evaluation of the GPSD as well as of an impact assessment on its potential revision, written by Civic Consulting, 2020 (ongoing at time of writing)

⁴⁵ OECD (2018), Enhancing Product Recall Effectiveness Globally. Available at: [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DSTI/CP/CPS\(2018\)1/FINAL&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DSTI/CP/CPS(2018)1/FINAL&docLanguage=En)

⁴⁶ The participants were asked the following question: "Could you estimate the percentage of products that your company has successfully retrieved from consumers following a product recall over the past 5 years?"

⁴⁷ National Highway Traffic Safety Administration (2017), Report to Congress: "Vehicle Safety Recall Completion Rates Report". Available at: https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13376-recall_completion_rates_rtc-tag_final.pdf

these estimates the most relevant for the model. Using US data, however, requires the assumption that the effectiveness of recall campaigns in the US is the same as in the EU.

A3.7 Additional information in support of the economic assessment

Table 17: Category matching between the CPSC dataset and the IDB-FDS data

Product Category Safety Gate	Product category CPSC	Product sub-categories CPSC	Product category IDB-FDS data	Product sub-categories IDB-FDS data
Chemical products	Other	N/A	Other	N/A
Childcare articles and children's equipment	Children's Products	cribs, strollers, highchairs, carriers, etc. (all products subject to CPSC's durable and toddler product regulations)	06 INFANT OR CHILD PRODUCT	Baby or child article, playground equipment, other specified infant or child product, unspecified infant or child product
Clothing, textiles and fashion items	Clothing & Accessories	clothes (including children's), footwear	09 ITEM MAINLY FOR PERSONAL USE	Clothes, footwear or related products, clothing accessory or personal decoration items
Communication and media equipment	Electronics	television, chargers, cameras, wall mounts, power packs, laptop, cell phones, etc.	09 ITEM MAINLY FOR PERSONAL USE	Communication or related utensil or accessory
Construction products	Home appliances & Maintenance	tools, home repair items, heating and cooling items, alarm system, etc.	14 BUILDING, BUILDING COMPONENT, OR RELATED FITTING	Building fitting, Door, window, or related fitting/feature, floor or related fitting, wall or related fitting, other specified building, building component or related fitting
Cosmetics	Other	N/A	09 ITEM MAINLY FOR PERSONAL USE	Personal grooming utensil, Toiletries, cosmetics or related product
Decorative articles	Home Furnishings & Decor	home decorations, candles, etc.	05 FURNITURE/ FURNISHING	Decoration, decorating item
Electrical appliances and equipment	Home appliances & Maintenance	all non-kitchen home appliances, heating and cooling items, , etc.	07 APPLIANCE MAINLY USED IN HOUSEHOLD	Cooking or kitchen appliance, cleaning or laundering appliance or tool, lighting appliance, heating or cooling appliance, sewing appliance or equipment, entertainment appliance, other household appliance

Product Category Safety Gate	Product category CPSC	Product sub-categories CPSC	Product category IDB-FDS data	Product sub-categories IDB-FDS data
Gas appliances and components	Home appliances & Maintenance	all non-kitchen home appliances heating and cooling items, etc.	07 APPLIANCE MAINLY USED IN HOUSEHOLD	Heating or cooling appliance
Hobby/sports equipment	Sports & Recreation	bikes, recreational/utility vehicles, outdoor activity products (hunting, camping, snowmobile, hiking, sports, swing sets), pool items, hover boards, etc.	10 EQUIPMENT MAINLY USED FOR SPORTS/RECREATIONAL ACTIVITY	Ball used in sport, Hand-held sports equipment, Equipment for playing sports and exercise, Equipment with wheels for sports/recreational activity, Underwater diving equipment, Other equipment for sport/recreational activity
Jewellery	Clothing & Accessories	watches	09 ITEM MAINLY FOR PERSONAL USE	clothing accessory or personal decoration items, other personal use item
Kitchen/cooking accessories	Kitchen	kitchen appliances, utensils, pots and pans, coffee makers, cups and plates, kettles, dehydrators, etc.	07 APPLIANCE MAINLY USED IN HOUSEHOLD	Cooking or kitchen appliance, other household appliance
Laser pointers	Electronics	television, chargers, cameras, wall mounts, power packs, laptop, cell phones, etc.	09 ITEM MAINLY FOR PERSONAL USE	Unspecified personal use item
Lighters	Fuel & Lighters	bulk propane, fuel filters, kerosene, etc.	07 APPLIANCE MAINLY USED IN HOUSEHOLD	Cooking or kitchen appliance, cleaning or laundering appliance or tool, lighting appliance, heating or cooling appliance, sewing appliance or equipment, entertainment appliance, other household appliance
Lighting chains	Home Furnishings & Decor	holiday lights, home decorations, lights, light bulbs, and light fixtures, , etc.	07 APPLIANCE MAINLY USED IN HOUSEHOLD	Lighting appliance
Lighting equipment	Home Furnishings & Decor	holiday lights, home decorations, lights, light bulbs, and light fixtures, etc.	07 APPLIANCE MAINLY USED IN HOUSEHOLD	Lighting appliance

Product Category Safety Gate	Product category CPSC	Product sub-categories CPSC	Product category IDB-FDS data	Product sub-categories IDB-FDS data
Machinery	Yard & Garden	lawn care equipment, tractors, etc.	11 TOOL, MACHINE, APPARATUS MAINLY USED FOR WORK-RELATED ACTIVITY	Machinery or fixed plant, Powered and unpowered hand tool/equipment, pressure-based equipment, other unpowered equipment, other specified tool, machine, apparatus mainly used for work-related activity
Measuring instruments	Home appliances & Maintenance	tools, all non-kitchen home appliances home repair items, etc.	11 TOOL, MACHINE, APPARATUS MAINLY USED FOR WORK-RELATED ACTIVITY	other unpowered equipment, other specified tool, machine, apparatus mainly used for work-related activity
Motor vehicles	Personal cars and motorcycle	Personal cars and motorcycle	MOTOR VEHICLES	Motor Vehicles
Other	Other	N/A	Other	N/A
Pressure equipment/vessels	Other	N/A	11 TOOL, MACHINE, APPARATUS MAINLY USED FOR WORK-RELATED ACTIVITY	pressure-based equipment
Protective equipment	Clothing & Accessories	clothes (including children's), footwear	09 ITEM MAINLY FOR PERSONAL USE	Clothes, footwear or related products, Personal aid, other personal use item
Pyrotechnic articles	Fuel & Lighters	bulk propane, fuel filters, kerosene, etc.	Other	N/A
Recreational crafts	Sports & Recreation	bikes, recreational/utility vehicles, outdoor activity products (hunting, camping, snowmobile, hiking, sports, swing sets), pool items, hover boards, etc.	10 EQUIPMENT MAINLY USED FOR SPORTS/RECREATIONAL ACTIVITY	Ball used in sport, Hand-held sports equipment, Equipment for playing sports and exercise, Equipment with wheels for sports/recreational activity, Underwater diving equipment, Other equipment for sport/recreational activity
Stationery	Hobby	magnet sets, pet products, craft items, etc.	09 ITEM MAINLY FOR PERSONAL USE	Arts and crafts supplies

Product Category Safety Gate	Product category CPSC	Product sub-categories CPSC	Product category IDB-FDS data	Product sub-categories IDB-FDS data
Toys	Toys	Toys	06 INFANT OR CHILD PRODUCT	toy, playground equipment

Source: CPSC, IDB-FDS

Table 18: Categories in the CPSC dataset

Product type CPSC	Description CPSC
Children’s Products	blankets for babies/toddlers, riding toys, pacifiers, mobiles, baby monitors, etc.
CP-Durable Infant and Toddler Products	cribs, strollers, highchairs, carriers, etc. (all products subject to CPSC’s durable and toddler product regulations)
Clothing & Accessories	clothes (including children’s), watches, footwear
Electronics	television, chargers, cameras, wall mounts, power packs, laptop, cell phones, etc.
Fuel & Lighters	bulk propane, fuel filters, kerosene, etc.
Hobby	magnet sets, pet products, craft items, etc.
Home Appliances & Maintenance	tools, all non-kitchen home appliances, laundry products, home repair items, heating and cooling items, alarm system, cleaners, etc.
Home Furnishings & Decor	living room, dining room, and bedroom furniture, holiday lights, home decorations, candles, lights, light bulbs, and light fixtures, safes, clocks, etc.
Kitchen	kitchen appliances, utensils, pots and pans, coffee makers, cups and plates, kettles, dehydrators, etc.
Personal Care	hair dryers/curling irons, air misters/personal fans, panic devices, bedbug control products, eyelash curler, etc.
Products at Public Facilities	neon sign transformers, pool lifts, creamer dispensers, fire alarm pull stations, crane wind speed sensor, etc.
Sports & Recreation	bikes, recreational/utility vehicles, outdoor activity products (hunting, camping, snowmobile, hiking, sports, swing sets), pool items, hover boards, etc.
Toys	toys
Yard & Garden	outdoor furniture, lawn care equipment, tractors, outdoor lights, etc.

Source: CPSC

Figure 13: Selected IDB-FDS data elements

OBJECT/SUBSTANCE/PRODUCT INVOLVED IN THE INJURY OVERVIEW OF SELECTED (PRODUCT-RELATED) CODES OF FIRST AND SECOND LEVEL			
05 Furniture/ furnishing	05.01 Bed, bedding or bedding accessories		09.09 Carrying equipment, luggage
	05.02 Chair, sofa		09.98 Other specified personal use item
	05.03 Table, stand, cupboard, shelf or partition		09.99 Unspecified personal use item
	05.04 Decoration, decorating item	10	10.01 Ball used in sport
	05.05 Garden furniture	Equipment	10.02 Hand-held sports equipment
	05.06 Household linen	mainly used	10.03 Equipment/structure for playing sports and exercise
	05.98 Other specified furniture/furnishing	for	10.04 Equipment with wheels or designed for movement mainly used
	05.99 Unspecified furniture/furnishing	sports/recre	for sports/recreational activity
06 Infant or child product	06.01 Baby or child article	ational	10.05 Underwater diving equipment
	06.02 Toy	activity	10.98 Other specified equipment mainly used for sports/recreational
	06.03 Playground equipment		activity
	06.98 Other specified infant or child product	11 Tool,	11.01 Machinery or fixed plant
07 Appliance mainly used in household	06.02 Toy	machine,	11.02 Powered hand tool/equipment
	06.03 Playground equipment	apparatus	11.03 Unpowered hand tool/equipment
	06.98 Other specified infant or child product	mainly used	11.04 Pressure-based equipment
	06.99 Unspecified infant or child product	for work-	11.05 Other unpowered equipment
07 Appliance mainly used in household	07.01 Cooking or kitchen appliance	related	11.98 Other specified tool, machine, apparatus mainly used for work-
	07.02 Cleaning or laundering appliance or tool	activity	related activity
	07.03 Lighting appliance		related activity
	07.04 Heating or cooling appliance	14 Building,	14.01 Building fitting
	07.05 Sewing appliance or equipment	building	14.02 Door, window, or related fitting/feature
	07.06 Entertainment appliance	component,	14.03 Floor or related fitting/feature
08 Utensil or container	07.98 Other specified household appliance	or related	14.04 Wall or related fitting/feature
	07.99 Unspecified household appliance	fitting	14.98 Other specified building, building component, or related
	08.01 Cooking or food processing utensil		fitting
	08.02 Crockery, kitchen container		14.99 Unspecified building, building component, or related fitting
	08.02 Crockery, kitchen container	15 Ground	15.01 Ground surface
	08.03 Cleaning utensil or container	surface or	15.02 Body of water
08 Utensil or container	08.04 Food storage or related utensil or container	surface	15.98 Other specified surface conformation
	08.98 Other specified utensil or container	conformatio	15.99 Unspecified surface conformation
	08.99 Unspecified utensil or container		17 Fire,
	09.01 Clothes, footwear, or related products	17 Fire,	17.01 Fire, flame
09 Item	09.02 Clothing accessory or personal decoration item	flame, or	17.02 Smoke
	09.03 Personal grooming utensil	smoke	17.98 Other specified fire, flame or smoke
	09.04 Toiletries, cosmetics, or related product		injury
	09.05 Communication or related utensil or accessory	18 Hot	18.01 Hot liquid
	09.06 Arts and crafts supplies	object/subst	18.02 Hot air or gas
	09.07 Personal aid	ance nec	18.98 Other specified hot object/substance
	09.08 Tobacco or related product		18.99 Unspecified hot object/substance

Source: Civic Consulting from IDB-FDS data dictionary

Table 19: Pairing between Safety gate category and Experiment category

Product Category Safety Gate	# Alerts 2019	Experiment product	Impact Of Direct Communication on % returning product	Impact Of Direct Communication on % disposing product	Impact Of Direct Communication on % Disposing/Returning the Product
Chemical products	11	Full sample	9.5%	0.8%	10.3%
Childcare articles and children's equipment	40	Full sample	9.5%	0.8%	10.3%
Clothing, textiles and fashion items	42	Sweater	7.6%	0.8%	8.4%
Communication and media equipment	5	Full sample	9.5%	0.8%	10.3%
Construction products	2	Full sample	9.5%	0.8%	10.3%
Cosmetics	16	Full sample	9.5%	0.8%	10.3%
Decorative articles	17	Full sample	9.5%	0.8%	10.3%
Electrical appliances and equipment	83	Washing machine	13.1%	0.6%	13.8%
Gas appliances and components	2	Full sample	9.5%	0.8%	10.3%
Hobby/sports equipment	38	Full sample	9.5%	0.8%	10.3%
Jewellery	4	Full sample	9.5%	0.8%	10.3%
Kitchen/cooking accessories	10	Full sample	9.5%	0.8%	10.3%
Laser pointers	11	Full sample	9.5%	0.8%	10.3%
Lighters	2	Full sample	9.5%	0.8%	10.3%
Lighting chains	33	Full sample	9.5%	0.8%	10.3%
Lighting equipment	22	Full sample	9.5%	0.8%	10.3%
Machinery	9	Full sample	9.5%	0.8%	10.3%
Measuring instruments	3	Full sample	9.5%	0.8%	10.3%
Motor vehicles	508	Hatchback car	7.7%	0.7%	8.4%
Other	22	Full sample	9.5%	0.8%	10.3%
Pressure equipment/vessels	1	Full sample	9.5%	0.8%	10.3%
Protective equipment	13	Full sample	9.5%	0.8%	10.3%

Product Category Safety Gate	# Alerts 2019	Experiment product	Impact Of Direct Communication on % returning product	Impact Of Direct Communication on % disposing product	Impact Of Direct Communication on % Disposing/Returning the Product
Pyrotechnic articles	7	Full sample	9.5%	0.8%	10.3%
Recreational crafts	3	Full sample	9.5%	0.8%	10.3%
Stationery	1	Full sample	9.5%	0.8%	10.3%
Toys	162	Shape sorter toy	12.0%	0.8%	12.8%
TOTAL (2019)	1,067				

Source: VVA analysis; Recall experiment

Annex 4 Evaluation of literature vis-à-vis research questions

Table 20: Mapping between project research questions and evaluation of identified literature

	Project research question	Literature review evaluation
1	<i>To what extent and how are consumers' decisions concerning product registration and recall participation influenced by external factors such as product value, expected lifespan, type of risk, cultural factors as well as consumers' socio-economic status?</i>	<ul style="list-style-type: none"> ▪ Does the document provide insights on consumers' behaviour in relation to product registration and/or participation in recall programmes? ▪ If yes, does it provide insights on how factors such as product value, expected lifespan, type of risk, consumer's socio-economic status influence the participation? ▪ If yes, does it discuss the costs and benefits for consumers' participation and how to improve them?
2	<i>To what extent do consumers trade off the perceived seriousness and likelihood of harm on the one hand and the perceived costs and benefits of product registration and recall participation on the other hand?</i>	<ul style="list-style-type: none"> ▪ See research question 1
3	<i>What are consumers' expectations about the government's role in sharing safety information? What is the relative trustworthiness of information originating/endorsed by the government, economic operators and informal sources (e.g. family and friends)?</i>	<ul style="list-style-type: none"> ▪ Does the document provide information regarding the expectations of consumers on government's/Pas' role in product safety? ▪ Does the document provide insights on the perceived trustworthiness of information provided by government or economic operators or other informal sources (e.g. family and friends)?
4	<i>What are the current market practices linked to product recalls and use of customer data for safety purposes?</i>	<ul style="list-style-type: none"> ▪ Does the document provide insights on market practices regarding products recalls (for safety purposes)? ▪ If yes, please summarise the findings.
5	<i>What are the existing public initiatives (in EU Member States, third countries and at international level) that aim to enhance recall effectiveness?</i>	<ul style="list-style-type: none"> ▪ Does the document provide insights on policies adopted by EU MS or third countries to enhance the effectiveness of recall programmes? ▪ If yes, please summarise the findings.
6	<i>What EU-level initiatives could be envisaged to enhance recall effectiveness in the short and medium term?</i>	<ul style="list-style-type: none"> ▪ Does the document provide recommendations on how to improve recall effectiveness? ▪ If yes, please summarise these recommendations.
7	<i>How does consumer recall behaviour change if the product risk is a personal risk, a risk to children, a risk to the environment, a risk to others in society?</i>	<ul style="list-style-type: none"> ▪ See research question 1

	Project research question	Literature review evaluation
9	<i>When thinking about future legislation in the area, what inspiration can be drawn from the examples of other jurisdictions?</i>	<ul style="list-style-type: none"> ▪ Does the document provide examples of good practices on product registration and product recalls? If yes, please summarise using the following structure: <ul style="list-style-type: none"> ○ Country ○ Product registration and/or Product recall ○ Description of the approach ○ Why is considered good practice
10	<i>What best practices aimed at enhancing product registration and recall can be identified?</i>	<ul style="list-style-type: none"> ▪ See research question 9
11	<i>What kind of drivers, barriers and trade-offs do consumers face when deciding to share their personal data for safety purposes (e.g. in the context of product registration, loyalty programmes, online purchases)?</i>	<ul style="list-style-type: none"> ▪ Does the document provide insights on propensity (drivers, barriers, trade-offs) of consumers to share their personal data for safety purposes (e.g. for product registration, participation to loyalty programmes, online purchases)? ▪ If yes, please summarise the findings.
12	<i>How to establish the link between product registration and safety?</i>	<ul style="list-style-type: none"> ▪ See research question 11
13	<i>What is the relative effectiveness of current registration schemes?</i>	<ul style="list-style-type: none"> ▪ Does the study provide insights on the effectiveness of products' registration schemes? ▪ If yes, please summarise.
14	<i>What is the potential of increasing product registration rates through changes to the registration material?</i>	<ul style="list-style-type: none"> ▪ Does the document discuss means of improvement of registration rates? ▪ If yes, please summarise the identified measures to improve registration rates.
15	<i>What is the potential of increasing product registration rates through reducing the costs and/or increasing the benefits of complying?</i>	<ul style="list-style-type: none"> ▪ Does the document discuss the costs and benefits of higher registration rates? ▪ Please summarise the mentioned costs and benefits (e.g. reduce amount of effort required for registration, use of incentives or sanctions, others)
16	<i>What are the best practices linked to the use of consumer data collected for other purposes (e.g. loyalty schemes, online sales, digital receipts) for product safety purposes?</i>	<ul style="list-style-type: none"> ▪ See research questions 9 and 11
17	<i>What is the most effective way to get consumers' consent to receiving safety notifications when they sign up to loyalty programmes or make online purchases?</i>	<ul style="list-style-type: none"> ▪ Does the document discuss approaches to communicate with customers on safety related issues? ▪ If yes, please describe briefly what are the recommendations in terms of communication with customers (only

	Project research question	Literature review evaluation
		regarding product safety issues and recall programmes)
18	<i>Do data privacy concerns affect consumers' decisions as to whether or not to register a product online?</i>	<ul style="list-style-type: none"> See research question 11
19	<i>Should mandatory registration of certain product categories exist?</i>	<ul style="list-style-type: none"> Does the document provide indication of products for which product registration should be mandatory?
20	<i>Should there be a difference in terms of requirements to register a product for online and offline purchases?</i>	<ul style="list-style-type: none"> Does the document discuss registration practices of online purchases and offline purchases? If yes, does it provide a comparison of the two means? Please summarise major insights.
22	<i>What improvements can be made to recall notices to make them more noticeable, understandable and persuasive?</i>	<ul style="list-style-type: none"> Does the document discuss the effectiveness of recall notices? Does it provide insights on how to improve them (more noticeable, understandable, use of persuasion techniques) and best means of communication (e.g. word-of-mouth, specialised online groups, influencers, etc.)? Please summarise.
23	<i>How best to encourage the word-of-mouth in recall announcements?</i>	<ul style="list-style-type: none"> See research question 22
24	<i>What is the relative effectiveness of different communication channels (including specialised online groups/fora and using influencers) for reaching consumers of different demographics?</i>	<ul style="list-style-type: none"> See research question 22
25	<i>What is the potential of increasing consumers' propensity to respond to product recalls through reducing the costs and/or increasing the benefits of complying?</i>	<ul style="list-style-type: none"> See research question 1
26	<i>What is the potential of internet-connected products for product registration and recall?</i>	<ul style="list-style-type: none"> Does the document focus on the effectiveness of recall programmes of consumer electronics (connected products in general)? Does it provide insights on consumers' expectations and concerns? If yes, please summarise.
27	<i>What is the EU-wide cost of recalled products remaining in consumers' hands?</i>	<ul style="list-style-type: none"> Does the document provide an assessment of the economic and social costs of having recalled products remaining in consumers' hands? Please indicate these costs and main figures.

	Project research question	Literature review evaluation
28	<i>What is the economic impact of increased recall effectiveness (i.e. products being returned or at least disposed of by consumers versus remaining in consumers' hands)?</i>	<ul style="list-style-type: none"> ▪ Does the document provide insights on the economic effects of an increased recall effectiveness? (i.e. increased consumer safety). ▪ If yes, please summarise the findings.
29	<i>What is the cost of recalling products for industry and does this cost constitute and obstacle for enhancing recall effectiveness?</i>	<ul style="list-style-type: none"> ▪ Does the document discuss the costs for enterprises to conduct recall programmes? ▪ Does it provide insights on how these costs influence the propensity of enterprises to conduct effective recall programmes? ▪ If yes, please summarise insights.

Annex 5 Desk research templates

A5.1 Product recall campaigns

Table 21: Template used to obtain information on product recall campaigns (original format)

Basic information about the product recall campaign	
Product category	<i>Insert text</i>
Product subject to the recall	<i>Insert text</i>
Name of company	<i>Insert text</i>
Website	<i>Insert text</i>
Country	<i>Insert text</i>
Year of the recall	<i>Insert number</i>
Years in which product was sold	<i>Insert number</i>
Product price (if available)	<i>Insert price range (EUR)</i>
Product lifespan	<input type="checkbox"/> Short <input type="checkbox"/> Medium <input type="checkbox"/> Long
Product user	<input type="checkbox"/> Adult <input type="checkbox"/> Child
Reason for the recall (what is the risk/potential harm)	<i>Insert text</i>
Risk level	<input type="checkbox"/> Serious <input type="checkbox"/> Other (please specify)
Was the recall campaign published in the country's official language(s)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Does the recall campaign have a process in place for addressing complaints? <i>(e.g. consumers can express their complaints via phone / website)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is there any unique or innovative element in the recall campaign that stands out?	<i>Please describe and provide examples (max. 100 words)</i>
Specifications of the recall campaign	

<p>Which communication channels are used within the recall campaign?</p> <p><i>Please select applicable option(s) + add description</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Manufacturer's or seller's website <input type="checkbox"/> Manufacturer's or seller's social media <input type="checkbox"/> Direct communication to affected consumers <input type="checkbox"/> Press releases from manufacturer / seller / government <input type="checkbox"/> Online newspapers / articles / blogs <input type="checkbox"/> Social media / online influencers <input type="checkbox"/> Television campaigns / YouTube <input type="checkbox"/> Market surveillance authorities <input type="checkbox"/> National consumer association <input type="checkbox"/> National industry association <input type="checkbox"/> Dedicated product safety and recalls website <input type="checkbox"/> Multiple channels (please specify) <input type="checkbox"/> Other (please specify)
<p>What is the overall language of the recall announcement?</p> <p><i>Please select applicable option(s) + add description</i></p> <p><i>Screenshots to be provided as justification</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Did the campaign use vague language? (e.g. unclear description of risk or instructions to consumers) <input type="checkbox"/> Did the campaign use complex and/or technical language? (e.g. technical description of product failure or legal jargon) <input type="checkbox"/> Did the campaign use easy-to-understand language? (e.g. simple / short expressions) <input type="checkbox"/> Did the campaign use persuasive language? (e.g. personalised language, appeal to emotions) <p><i>Please describe and provide examples (max. 100 words):</i></p>
<p>What type of risks are highlighted the most in the recall announcement?</p> <p><i>Please select applicable option(s) + add description</i></p> <p><i>Screenshots to be provided as justification</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Did the campaign highlight the risk for consumer's own safety and appeal to people's desire for safety for themselves? <input type="checkbox"/> Did the campaign highlight the risk for their family / children's safety? <input type="checkbox"/> Did the campaign highlight the risk for their neighbours / community's safety? <p><i>Please describe (max. 100 words):</i></p>
<p>Does the recall announcement use any terms that downplay/ soften a risk level associated with the recall?</p> <p><i>Please select applicable option(s) + add description</i></p> <p><i>Screenshots to be provided as justification</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Such as: 'voluntary/precautionary recall' <input type="checkbox"/> Such as: 'in rare cases'/'in specific conditions' <input type="checkbox"/> Other (please specify) <p><i>Please describe and provide examples (max. 100 words):</i></p>
<p>Does the recall announcement use any terms that increase / stress the risk level associated with the recall?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Use of stronger signal words e.g. 'danger', 'immediately stop using the product' <input type="checkbox"/> Use of capital letters or bold in description of risk <input type="checkbox"/> Other (please specify) <p><i>Please describe and provide examples (max. 100 words):</i></p>

<p><i>Please select applicable option(s) + add description</i></p> <p><i>Screenshots to be provided as justification</i></p>	
<p>How clear is the description of the recalled product in the recall notice?</p> <p><i>Please select applicable option(s) + add description</i></p> <p><i>Screenshots to be provided as justification</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Verbal only description of the product <input type="checkbox"/> Product picture <input type="checkbox"/> Product identifiers, such as model, batch and serial numbers <input type="checkbox"/> Clear explanation where to find product identifiers <input type="checkbox"/> Other (please specify) <p><i>Please describe and provide examples (max. 100 words):</i></p>
<p>Does the recall announcement use behaviourally informed nudges or messaging?</p> <p><i>Please select applicable option(s) + add description</i></p> <p><i>Screenshots to be provided as justification</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Highlighting benefits of participation in a recall (e.g. highlighting "Free replacement", "free repair" etc.) <input type="checkbox"/> Highlighting risk of harm or loss if consumers do not participate in the recall e.g. "Don't risk your family's safety") <input type="checkbox"/> Referencing to social norms (e.g. "people like you protect their families" [by participating in the recall]) <input type="checkbox"/> Other (please specify) <p><i>Please describe and provide examples (max. 100 words):</i></p>
<p>Does the recall announcement encourage the word of mouth?</p> <p><i>(e.g. encouragement to tell friends / family about product recall)</i></p> <p><i>Screenshots to be provided as justification</i></p>	<p><i>Please describe and provide examples (max. 100 words):</i></p>
<p>Which additional information is available to consumers in the recall announcement?</p> <p><i>Please select applicable option(s) + add description</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Free hotline <input type="checkbox"/> Online interactive service <input type="checkbox"/> Paid phone number <input type="checkbox"/> Company website <input type="checkbox"/> Other (please specify) <p><i>Please describe and provide examples (max. 100 words):</i></p>
<p>Is the additional information available in the national language(s)?</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Yes <input type="checkbox"/> No

<p>What is the layout of the recall announcement?</p> <p><i>Please select applicable option(s) + add description</i></p> <p><i>Screenshots to be provided as justification</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Specific striking graphical elements (frames, symbols, red colour) <input type="checkbox"/> Lengthy continuous text <input type="checkbox"/> Short paragraphs with subheadings / bullet points <input type="checkbox"/> Presence of brand logo <input type="checkbox"/> Other (please specify) <p><i>Please describe and provide examples (max. 100 words):</i></p>
<p>What do consumers need to do in order to comply with the recall campaign? Which steps are needed to receive the remedy?</p> <p><i>Please select applicable option(s) + add description</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Bring back the product to a store <input type="checkbox"/> Send back the product <input type="checkbox"/> Need to schedule an appointment for a pick-up / repair at home <input type="checkbox"/> Contact the company for replacement parts <input type="checkbox"/> Dispose of the product and provide evidence to seller <input type="checkbox"/> Other (please specify) <p><i>Please describe and provide examples (max. 100 words):</i></p>
<p>In general, how would you assess the ease or difficulty for a consumer to participate in this product recall?</p> <p><i>Please select applicable option(s) + add description</i></p>	<p>How easy or difficult is it to understand the instructions given in the recall announcement?</p> <ul style="list-style-type: none"> <input type="checkbox"/> very easy <input type="checkbox"/> rather easy <input type="checkbox"/> rather difficult <input type="checkbox"/> very difficult <p>How easy or burdensome are the steps to be taken by the consumer?</p> <ul style="list-style-type: none"> <input type="checkbox"/> very easy <input type="checkbox"/> rather easy <input type="checkbox"/> rather burdensome <input type="checkbox"/> very burdensome <p>Other (please specify)</p> <p><i>Please describe and provide examples (max. 100 words):</i></p>
<p>Do sellers/manufacturers in some way facilitate the process to encourage the consumer to participate in the recall?</p> <p><i>Please select applicable option(s) + add description</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> The seller / manufacturer offers to collect bulky / non-portable products <input type="checkbox"/> The seller / manufacturer offers pre-paid postage or reimbursement of postage costs <input type="checkbox"/> The seller / manufacturer offers an incentive for the consumer to return the product <input type="checkbox"/> Other (please specify) <p><i>Please describe and provide examples (max. 100 words):</i></p>
<p>Which remedies are offered to consumers?</p> <p><i>Please select applicable option(s) + add description</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Product replacement <input type="checkbox"/> Product repair <input type="checkbox"/> Free replacement parts for self-repair <input type="checkbox"/> Full refund <input type="checkbox"/> Partial refund <input type="checkbox"/> Gift card <input type="checkbox"/> Other (please specify)

	<i>Please describe and provide examples (max. 100 words):</i>
<p>Is the time limit for obtaining the remedy specified?</p> <p><i>Please select applicable option(s) + add description</i></p> <p><i>Screenshots to be provided as justification</i></p>	<input type="checkbox"/> Yes [... days] <input type="checkbox"/> No
<p>How would you assess the attractiveness of the remedies offered?</p> <p><i>Please select applicable option(s) + add description</i></p>	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <p>Were remedies offered attractive enough to encourage a consumer to participate? <i>(please discuss in max. 100 words):</i></p>
<p>Does the recall campaign foresee back-up solutions in case of no participation from the consumer?</p> <p><i>(e.g. Remote deactivation of the device by manufacturer / reducing functionality of connected device)</i></p>	<i>Please describe and provide examples (max. 100 words):</i>
<p>Are any extra incentives (beyond the ones mentioned above) offered to encourage participation in the recall?</p>	<i>Please describe and provide examples (max. 100 words):</i>
<p>In your opinion, can this recall campaign be considered as best practice?</p> <p><i>Please select applicable option(s) + add description</i></p> <p><i>Screenshots to be provided as justification</i></p>	<input type="checkbox"/> Indication of high rate of products returned (out of the total products recalled) <input type="checkbox"/> No damage to consumers (no incidents following recall) <input type="checkbox"/> Qualitative opinion of stakeholders regarding the effectiveness (if available) <input type="checkbox"/> Practice replicated in multiple sectors / countries <input type="checkbox"/> Communication methods used <input type="checkbox"/> Word-of-mouth spreading awareness <input type="checkbox"/> Ease of consumer participation in the recall <input type="checkbox"/> Remedies offered <input type="checkbox"/> Unique / innovative element of the recall campaign <input type="checkbox"/> Others (to specify)
	<i>Please describe and provide arguments (max. 100 words):</i>
Quantitative assessment of effectiveness of the recall campaign	
<p>Have there been any incidents / injuries reported related to the product following the</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>Insert text / figures:</i>

launch of the recall? If yes, how many?	
Do injuries continue to be reported? If yes, how many?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>Insert text / figures:</i>
Is there any indication of the cost of the recall to the recalling company?	<i>Insert text / figures:</i>
What is the proportion of affected consumers successfully contacted following the launch of the recall?	<i>Insert figures:</i>
What is the proportion of affected products remedied? (returned, repaired, refunded, disposed of etc.)	<i>Insert figures:</i>
What is the proportion of affected products that are still in use by consumers?	<i>Insert figures:</i>
What is the number of complaints related to the recall?	<i>Insert figures:</i>
Is there any other indication of the effectiveness of the recall (e.g. number of views/shares in social media)?	<i>Insert text / figures:</i>

Source: VVA

A5.2 Product registration

Table 22: Template used to obtain information on product registration (original format)

Basic information about a company / organisation	
Name of a company / organisation	<i>Insert text</i>
Website link	<i>Insert link</i>
Type of initiative <i>Please select one option</i>	<input type="checkbox"/> Manufacturer <input type="checkbox"/> Retailer <input type="checkbox"/> Industry association <input type="checkbox"/> National market authority
Country of registration	<i>Insert text</i>
Product category covered <i>Please select applicable option</i>	<input type="checkbox"/> Domestic electrical appliances (e.g. fridges, washing machines, coffee makers) <input type="checkbox"/> Communication devices (e.g. mobile phones, computers, accessories) <input type="checkbox"/> Children's articles and equipment (e.g. feeding equipment, high-chairs, pushchairs)

<p>Does the seller have a product registration scheme?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>Does the company have a dedicated section on the website called 'Register your product' or similar)?</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>Can you register / set-up a personal profile/account on the website without purchasing a product? (this means that there is no need to purchase the product to proceed with the online registration simulation)</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>Product registration scheme and consumer journey</p>	
<p>Link to the website with a product registration scheme</p>	
<p>Product selected for registration</p>	<p><i>Examples: - Fridge, laptop, pram</i></p>
<p>What is the type of product registration? <i>Please select applicable option</i></p>	<p><input type="checkbox"/> Voluntary & no additional incentives or encouragement <input type="checkbox"/> Voluntary & incentivised <input type="checkbox"/> Other (please specify)</p>
<p>How is the product registration incentivised? <i>Please select applicable option(s)</i></p>	<p><input type="checkbox"/> Extended warranty <input type="checkbox"/> Coupons / vouchers <input type="checkbox"/> In-store credit / discounts <input type="checkbox"/> Participation in a lottery (monetary incentive) <input type="checkbox"/> Enhanced technical support / free repair of device <input type="checkbox"/> Free updates about promotions / new products <input type="checkbox"/> Personalised after-sales support / information about compatible products <input type="checkbox"/> Other (please specify)</p>
<p>Types of incentives selected above <i>Please describe (max. 100 words)</i></p>	<p><i>Insert text</i></p>
<p>At which stage in the consumer journey is the registration scheme made available? <i>Please describe ((max. 100 words)</i></p> <p><i>Screenshots to be provided as justification</i></p>	<p><input type="checkbox"/> Product registration is done after consumer purchased a product (post-purchase registration on the website without time limit) <input type="checkbox"/> Product registration is done immediately after consumer purchased the product (post-purchase registration on the website with time limit) <input type="checkbox"/> Consumer receives information by email or other means regarding the possibility to register the product (post-purchase registration via follow-up communication) <input type="checkbox"/> Product registration is done at the same time as the purchase (product registration during sale) <input type="checkbox"/> Product registration is done during product delivery <input type="checkbox"/> Other (please specify)</p> <p><i>Description (max. 100 words):</i></p>

<p>Is there a product age limit for registration? (e.g. a product bought during a certain period)</p> <p><i>Screenshots to be provided as justification</i></p>	<p><input type="checkbox"/> Yes [... years] <input type="checkbox"/> No</p>
<p>Is registration also available to consumers who have not purchased the product from the company (e.g. to those who received it as a gift or bought it second-hand)?</p> <p><i>Screenshots to be provided as justification</i></p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>What process do consumers need to follow to register their product?</p> <p><i>Please select applicable option(s) Screenshots to be provided as justification</i></p>	<p><input type="checkbox"/> Fill out product registration form on company's website (or in-store) without setting up an account <input type="checkbox"/> Set-up and account on company's website <input type="checkbox"/> Register a product using a social media (Facebook, Google) identity (personal details are auto-filled) <input type="checkbox"/> Scan the product barcode / QR code online or in-store (product details are auto-filled)</p> <p><input type="checkbox"/> Confirm product registration via post purchase email received from a company <input type="checkbox"/> Register a product via mobile application <input type="checkbox"/> Register a product by phone <input type="checkbox"/> Register a product by e-mail <input type="checkbox"/> Subscribe to loyalty/membership scheme <input type="checkbox"/> Register a product through activation of customer's warranties <input type="checkbox"/> Other (please specify)</p>
<p>Detailed steps of the registration process</p> <p><i>Please describe (max. 100 words) If several options are selected above, please provide an overall summary of the processes across the various options.</i></p>	<p><i>Insert text</i></p>
<p>How long does the registration process take to complete?</p> <p><i>Please describe (max. 100 words) Provide a qualitative summary of the average timing across the selected options above.</i></p>	<p><i>Insert text</i></p>
<p>Which benefit is highlighted the most in the registration invite?</p> <p><i>Please select applicable option(s) Screenshots to be provided as justification</i></p>	<p><input type="checkbox"/> Ability to receive notifications in case of safety issues, e.g. a product recall <input type="checkbox"/> After-sale service and support (e.g. download of device manual) <input type="checkbox"/> Loyalty membership cards / subscriptions <input type="checkbox"/> Consumer incentives (e.g. extended warranty, immediate discount, vouchers) <input type="checkbox"/> Marketing / Sales (e.g. receiving information about new products and offers) <input type="checkbox"/> Other (please specify)</p>
<p>What is seen as the main purpose of the registration? (e.g. notification in case of the safety issue or general marketing)</p> <p><i>Please describe (max. 100 words)</i></p>	<p><i>Insert text</i></p>

<p>How does the invitation to register the product frame the main benefit of registration? <i>Please describe the message itself (max. 100 words)</i></p>	<p><i>In terms of:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Language: please describe [text] <input type="checkbox"/> Visuals: please describe [text] <input type="checkbox"/> Content: please describe [text]
<p>Does the invitation to register include a statement that customer contact details will <u>only</u> be used to communicate any issues with the product, including product safety? (and not for marketing purposes) <i>Please describe the message itself (max. 100 words)</i> <i>Screenshots to be provided as justification</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Yes <input type="checkbox"/> No <p><i>Please describe:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Language: [text] <input type="checkbox"/> Visuals: [text] <input type="checkbox"/> Content: [text]
<p>What kind of product information are customers asked to provide? <i>Screenshots to be provided as justification</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> Product code <input type="checkbox"/> Product model <input type="checkbox"/> Product series <input type="checkbox"/> Barcode <input type="checkbox"/> Data of purchase <input type="checkbox"/> Manufacturing date <input type="checkbox"/> Proof of purchase <input type="checkbox"/> Location of purchase (country / city/ specific address) <input type="checkbox"/> Store name where purchase was made <input type="checkbox"/> Purpose of product use (personal / professional) <input type="checkbox"/> Other (please specify)
<p>Which of the above-mentioned product information are mandatory fields?</p>	<p><i>Insert text</i></p>
<p>What kind of customer information are customers asked to provide? <i>Screenshots to be provided as justification</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> First name / Surname <input type="checkbox"/> E-mail address <input type="checkbox"/> Phone number <input type="checkbox"/> Exact address <input type="checkbox"/> Post code <input type="checkbox"/> Country <input type="checkbox"/> Personal information such as date of birth <input type="checkbox"/> Information about personal interests <input type="checkbox"/> Information about preferred communication channel /s <input type="checkbox"/> Other (please specify)
<p>Which of the above-mentioned customer information are mandatory fields?</p>	<p><i>Insert text</i></p>
<p>Are there any other features of the registration process that are not captured above? <i>Please describe (max. 100 words)</i> <i>Screenshots to be provided as justification</i></p>	<p><i>Insert text</i></p>
<p>What is the use of customer data collected through product registration schemes according to company's privacy / data policy? <i>Please describe (max. 100 words)</i> <i>Screenshots to be provided as justification</i></p>	<ul style="list-style-type: none"> <input type="checkbox"/> To contact customers in case of safety or other issues with the product <input type="checkbox"/> Newsletters <input type="checkbox"/> Direct marketing <input type="checkbox"/> After-sales support <input type="checkbox"/> Loyalty schemes <input type="checkbox"/> Other (please specify)

	<p><i>Description:</i></p>
<p>Does the company privacy / data policy envisage the use of customer data collected outside of product registration schemes for safety notifications? <i>Screenshots to be provided as justification</i> <i>Please select applicable option(s) + add description</i></p>	<p> <input type="checkbox"/> Data collected by a company during online sales <input type="checkbox"/> Data collected by a company via subscriptions to loyalty / membership programmes <input type="checkbox"/> Data collected by a company through digital receipts <input type="checkbox"/> Other (please specify) </p> <hr/> <p><i>Please describe the use of other customer data for safety notifications (max. 100 words):</i></p>
<p>Is the company privacy/data policy easy to find on the website or readily available at the point of sale?</p>	<p> <input type="checkbox"/> Yes <input type="checkbox"/> No </p>
<p>Qualitative assessment of effectiveness of the registration schemes in place</p>	
<p>In your opinion, does the registration scheme qualify as an effective one? <i>Please describe your perception of the registration process (max. 100 words)</i></p>	<p> <input type="checkbox"/> Innovative solution (e.g. using an app / QR code) <input type="checkbox"/> Ease and accessibility of registration (e.g. limited mandatory fields) <input type="checkbox"/> Types of incentives offered (e.g. encouraging consumer to register) Invitation to register is engaging (e.g. because of visuals, layout, appeal to consumers' private, family, or social concerns) <input type="checkbox"/> Other (please specify) </p>

Source: VVA

Annex 6 Stakeholder interview guides

This annex provides the guides for the semi-structured stakeholder interviews, for each type of stakeholder.

A6.1 Industry associations and companies

Recall communication and procedure

Question	Prompts
Q1: To what extent would you consider product recalls as being effective in your country?	
Q2: Which factors determine the propensity of a consumer to participate to a product recall campaign?	For example the product value, the expected lifespan, the type of risk, cultural factors or the socio-economic status of the consumer.
Q3: What current market practices linked to product recalls can you identify in your country? Are there any that are most prevalent for certain product types or categories?	For example in terms of consumers' reach out, offered remedies, incentives for participation, communication channels, etc. Are there any notables differences between products bought online and offline?
Q4: How do (your organisation's members/your company) usually announce product recalls? Are these compulsory or voluntary channels? To what extent are these channels effective?	For example via direct contact with consumers known to have the product (e.g. by letter, email or phone), on the company's website, on company's social media, through television campaigns, in newspaper advertisements or with newsletters
Q5: How burdensome is it typically for consumers to participate in a recall organised by (your organisation's members/your company)?	Do consumers bear the cost of postage, are non-portable products returned by consumers themselves or collected by the company?
Q6: What kind of remedies and how quickly are usually offered to consumers?	E.g. replacement, repair, self-repair, (partial/full) refund, voucher
Q7: Are there any extra incentives or sanctions being adopted?	E.g. coupons, free gifts/accessories, reducing or switching off the functionality of connected products, vehicle deregistration
Q8: Are there any specific public initiatives in your country that aim to enhance recall effectiveness? Could you share more information? Are you aware of such initiatives at EU and/or international level? How effective are they and what is missing?	
Q9: Can you think of a successful recall that could serve as an example of good practice? If so, what makes it effective in your opinion? Could you share more details: product type, notice type, timeline, access to consumers, costs etc.	
Q10: What improvements could be made to recall notices so consumers can better notice and understand them, but also follow up.	Better graphical presentation; Attention-grabbing headline; Clearer description of the recalled product, allowing for its easier identification; Clearer description

Question	Prompts
	of risk, avoiding misleading terms; Clearer description of the remedy available to consumers and of action consumers should take; Free phone number of online services, where consumers can get more information in national languages
<p>Q11: How do so you see the potential of standardising and simplifying recall information (i.e. specifying some key elements and ground rules applicable to all recall notices? What impact would it have on enterprises?</p>	
<p>Q12: What is the potential of Internet-connected products for product recalls? Are these different in comparison to other product categories? If yes, how and why?</p>	

Registration and consumer contact

Question	Prompts
<p>Q13: To the best of your knowledge, how easy or difficult is it to identify and contact consumers affected by product recalls in your country? What are the main issues?</p>	Are there any notable differences by product categories? Are there any notable differences between offline and online?
<p>Q14: <i>[Industry Associations only]</i> What is the share, approximately, of your members that provide product registration? Do these practices change by product types or categories? Online vs offline?</p>	
<p>Q15: <i>[Companies only]</i> Do you provide a product registration scheme to your consumers (for some or all your products)? If yes, do you use this information for safety purposes?</p>	
<p>Q16: Do data privacy concerns affect consumers' decisions as to whether or not to register a product online?</p>	For example, are consumers concerned when deciding to share their personal data in the context of product registration, loyalty programmes and online purchases even if these data are used for safety purposes
<p>Q17: <i>[Industry Associations only]</i> For companies that link product registration to safety, how do they persuade customers that there is a genuine link between product registration and safety?</p>	
<p>Q18: <i>[Companies only]</i> If your company links product registration to safety, how do you persuade customers that there is a genuine link between product registration and safety?</p>	
<p>Q19: In your opinion, how could companies contribute to increasing product registration rates? How could this be done (policy, legislative, soft intervention)?</p>	

Question	Prompts
<p>Q20: In addition to the above, do you consider that the following solutions could support companies in increasing registration rates?</p>	<p>Please ask opinion on following remedies - standardising and simplifying the registration forms; adding a statement that the data would be used for safety purposes only; having public authority vs. businesses as a messenger; reducing the amount of effort required (e.g. online registration and mobile scanning vs mailing); timing (registration at point/moment of sale in comparison to post-purchase registration, registration at delivery); different incentives or sanctions (both financial and non-financial), e.g. extended warranty or lack thereof)</p>
<p>Q21: Should sellers and/or manufacturers have the obligation to provide the possibility of registration to their consumers? If yes/no, why and for which product categories?</p>	<p>In the US, such obligation exists for durable childcare products</p>
<p>Q22: For certain product categories, should it be mandatory for consumers to register their product? If so, for which categories is this the case and why?</p>	<p>Registration already mandatory for cars</p>
<p>Q23: <i>[Industry Associations only]</i> To the best of your knowledge, to what extent is consumer data collected for marketing purposes (e.g. in the context of loyalty programmes, online sales, digital receipts) also used for product recall purposes by your members? Can you identify any good practice? Are consumers explicitly asked to consent to receiving safety notifications (e.g. when signing up to loyalty programmes)?</p>	
<p>Q24: <i>[Companies only]</i> Do you use data collected for marketing also for product recall purposes? Are your customers explicitly asked to consent to receiving safety notifications (e.g. when signing up to loyalty programmes)?</p>	
<p>Q25: How do you see the potential of connected products for product registration?</p>	<p>Registration request as part of device initialisation</p>

Economic impact

Question	Prompts
<p>Q26: Do you monitor the effectiveness of product recalls? If yes, how?</p>	
<p>Q27: How does a procedure of product recall impact a business and how disruptive is it for the business operations? How often does this happen?</p>	
<p>Q28: In case of small number of returned products, how damaging is it for businesses to have recalled products remaining in customers' hands? How do companies</p>	

Question	Prompts
assess this and what are the next steps in such cases?	
Q29: What is the cost of recalling products for industry and does this cost constitute an obstacle for enhancing recall effectiveness?	

Closing questions

Question	Prompts
Q30: Are there any other issues that you would like to point out and that have not been covered by the above questions?	

A6.2 Consumer organisations

Recall communication and procedure

Question	Prompts
Q1: What current market practices linked to product recalls can you identify in your country? Are there any such practices that are particularly prevalent for certain product categories or differences between online and offline purchases?	For example in terms of consumers' reach out approach, offered remedies, incentives for participation, communication channels, etc
Q2: To what extent would you consider product recalls as being effective in your country?	
Q3: Are there any specific public initiatives in your country that aim to enhance recall effectiveness? Could you share more information?	
Q4: Are you aware of such initiatives at EU and/or international level?	
Q5: In your opinion, what could be done at EU-level to enhance recall effectiveness in the short and medium term?	
Q6: Can you think of a successful recall campaign in your country that could serve as good practice? If so, what makes it effective in your opinion? Could you share	Ask to share more details: product type and registration form, notice type and timeline, access to consumers, costs etc.
Q7: What communication channels are typically used to announce product recalls? How would you rate their effectiveness?	
Q8: What is your organisation's involvement in the sharing of recall information?	Do you share recall announcements on your website, social media etc.?
Q9: What are consumers' expectations about the government's role in sharing recall information?	
Q10: How easy or burdensome is it typically for consumers to participate in a recall? How could their effort be reduced?	Do consumers bear the cost of postage, are non-portable products returned by consumers themselves or collected by the company?
Q11: How would you rate the attractiveness and speediness of remedies typically offered	E.g. replacement, repair, self-repair, (partial/full) refund, voucher

Question	Prompts
to consumers? What could be done to increase their attractiveness and speediness?	
Q12: Are any extra incentives or sanctions being adopted? How effective are sanctions to promote the participation to recall programmes?	E.g. coupons, free gifts/accessories, reducing or switching off the functionality of connected products, vehicle deregistration I.e. in Finland if vehicle's owner does not comply to the recall request the national authority adds a specific restriction on the public registry for the vehicle
Q13: What improvements could be made to recall notices so consumers can better notice and understand them, but also follow up?	Better graphical presentation; Attention-grabbing headline; Clearer description of the recalled product, allowing for its easier identification; Clearer description of risk, avoiding misleading terms; Clearer description of the remedy available to consumers and of action consumers should take; Free phone number of online services, where consumers can get more information in national languages
Q14: How do you see the potential of standardising and simplifying recall information (i.e. specifying some key elements and ground rules applicable to all recall notices)?	
Q15: To the best of your knowledge, how effective is word-of-mouth in recall products? If yes, how is this currently encouraged?	
Q16: What is the potential of Internet-connected products for product recalls? Are these different in comparison to other product categories? If yes, how and why?	

Registration and consumer contact

Question	Prompts
Q17: To the best of your knowledge, how easy or difficult is it to identify and contact consumers affected by product recalls in your country? What are the main issues?	Are there any notable differences by product categories? Are there any notable differences between offline and online?
Q18: To the best of your knowledge, what types of product registration are currently available to consumers in your country?	Are there any notable differences by product categories? Are there any notable differences between offline and online?
Q19: To what extent would you consider current market practices on product registration as being effective?	
Q20: Are there any public initiatives in your country that encourage product registration?	
Q21: Does your organisation promote product registration for safety purposes?	For example giving specific recommendations to economic operators

Question	Prompts
Q22: Do data privacy concerns affect consumers' decisions as to whether or not to register a product online?	Consumers' concerns on the use of provided contact details for marketing purposes
Q23: In your opinion, how best to communicate the link between product registration and safety to consumers?	
Q24: In your opinion, how could registration rates be increased?	Please ask opinion on following remedies - standardising and simplifying the registration forms; adding a statement that the data would be used for safety purposes only; having public authority vs. businesses as a messenger; reducing the amount of effort required (e.g. online registration and mobile scanning vs mailing); timing (registration at point/moment of sale in comparison to post-purchase registration, registration at delivery); different incentives or sanctions (both financial and non-financial), e.g. extended warranty or lack thereof)
Q25: Generally, do you consider that economic operators in your country could contribute to the increase of product registration? How this could be done (policy, legislative, soft intervention)?	
Q26: Should sellers and/or manufacturers have the obligation to provide the possibility of registration to their consumers? If yes/no, why and for which categories?	In the US, such obligation exists for durable childcare products
Q27: For certain product categories, should it be mandatory for consumers to register their product? If so, for which categories and why?	For example for consumer products that could require specific training for their use (e.g. drones)
Q28: To the best of your knowledge, to what extent is consumer data collected for marketing purposes (e.g. in the context of loyalty programmes, online sales, digital receipts) used also for product recall purposes in your country? Can you identify any good practice?	
Q29: What methods could be used to increase consumers' likelihood of consenting to receiving safety notifications and providing accurate data for this purpose e.g. when signing up to loyalty programmes?	Possibility to provide different email address / phone number specifically to receive safety notifications
Q30: Do you consider that companies that collect their customers' contact information should be obligated to make use of it in case there is a product recall? If yes/no, why?	
Q31: How do you see the potential of connected products for product registration?	Registration request as part of device initialisation

Economic impact

Question	Prompts
Q32: How would you estimate the economic impact of the ineffectiveness of recall campaigns? [i.e. the cost of recalled products remaining in consumers' hands]	

Closing questions

Question	Prompts
Q33: Are there any other issues that you would like to point out and that have not been covered by the above questions?	

A6.3 Online platforms

Online marketplaces that offer third-party products are a different type of actor than “retailers” or “distributors”, as they do not have access to physical products. According to EU rules, they are therefore not responsible for the safety of the product itself and do not themselves organise recalls or offer product registration.

At the same time, because online marketplaces have the possibility to directly identify consumers who have purchased a recalled product, they can play an important “facilitating” role in improving recall effectiveness. On top of the “notice and take-down” procedure of the E-commerce Directive^{48,49}, the signatories of the EU Product Safety Pledge (AliExpress, Allegro, Amazon, Cdiscount, eBay and Rakuten France) have adopted additional voluntary commitments, which include cooperating with EU Member State authorities and sellers to inform consumers about relevant recalls or corrective actions.⁵⁰

Recall communication and procedure

Question	Prompts
Q1: To what extent would you consider product recalls carried out by your sellers as being effective?	
Q2: Which factors determine the propensity of a consumer to participate to a product recall campaign?	For example the product value, the expected lifespan, the type of risk, cultural factors or the socio-economic status of the consumer
Q3: What sellers’ practices linked to product recalls can you identify? Are there any that are most prevalent for certain product types or categories?	For example in terms of consumers’ reach out, offered remedies, incentives for participation, communication channels, etc. Are there any notables differences

⁴⁸ Directive 2000/31/EC. Available at: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32000L0031>

⁴⁹ Intermediary service providers carrying out hosting activities may benefit under certain conditions from an exemption of liability. However, the liability exemption is subject to specific conditions. It only applies if the intermediary service providers have no actual knowledge or awareness of the information hosted (in this case the dangerous product) or, upon obtaining such knowledge or awareness, they act expeditiously to remove or to disable access to it. If hosting service providers do not fulfil these conditions, they are not covered by the liability exemption and thus they can be held liable for the content they host. For more information, see also the European Commission notice on the market surveillance of products sold online (2017/ 250/01), available at [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017XC0801\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017XC0801(01)&from=EN).

⁵⁰ The first progress report on the implementation of the Pledge was published in July 2019 and the second one in end 2019. The first report as available at https://ec.europa.eu/info/sites/info/files/product_safety_pledge_-_1st_progress_report.pdf. The second report is available at https://ec.europa.eu/info/sites/info/files/2nd_progress_report_product_safety_pledge_1.pdf.

Question	Prompts
	between products bought online and offline?
<p>Q4: Which procedures has your marketplace put in place to ensure cooperation with the authorities and sellers in case of a product recall?</p>	<p>E.g. is there a dedicated channel for sellers to inform the marketplace that they intend to recall a product?</p> <p>How can the authorities communicate about mandatory recalls to the marketplace?</p>
<p>Q5: Does your marketplace usually contact customers itself to inform them of a recall or do you let sellers do this? Why? What are the pros and cons of both approaches?</p>	
<p>Q6: <i>[If the online marketplace directly contacts customers]</i></p> <ul style="list-style-type: none"> ▪ Does your marketplace send a standardised message to consumers in case of a product recall or is it possible for sellers/authorities to customise this message? ▪ Can the consumer contact the seller if s/he has a question regarding the recall? More generally, can there be direct contacts between the seller and the consumer in this case? ▪ Is the recall message sent once or multiple times? 	
<p>Q7: <i>[In the online marketplace informs sellers and requests them to contact the customers]</i></p> <ul style="list-style-type: none"> ▪ Do you communicate customers' contact details to the seller or does the seller have them directly after the sale? ▪ Is such sharing envisaged by your privacy notice? ▪ In case the seller fails to contact the customers, do you take over this task? 	
<p>Q8: How do your sellers usually announce product recalls? Are these compulsory or voluntary channels? To what extent are these channels effective?</p>	<p>For example via direct contact with consumers known to have the product (e.g. by letter, email or phone), on the company's website, on company's social media, through television campaigns, in newspaper advertisements or with newsletters</p>
<p>Q9: How burdensome is it typically for consumers to participate in a recall organised by your marketplace's sellers?</p>	<p>Do consumers bear the cost of postage, are non-portable products returned by consumers themselves or collected by the company</p>
<p>Q10: What kind of remedies and how quickly are usually offered to consumers?</p>	<p>E.g. replacement, repair, self-repair, (partial/full) refund, voucher</p>
<p>Q11: Are there any extra incentives or sanctions being adopted?</p>	<p>E.g. coupons, free gifts/accessories, reducing or switching off the functionality of connected products, vehicle deregistration</p>

Question	Prompts
<p>Q12: Are there any specific public initiatives in your country that aim to enhance recall effectiveness? Could you share more information? Are you aware of such initiatives at EU and/or international level? How effective are they and what is missing?</p>	
<p>Q13: Can you think of a successful recall that could serve as an example of good practice? If so, what makes it effective in your opinion? Could you share more details: product type, notice type, timeline, access to consumers, costs etc.</p>	
<p>Q14: What improvements could be made to recall notices so consumers can better notice and understand them, but also follow up.</p>	<p>Better graphical presentation; Attention-grabbing headline; Clearer description of the recalled product, allowing for its easier identification; Clearer description of risk, avoiding misleading terms; Clearer description of the remedy available to consumers and of action consumers should take; Free phone number of online services, where consumers can get more information in national languages</p>
<p>Q15: How do so you see the potential of standardising and simplifying recall information (i.e. specifying some key elements and ground rules applicable to all recall notices? What impact would it have on enterprises?</p>	
<p>Q16: What is the potential of Internet-connected products for product recalls? Are these different in comparison to other product categories? If yes, how and why?</p>	

Registration and consumer contact

Question	Prompts
<p>Q17: To the best of your knowledge, how easy or difficult is it to identify and contact consumers affected by product recalls? What are the main issues?</p>	<p>Are there any notable differences by product categories? Are there any notable differences between offline and online?</p>
<p>Q18: What is the share, approximately, of your sellers that provide product registration? Do these practices change by product types or categories? Online vs offline?</p>	
<p>Q19: Do data privacy concerns affect consumers' decisions as to whether or not to register a product online?</p>	<p>For example, are consumers concerned when deciding to share their personal data in the context of product registration, loyalty programmes and online purchases even if these data are used for safety purposes</p>
<p>Q20: For companies that link product registration to safety, how do they persuade customers that there is a genuine link between product registration and safety?</p>	

Question	Prompts
<p>Q21: In your opinion, how could companies contribute to increasing product registration rates? How could this be done (policy, legislative, soft intervention)?</p>	
<p>Q22: In addition to the above, do you consider that the following solutions could support companies in increasing registration rates?</p>	<p>Please ask opinion on following remedies - standardising and simplifying the registration forms; adding a statement that the data would be used for safety purposes only; having public authority vs. businesses as a messenger; reducing the amount of effort required (e.g. online registration and mobile scanning vs mailing); timing (registration at point/moment of sale in comparison to post-purchase registration, registration at delivery); different incentives or sanctions (both financial and non-financial), e.g. extended warranty or lack thereof)</p>
<p>Q23: Should sellers and/or manufacturers have the obligation to provide the possibility of registration to their consumers? If yes/no, why and for which product categories?</p>	<p>In the US, such obligation exists for durable childcare products</p>
<p>Q24: For certain product categories, should it be mandatory for consumers to register their product? If so, for which categories is this the case and why?</p>	<p>Registration already mandatory for cars</p>
<p>Q25: To the best of your knowledge, to what extent is consumer data collected for marketing purposes (e.g. in the context of loyalty programmes, online sales, digital receipts) also used for product recall purposes by your members? Can you identify any good practice? Are consumers explicitly asked to consent to receiving safety notifications (e.g. when signing up to loyalty programmes)?</p>	
<p>Q26: Do you use data collected for marketing also for product recall purposes? Are your customers explicitly asked to consent to receiving safety notifications (e.g. when signing up to loyalty programmes)?</p>	
<p>Q27: How do you see the potential of connected products for product registration?</p>	<p>Registration request as part of device initialisation</p>

Economic impact

Question	Prompts
<p>Q28: Do you monitor the effectiveness of product recalls? If yes, how?</p>	
<p>Q29: How does a procedure of product recall impact a business and how disruptive is it for the business operations? How often does this happen?</p>	

Question	Prompts
Q30: In case of small number of returned products, how damaging is it for businesses to have recalled products remaining in customers' hands? How do companies assess this and what are the next steps in such cases?	
Q31: What is the cost of recalling products for industry and does this cost constitute an obstacle for enhancing recall effectiveness?	

Closing questions

Question	Prompts
Q32: Are there any other issues that you would like to point out and that have not been covered by the above questions?	

A6.4 Market authorities

Recall communication and procedure

Question	Prompts
Q1: What is your authority's involvement in the recall process?	<p>Role in pre-approving recall strategy and communication and in sharing or publicizing recall information</p> <p><i>Prompt for motor vehicles authorities: ask also if they are responsible for the vehicle registry or if that is a separate entity, if they contact the vehicle owner directly or share vehicle owner's contact details with manufacturers/distributors</i></p>
Q2: To what extent would you consider product recalls as being effective in your country?	
Q3: Are there any specific public initiatives in your country that aim to enhance recall effectiveness? Could you share more information?	
Q4: Are you aware of such initiatives at EU and/or international level?	
Q5: In your opinion, what could be done at EU-level to enhance recall effectiveness in the short and medium term?	
Q6: Can you think of a successful recall campaign in your country that could serve as good practice? If so, what makes it effective in your opinion? Could you share	Ask to share more details: product type and registration form, notice type and timeline, access to consumers, costs etc.
Q7: What communication channels are typically used to announce product recalls? How would you rate their effectiveness?	<i>Prompt for motor vehicles authorities: in addition to letters to vehicle owners, do you or the manufacturers/distributors use other communication channels? Are these effective?</i>

Question	Prompts
Q8: How easy or burdensome is it typically for consumers to participate in a recall? How could their effort be reduced?	Do consumers bear the cost of postage, are non-portable products returned by consumers themselves or collected by the company?
Q9: How would you rate the attractiveness and speediness of remedies typically offered to consumers? What could be done to increase their attractiveness and speediness?	E.g. replacement, repair, self-repair, (partial/full) refund, voucher
Q10: Are any extra incentives or sanctions being adopted?	E.g. coupons, free gifts/accessories, reducing or switching off the functionality of connected products, vehicle deregistration <i>Prompt for motor vehicles authorities: do you use sanctions to promote the participation (use of special notes on the public registry, communication to other law enforcement authorities)?</i>
Q11: What improvements could be made to recall notices so consumers can better notice and understand them, but also follow up?	Provide following solutions - Better graphical presentation; Attention-grabbing headline; Clearer description of the recalled product, allowing for its easier identification; Clearer description of risk, avoiding misleading terms; Clearer description of the remedy available to consumers and of action consumers should take; Free phone number of online services, where consumers can get more information in national languages <i>Prompt for motor vehicle authorities: do you use a standard format for recall notifications which manufacturers/distributors must use? Could you please describe the structure and the recall notice and if some behavioural nudges have been used to encourage participation?</i>
Q12: How do you see the potential of standardising and simplifying recall information (i.e. specifying some key elements and ground rules applicable to all recall notices)?	<i>Prompt for motor vehicles authorities: do not make this question if they already use a standard communication template</i>
Q13: What is the potential of Internet-connected products for product recalls? Are these different in comparison to other product categories? If yes, how and why?	

Registration and consumer contact

Note for motor vehicle authorities: these questions are not relevant since registration of vehicles is mandatory

Question	Prompts
Q14: To the best of your knowledge, how easy or difficult is it to identify and contact consumers affected by product recalls in your country? What are the main issues?	Please ask to describe notable differences by product categories or notable differences between offline and online purchases
Q15: Can you identify any issues related to the use of data for safety purposes in your country when it comes to recalls?	Issues linked to GDPR and consumers' authorization to share personal information
Q16: What are the most prevalent types of registration used by consumers in your country? Are there any notable differences between offline and online?	
Q17: To what extent would you consider current market practices on product registration as being effective? Which solutions might increase such effectiveness?	
Q18: Does your authority promote product registration for safety purposes?	For example giving specific recommendations to economic operators
Q19: Are there any public initiatives in your country that encourage product registration?	
Q20: Do data privacy concerns affect consumers' decisions as to whether or not to register a product online? Does your authority provide recommendations on this issue?	Consumers' concerns on the use of provided contact details for marketing purposes
Q21: In your opinion, how best to communicate the link between product registration and safety to consumers?	
Q22: In your opinion, how could registration rates be increased?	Please ask opinion of following remedies - standardising and simplifying the registration forms; adding a statement that the data would be used for safety purposes only; having public authority vs. businesses as a messenger; reducing the amount of effort required (e.g. online registration and mobile scanning vs mailing); timing (registration at point/moment of sale in comparison to post-purchase registration, registration at delivery); different incentives or sanctions (both financial and non-financial), e.g. extended warranty or lack thereof)
Q23: Should sellers and/or manufacturers have the obligation to provide the possibility of registration to their consumers? If yes/no, why and for which categories?	In the US, such obligation exists for durable childcare products
Q24: Do you consider that mandatory registration of certain product categories should exist? If yes/no, why?	For example for consumer products that could require specific training for their use (e.g. drones)
Q25: To the best of your knowledge, to what extent is consumer data collected for marketing purposes (e.g. in the context of loyalty programmes, online sales, digital receipts) used also for product recall	

Question	Prompts
purposes in your country? Can you identify any good practice?	
Q26: What methods could be used to increase consumers' likelihood of consenting to receiving safety notifications and providing accurate data for this purpose e.g. when signing up to loyalty programmes?	Possibility to provide different email address / phone number specifically to receive safety notifications
Q27: Do you consider that companies that collect their customers' contact information should be obligated to make use of it in case there is a product recall? If yes/no, why?	
Q28: How do you see the potential of connected products for product registration?	Registration request as part of device initialisation

Economic impact

Question	Prompts
Q29: How do you define the "effectiveness" of a recall campaign? Do you collect data on the effectiveness of recalls campaigns? If yes, how?	
Q30: What is the cost for companies to implement a product recall? Does it constitute an obstacle for enhancing recall effectiveness?	

Closing questions

Question	Prompts
Q31: Are there any other issues that you would like to point out and that have not been covered by the above questions?	

A6.5 Academics and experts

Recall communication and procedure

Question	Prompts
Q1: Which levers determine the propensity of a consumer to participate in a product recall?	For example the product value, the expected lifespan, the type of risk, cultural factors or the socio-economic status of the consumer, whether the risk is framed as a personal risk, risk to family, environment etc.
Q2: How are consumers influenced when it comes to deciding to return a recalled product?	For example, does consumers' recall behaviour change if the product risk is a personal risk, a risk to children, a risk to the environment, a risk to others in society?
Q3: How do consumers perceive the government's role in sharing safety information and what are their expectations? Are you aware of any research (in your country) on this issue?	

Question	Prompts
Q4: Do consumers in your country trust information from the government to a higher extent than information from the private sector? Are you aware of any research (in your country) that could support this view?	
Q5: What about information shared by economic operators and informal sources (such as family, friends, online blogs)?	
Q6: What improvements can be made to recall notices so consumers can better notice and understand them, but also follow up.	Better graphical presentation; Attention-grabbing headline; Clearer description of the recalled product, allowing for its easier identification; Clearer description of risk, avoiding misleading terms; Clearer description of the remedy available to consumers and of action consumers should take; Free phone number of online services, where consumers can get more information in national languages
Q7: How do so you see the potential of standardising and simplifying recall information (i.e. specifying some key elements and ground rules applicable to all recall notices)?	
Q8: How do you see the potential of different message framing and persuasion techniques, e.g. to encourage positive social norms around recalls?	
Q9: To the best of your knowledge, how effective is word-of-mouth in recall products? If yes, how is this currently encouraged?	
Q10: To what extent are different communication channels, including specialised online groups/for and the use of social media, effective in reaching consumers of different demographics?	

Registration and consumer contact

Question	Prompts
Q11: What factors influence the likelihood of consumers registering their products?	For example propensity to register the product depends on the product value, the expected lifespan, the incentives that are given, the additional services that would be provided, or cultural factors or the socio-economic status of the consumer
Q12: Do data privacy concerns affect consumers' decisions as to whether or not to register a product online?	
Q13: To the best of your knowledge, what registration schemes are available to consumers in your country? Are there any patterns that you could share (product	

Question	Prompts
categories etc.)? Are there any notable differences between offline and online?	
Q14: To what extent do you consider existing schemes as effective? Why?	
Q15: In your opinion, how could consumers be persuaded that there is a link between product registration and safety? Would this increase the registration rates?	
Q16: In your opinion, which solutions might lead to an increase of voluntary registration rates?	Please ask opinion on following remedies - standardising and simplifying the registration forms; adding a statement that the data would be used for safety purposes only; having public authority vs. businesses as a messenger; reducing the amount of effort required (e.g. online registration and mobile scanning vs mailing); timing (registration at point/moment of sale in comparison to post-purchase registration, registration at delivery); different incentives or sanctions (both financial and non-financial), e.g. extended warranty or lack thereof)
Q17: Generally, do you consider that economic operators in your country could contribute to the increase of product registration? How this could be done (policy, legislative, soft intervention)?	
Q18: In your opinion, should there be a difference in terms of requirements to register a product for online and offline purchases?	
Q19: To the best of your knowledge, what effects could have on sellers and/or manufacturers an obligation to provide registration possibility to their consumers? If yes/no, why?	
Q20: Do you consider that companies that collect their customers' contact information should be obligated to make use of it in case there is a product recall? If yes/no, why?	
Q21: How do you see the potential of connected products for product registration?	Registration request as part of device initialisation

Economic impact

Question	Prompts
Q22: Are you aware of studies on the societal economic costs of the ineffectiveness of recall campaigns? [i.e. the cost of recalled products remaining in consumers' hands]	
Q23: Are you aware of studies on the economic impact of product recalls on businesses? To what extent these costs may	

Question	Prompts
be an obstacle for enhancing recall effectiveness?	

Closing questions

Question	Prompts
Q24: Are there any other issues that you would like to point out and that have not been covered by the above questions?	

A6.6 List of conducted interviews

Table 23: List of organisations interviewed

Name of interviewee	Category of stakeholder	Country / EU level
Federal Public Service (FPS) Economy, SME's, Self-employed and Energy	Market authority	Belgium
SPF Economie, P.M.E, Classes Moyennes et Energie	Market authority	Belgium
Ministry of Economy, Energy & Tourism - Consumer Protection Directorate	Market authority	Bulgaria
Sector for supervision of trade, services and consumer protection	Industry association	Croatia
Czech Trade Inspection Authority	Market authority	Czechia
Ministry of Environment and Food	Market authority	Denmark
Danish Safety Technology Authority	Market authority	Denmark
Verband der Deutschen Möbelindustrie e.V. (Association of the German furniture industry)	Industry association	Germany
Bundesverband des Elektro-Großhandels (Federal Association of the Electrical Wholesale Trade)	Industry association	Germany
Driver and Vehicle Computer Services Division, Department of Transport, Tourism and Sport	Industry association	Ireland
Competition and Consumer Protection Commission	Market authority	Ireland
Consumer Rights Protection Centre PTAC	Consumer organisation	Latvia
Asociación Española de Fabricantes de Juguetes (AEFJ) (Spanish Association of Toys Manufacturers)	Industry association	Spain
Asociación de Fabricantes de Material Eléctrico (AFME) (Spanish Association of Electric Materials Manufacturers)	Industry association	Spain
Consumidores en Acción (Consumer Association)	Consumer organisation	Spain
ANEC – the European consumer voice in standardisation	Consumer organisation	EU level
ACEM – the Motorcycle Industry in Europe	Industry association	EU level
BEUC – The European Consumer Organisation	Consumer organisation	EU level

Name of interviewee	Category of stakeholder	Country / EU level
Eurocommerce	Industry association	EU level
European Nursery Products Confederation	Industry association	EU level
TIC Council	Industry association	EU level
Schneider Electric	Company	EU level
Amazon	Online marketplace	EU level
Digital Europe	Industry association	EU level
<i>Academic</i>	Academic	EU level
Australian Competition and Consumer Commission	Consumer organisation	Australia (Third country)
Health Canada	Market authority	Canada (Third country)
IKEA	Company	EU level
National Association for Consumers' Protection	Consumer organisation	Bulgaria
Consumers' Protection Commission	Market authority	Bulgaria
State Agency for Metrological and Technical Surveillance	Market authority	Bulgaria
Juvenile Products Manufacturers Association	Industry association	United States (Third country)
Toy Industries of Europe	Industry association	EU level
Defesa do Consumidor	Consumer organisation	Portugal
Ministry of Economics	Market authority	Latvia
Ministry of Health Inspectorate	Market authority	Latvia
APPLIA Denmark	Industry association	Denmark
RAPEX Team, European Commission	Expert	EU level
Premier Farnell (electrical goods)	Manufacturer	United Kingdom (Third country)
Lewden (electrical goods)	Manufacturer	United Kingdom (Third country)
Universal Honda Ltd.	Company	Ireland
Salling Group	Company	Denmark
Nederman	Manufacturer	Denmark
BSH Hausgeräte GmbH	Manufacturer	EU level
Audi	Manufacturer	EU level
eBay	Online platform	EU level
AliExpress	Online platform	EU level
Whirlpool	Manufacturer	United Kingdom (Third country)

Name of interviewee	Category of stakeholder	Country / EU level
AMDEA	Industry association	United Kingdom (Third country)

Annex 7 Industry survey

The following colour coding is used for the industry survey as outlined below.

- Blue text indicates programming instructions
- Grey text indicates text which is shown to participants in the experiment (except for question numbers)

A7.1 Introduction

Product recall is one of the main ways that producers, distributors and authorities can work together to reduce the risks posed by dangerous products, potentially saving lives.

As part of a wider behavioural study on strategies to maximise the effectiveness of product recalls, we are conducting a survey on behalf of the European Commission to learn more about industry practices on product recall and product registration.

The survey is available in English, French, German, Bulgarian and Spanish (you can select your preferred language in the top right corner).

We expect that filling out the survey will take maximum 20 minutes. If you cannot complete the survey in one session, please press the 'Save and continue later' button and provide an email address, to which we will send you a unique link that will allow you to pick up where you left off.

All information you provide will be treated with the utmost care and only presented in an aggregated and anonymised manner

A7.2 Screening questions

Q1: Type of stakeholder (multiple answers possible):

Multiple answer possible

- 1) Manufacturer
- 2) Wholesaler
- 3) Retailer (brick & mortar)
- 4) Retailer (online shop)

Q2: Products sold (multiple answers possible):

Multiple answer possible

- 1) Toys/games for children (of less than 14 years old)
- 2) Personal cars and motorcycles
- 3) Clothing and footwear (including sports gear)
- 4) Domestic electrical appliances (e.g. fridges, washing machines, coffee makers)
- 5) Communication devices (e.g. mobile phones, computers, accessories)
- 6) Childcare articles and children's equipment (e.g. feeding equipment, high-chairs, pushchairs)
- 7) Furniture
- 8) Other (please specify): [\[Show open field\]](#)

Q3: Size of company:

Single answer only

- 1) Micro (fewer than 10 employees)
- 2) Small (between 10 and 50 employees)

- 3) Medium-sized (between 51 and 250 employees)
- 4) Large (>250 employees)

Q4: Please select all countries of operations (multiple choice):

Multiple answer possible

- 1) Austria
- 2) Belgium
- 3) Bulgaria
- 4) Croatia
- 5) Cyprus
- 6) Czechia
- 7) Denmark
- 8) Estonia
- 9) Finland
- 10) France
- 11) Germany
- 12) Greece
- 13) Hungary
- 14) Iceland
- 15) Ireland
- 16) Italy
- 17) Latvia
- 18) Liechtenstein
- 19) Lithuania
- 20) Luxembourg
- 21) Malta
- 22) Netherlands
- 23) Norway
- 24) Poland
- 25) Portugal
- 26) Romania
- 27) Slovakia
- 28) Slovenia
- 29) Spain
- 30) Sweden
- 31) Switzerland
- 32) United Kingdom
- 33) United States
- 34) Canada
- 35) Australia
- 36) Other (please specify): [\[Show open field\]](#)

Q5: Name of the organisation (optional):

[\[Show open field\]](#)

A7.3 Product registration and other methods of identifying customers in case of a product recall

Q6: Do you offer your customers the possibility to register their products?

Single answer only

- 1) Yes
- 2) No

Q7 [\[Show only if Q6 = Yes\]](#): For which of the following product categories is registration possible? (please select all that apply)

Multiple answer possible

- 1) Toys/games for children
- 2) Personal cars and motorcycles
- 3) Clothing and footwear
- 4) Domestic electrical appliances
- 5) Communication devices
- 6) Childcare articles and children's equipment
- 7) Furniture
- 8) Other (please specify): [\[Show open field\]](#)

Q8 [\[Show only if Q6 = Yes\]](#): Which of the following registration methods are currently offered to your customers for registering their products and how would you rate their effectiveness? (please select all that apply)

Q8a: At the moment of sale

Grid question: single answer per row

Answer options shown in the columns

- 1) Not applicable (registration method not offered)
- 2) 1 = Not at all effective
- 3) 2 = Not very effective
- 4) 3 = Somewhat effective
- 5) 4 = Effective
- 6) 5 = Very effective

Registration method shown per row

- 1) In-store
- 2) Online

Q8b: Post-purchase

Grid question: single answer per row

Answer options shown in the columns

- 1) Not applicable (registration method not offered)
- 2) 1 = Not at all effective
- 3) 2 = Not very effective
- 4) 3 = Somewhat effective
- 5) 4 = Effective
- 6) 5 = Very effective

Registration method shown per row

- 1) Through a pre-paid return product registration form
- 2) On our company's website
- 3) On our company's website via membership of a loyalty scheme/card
- 4) On the website of another company, industry association or other organisation
- 5) Registration by phone
- 6) Registration by e-mail
- 7) Mobile scanning with a QR code
- 8) Registration at delivery

Q8c: Other (please specify):

[\[Show open field\]](#)

Q9 [Show only if Q6 = Yes]: If you selected more than one registration method, please explain if the registration method differs by product category and why.

[Show open field]

Q10 [Show only if Q6 = Yes]: For those product categories where registration is possible, please estimate the percentage of products sold per category that are registered.

- Toys/games for children: [Show open field]
- Personal cars and motorcycles: [Show open field]
- Clothing and footwear: [Show open field]
- Domestic electrical appliances: [Show open field]
- Communication devices: [Show open field]
- Childcare articles and children's equipment: [Show open field]
- Furniture: [Show open field]
- Other (please specify): [Show open field]

Comments

[Show open field]

Q11 [Show only if Q6 = Yes]: In your opinion, how could registration rates be increased?

[Show open field]

Q12 [Show only if Q6 = Yes]: Do you offer any incentives to encourage product registration among your customers, e.g. extended warranty, coupons/vouchers? Please specify.

[Show open field]

Q13 [Show only if Q6 = Yes]: Do you use customer information obtained through product registration for the following purposes? (Please select all that apply)

Multiple answer possible

- 1) To contact customers in case of safety issues, e.g. a product recall
- 2) To offer after-sale service and support
- 3) To send information about new products and special offers

Q14: Do you use customer data collected for other purposes (e.g. loyalty schemes, online sales, digital receipts etc.) to contact customers in case there is a safety issue with their product?

Single answer only

- 1) Yes
- 2) No
- 3) Not applicable (my company does not collect customer data)

Q15 [Show only if Q14 = To contact customers in case of safety issues, e.g. a product recall OR Q15 = Yes]: Which of the following means of communication do you use to contact customers in case of safety issues? (Please select all that apply.)

Multiple answer possible

- 1) Email
- 2) Phone call
- 3) Text message or push notifications via mobile
- 4) Letter
- 5) Other (please specify): [Show open field]

A7.4 Current practices on product recalls

Q16: Have you recalled a product from end consumers in the past 5 years to avoid a risk to health or safety?

Single answer only

- 1) Yes. Please indicate how many times: [Show open field]
- 2) No

Q17 [Show only if Q16 = Yes]: Please indicate which of the following product categories were concerned by the product recall. (Please select all that apply).

Multiple answer possible

- 1) Toys/games for children
- 2) Personal cars and motorcycles
- 3) Clothing and footwear
- 4) Domestic electrical appliances
- 5) Communication devices
- 6) Childcare articles and children's equipment
- 7) Furniture
- 8) Other (please specify): [Show open field]

Q18 [Show only if Q16 = Yes]: Could you estimate the percentage of your company's products sold on the EU market that has been recalled over the past 5 years for each of the following product categories?

- Toys/games for children: [Show open field]
- Personal cars and motorcycles: [Show open field]
- Clothing and footwear: [Show open field]
- Domestic electrical appliances: [Show open field]
- Communication devices: [Show open field]
- Childcare articles and children's equipment: [Show open field]
- Furniture: [Show open field]
- Other (please specify): [Show open field]

Comments

[Show open field]

Q19 [Show only if Q16 = Yes]: Could you estimate the percentage of products that your company has successfully retrieved from consumers following a product recall over the past 5 years?

- Toys/games for children: [Show open field]
- Personal cars and motorcycles: [Show open field]
- Clothing and footwear: [Show open field]
- Domestic electrical appliances: [Show open field]
- Communication devices: [Show open field]
- Childcare articles and children's equipment: [Show open field]
- Furniture: [Show open field]
- Other (please specify): [Show open field]

Comments

[Show open field]

Q20 [Show only if Q16 = Yes]: Have you ever used one of the following channels to encourage customer participation in a product recall? (Please select all that apply)

Multiple answer possible

- 1) Direct contact with consumers known to have the product (e.g. by letter, email or phone)
- 2) Your company's website
- 3) Your company's social media
- 4) Television campaigns
- 5) Newspaper advertisements
- 6) Newsletters
- 7) Influencers
- 8) Specialised online groups / fora
- 9) Other (please specify): [Show open field]

Q21 [Show only if Q16 = Yes]: In your opinion, which channels prove most impactful in encouraging consumers to participate in a product recall?

Grid question: single answer per row

Answer options shown in the columns

- 1) 1 = Not at all effective
- 2) 2 = Not very effective
- 3) 3 = Somewhat effective
- 4) 4 = Effective
- 5) 5 = Very effective

Channel shown per row

- 1) Direct contact with consumers known to have the product (e.g. by letter, email or phone)
- 2) Your company's website
- 3) Your company's social media
- 4) Television campaigns
- 5) Newspaper advertisements
- 6) Newsletters
- 7) Influencers
- 8) Specialised online groups / fora
- 9) Other (please specify)

Comments

[Show open field]

Q22 [Show only if Q16 = Yes]: In your opinion, how could the effectiveness of product recalls be increased?

[Show open field]

Q23 [Show only if Q16 = Yes]: Do you monitor the effectiveness of product recalls? If so, please provide details as to how you do this.

[Show open field]

Q24 [Show only if Q16 = Yes]: Can you estimate the approximate overall burden (in terms of required hours) for consumers to participate in your company's recall programmes?

[Show open field]

Q25 [Show only if Q16 = Yes]: Could you suggest any solutions to reduce this burden? (Please specify.)

[Show open field]

Q26 [Show only if Q16 = Yes]: Do you use any incentives/sanctions to enhance the effectiveness of product recalls? Please specify.

[Show open field]

Q27 [Show only if Q16 = Yes]: Could you estimate the cost for your company related to the last/average product recall?

Grid question: open response per cell in the grid

Text in columns

- 1) Estimated cost in EUR
- 2) Estimated cost in % of annual turnover

Text in rows

- 1) Operational damage related to disruption to operations while managing a recall
- 2) Direct costs of implementing a recall (e.g. cost of collecting repairing/replacing/refunding/destroying recalled products, paid recall announcements etc.)
- 3) Indirect costs (e.g. negative impact on reputation from incidents caused by recalled products)
- 4) Other costs (please specify)

Q28: Do you have a written procedure in place in case a product needs to be recalled from end consumers to avoid a risk to health or safety? (single choice).

Single answer only

- 1) Yes
- 2) No

Q29 [Show only if Q28 = Yes]: If you answered yes, could you please describe what the procedure is in case a product needs to be recalled?

[Show open field]

Q30 [Show only if Q16 = No AND Q28 = Yes]: Does the procedure envisage the use of one of the following channels to encourage customer participation in a product recall? (Please select all that apply)

Multiple answer possible

- 1) Direct contact with consumers known to have the product (e.g. by letter, email or phone)
- 2) Your company's website
- 3) Your company's social media
- 4) Television campaigns
- 5) Newspaper advertisements
- 6) Newsletters
- 7) Influencers
- 8) Specialised online groups / fora
- 9) Other (please specify): [Show open field]

Q31 [Show only if Q16 = No AND Q28 = Yes]: Does the procedure envisage the monitoring of the effectiveness of product recalls? If so, please provide details as to how you do this.

[Show open field]

Q32 [Show only if Q16 = No AND Q28 = Yes]: Does the procedure envisage the use any incentives/sanctions to enhance the effectiveness of product recalls? Please specify.

[Show open field]

Q33: Does your company have an insurance policy covering potential product recalls?

NB The survey is not sponsored by any business/industry and will not be used for any commercial purposes.

Single answer only

- 1) Yes
- 2) No

Q34 [Show only if Q33 = Yes]: If yes, could you indicate the approximate cost of your insurance policy covering potential product recalls?

- In EUR: [Show open field]
- In % of your annual turnover: [Show open field]

Q35 [Show only if Q33 = No]: If no, how much would your company be willing to pay for such insurance covering potential product recalls?

- In EUR: [Show open field]
- In % of your annual turnover: [Show open field]

A7.5 Closing

Thank you for your time!

Please tick the following box if you agree to be contacted for a follow-up interview.

I agree to be contacted for a follow-up interview.

In the case that you do consent to being contact for a follow up interview, please complete the following:

- Name of interviewee: [Show open field]
- Your position in the organisation: [Show open field]
- Contact email or contact number: [Show open field]

Thank you for your time! Your response is very important to us.

Annex 8 Focus group discussion guide

The number in parentheses in the section headings denotes the approximate time available in the focus groups for the respective section.

A8.1 Presentation and introduction to the study (5 min.)

Introduce self and Ipsos. Explain that the research is conducted on behalf of the European Commission. Present the research context: We are conducting focus groups in four countries (Bulgaria, Germany, Ireland and Portugal) and the results will be used in the context of a larger study of the European Commission. The focus groups will help to find out what is and what isn't working and what can be done better in terms of **product registration and recall notification**, to get consumers to act on a recall. Study about product registration and product recall for **non-food products**, such as electrical appliances, children's articles and equipment, furniture etc. The study does not look at medicines and medical equipment.

Reassure that no previous knowledge is required, and that there are no right or wrong answers – we want to understand participants' views and experiences.

Confidentiality: reassure participants that they are not being judged and that any information provided will not be followed up with them in person in any way. Get permission to record – transcribe for quotes, no detailed attribution. Recording will only be shared with the Ipsos research team.

Say that the session will last approximately 90 minutes. Explain other rules; mobile phones off, refreshments, etc. Ask if there are any questions before you start.

Allow participants to introduce themselves:

Before we start, may I ask each of you to introduce yourselves briefly – just by saying a few things such as what your first name is, what you do for a living, and anything else about yourself that you would like to share with us.

A8.2 Warm-up: General questions (5 min.)

Let's start with a few general questions.

- When you buy [an electrical appliance/furniture], what are the most important factors that you take into account to make a choice? Probe: Brand, performance, customer reviews, ... safety?
- And do you sometimes shop online? Which products?

A8.3 Awareness and attitudes towards product registration (5 min.)

Let's now talk about product registration.

Certain products, such as electrical appliances, can be registered with the manufacturer after you purchase the product. This registration is usually done on the manufacturer's website or by returning a form by post; as part of the process, you need to provide your contact details.

- Did you know that product can be registered with the manufacturer?
- Do you typically register products after purchasing them?
- Which products do you register? Which not? **Probe:** Linked to product value, expected lifespan?
- What motivates you (not) to register products?
- Why do manufacturers ask you to register a product?

Moderator Instruction: do not yet probe – initial discussion; the discussion will continue after looking at example invitations.

A8.4 Example invitations to register a product (10 min.)

Let’s have a look at some invitations, used by different manufacturers, to register a washing machine. Imagine that you have bought a washing machine, and with the delivery of the machine you receive **a card prompting you to register the product**.

Which of these invitations would make you most likely to register the washing machine? Why?

Focus group participants were shown four hypothetical invitations, or ‘messages’, to register a washing machine, displayed below.

<p>Thank you for buying one of our state-of-the-art washing machines. Make sure to register it so that you can keep track of your warranty and easily order replacement parts for your machine.</p> <p>Please visit registration.com</p>	<p>Thank you for buying one of our state-of-the-art washing machines. Make sure to register it so that we can contact you in case there are any issues with your product.</p> <p>Please visit registration.com</p>
<p>Thank you for buying one of our state-of-the-art washing machines. Make sure to register it so that we can contact you in case there are any issues with your product. This may prevent injury in your home and even save lives.</p> <p>Please visit registration.com</p>	<p>Thank you for buying one of our state-of-the-art washing machines. Make sure to register it so that we can contact you in case there are any issues with your product. The information will never be used for marketing purposes and will not be transferred to third parties.</p> <p>Please visit registration.com</p>

Which of these invitations would make you most likely to register the washing machine? Why?

Have you come across invitation using similar language? Probe: Safety reasons/reassuring language (not used for marketing purposes)?

A8.5 Attitudes towards product registration [cont.] (10 min.)

Moderator instruction: continue to the discussion about reasons (not) to register.

Probe to find out to what extent group participants are aware of the **benefits of product registration** (i.e. enable manufacturers to contact them directly in the event of **a recall due to safety reasons**). Also probe for **concerns** about registration (**privacy, only used for marketing purposes**).

Ask participants that do not (regularly) register products: Would you be more inclined to complete a product registration form if you knew that manufacturers use registration forms to enable them to contact you in the event of a recall due to safety reasons? **Explain, if necessary:** You are probably aware that sometimes products have to be recalled by the manufacturer, often for safety reasons. For example, IKEA organised the recall of some of their furniture that was not stable enough and could fall over and cause serious injuries to people, particularly children.

Let’s close the topic of product registration with one last question on the **registration process** itself.

- Think back about the last time you registered a product. How did you register the product? *Describe your experience.*

- At what stage would you like to complete a product registration form? **Probe:** at the point/moment of sale vs. post-purchase registration (using an online form/paper form included in packaging/at delivery) etc.

A8.6 Spontaneous perceptions of product safety and product recalls (10 min.)

Let's continue with the topic of "**product safety**". We would like to understand your views about:

- What constitutes a "safe" product? What makes a product "unsafe"?
- Which products are particularly likely to be safe?
- Which products carry a risk of being unsafe?

Start discussing generally, focusing only on non-food products, then probe for more insight on [electrical appliances/furniture]

I mentioned earlier that **sometimes products have to be recalled** by the manufacturer, usually for safety reasons.

- Which products can be subject to product recalls? *Probe for [PRODUCTS CATEGORIES COVERED BY THE STUDY]*
- Have you recently seen any recall announcements? Where? **Probe:** newspaper, in store, website of shop, social media? Which product was it about?
- Have any of you ever been impacted by a recall? Have you ever bought a product that has later been recalled? *If any participants have experienced a recall, ask them to shortly describe their experience. Did they take action or not?*

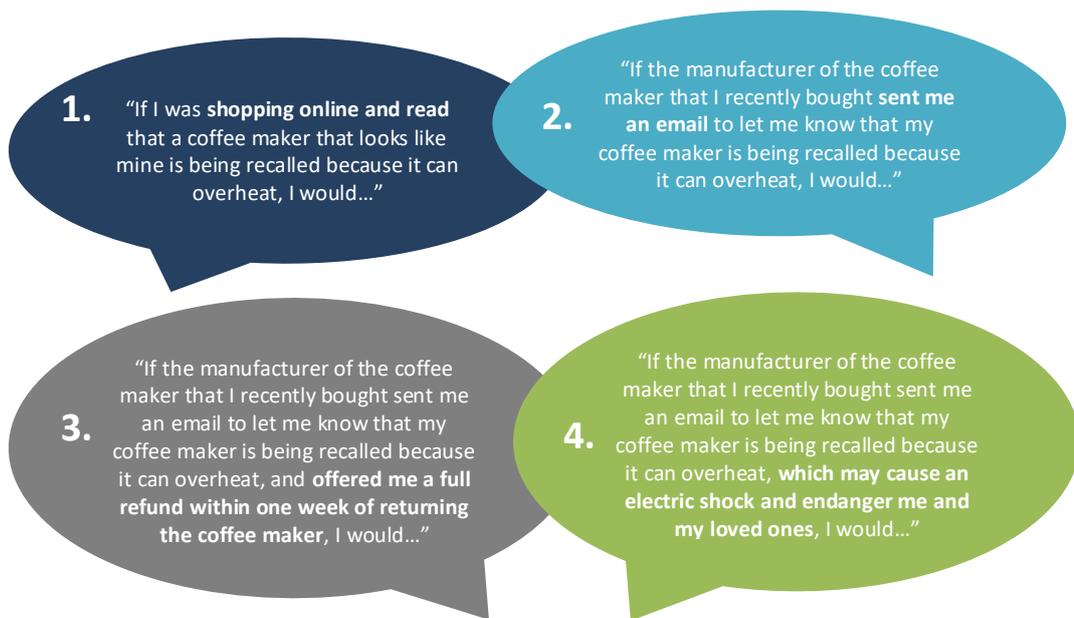
A8.7 Response to product recall (20 min.)

The following speech bubbles present various situations. In each situation, please imagine that you have recently bought a coffee machine and that it is being recalled. Let's also assume that, if you decide to return the coffee maker so that it can be repaired, you would have to go to an official seller. Once the coffee maker is repaired, you would have to pick it up again at a local seller.

Moderator instruction: Show first speech bubble. [Repeat for all speech bubbles.]

I would like to know what you would do next? Maybe you would decide to do nothing, maybe you would stop using the coffee maker or you might decide to return it. Please complete the speech bubble and explain your response.

Participants were shown four speech bubbles, describing varying situations relating to a recall of a coffee maker that could overheat, displayed below.



Moderator instruction: Continue with the following question when all speech bubbles have been discussed.

Let's now assume that, rather than having to pick up your repaired coffee maker at the nearest official seller, the manufacturer offered to ship it back to you. Would this change your response?

A8.8 Effectiveness of recall messages (20 min.)

Let's now have a look at some **recall messages and notices**.

To start with, take a look at the first recall notice. I'll give you a minute to review the content before we continue our discussion.

What do you think about this first notice? How effective do you think this notice will be to make consumers respond and return the product? Why?

Now I'd like to show you a few other recall notices. These notices are all for the same washing machine, with the same defect. The language used and the design, however, are different. The aim of this study is to find out which language and which visual design is most effective in getting consumers to act on a recall.

Five distinct types of recall notices were tested amongst FG participants, shown below.

1

Voluntary Product Recall

ABC Company recalls the following item:
ABC SuperWash X75 washing machine

Sold between February 2019 and December 2019

In some circumstances, the water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine may start leaking. Leakage may damage your property and cause electrical faults. Consumers should stop using the product and are entitled to a free replacement machine. You can contact us free-of-charge at 07700 900461.

See www.product-recalls.eu for more information
on product recalls

2

Product Recall

ABC Company recalls the following item:
ABC SuperWash X75 washing machine

Sold between February 2019 and December 2019

The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property and cause dangerous electrical faults creating potentially lethal safety hazards. Consumers should immediately stop using the product and should urgently contact us to get a free replacement machine. You can contact us free-of-charge at 07700 900461.

**Protect yourself and your loved ones.
Contact us now.**

See www.product-recalls.eu for more information on product recalls

3

Product Recall

ABC Company recalls the following item:
ABC SuperWash X75 washing machine

Sold between February 2019 and December 2019

Hazard The water level sensor may fail, causing the machine to leak. Leakage can damage your property and cause dangerous electrical faults, creating potentially lethal safety hazards.

What to do You should immediately stop using the product and urgently contact us to get a free replacement machine.

Contact details You can contact us free-of-charge at 07700 900461.

**Protect yourself and your loved ones.
Contact us now.**

See www.product-recalls.eu for more information on product recalls

4

Product Recall

ABC Company recalls the following item:
ABC SuperWash X75 washing machine
 Sold between February 2019 and December 2019

Hazard The water level sensor may fail, causing the machine to leak. Leakage can damage your property and cause dangerous electrical faults, creating potentially lethal safety hazards.

What to do You should immediately stop using the product and urgently contact us to get a free replacement machine.

Contact details You can contact us free-of-charge at 07700 900461.

Protect yourself and your loved ones.
Contact us now.

See www.product-recalls.eu for more information on product recalls



5



Important safety notice

ABC Company recalls the following item:
ABC SuperWash X75 washing machine
 Sold between February 2019 and December 2019

Hazard The water level sensor may fail, causing the machine to leak. Leakage can damage your property and cause dangerous electrical faults, creating potentially lethal safety hazards.

What to do You should immediately stop using the product and urgently contact us to get a free replacement machine.

Contact details You can contact us free-of-charge at 07700 900461.

Protect yourself and your loved ones.
Contact us now.

See www.product-recalls.eu for more information on product recalls



Moderator instruction: give participants time to **review the next** notice, and repeat the question about effectiveness. Probe for positive and negative elements of the notice in terms of language used and design. [Repeat for all notices.]

Probe: Why do you think this notice will be more (or less) effective?

We have reviewed five recall notices. Imagine you were responsible for recalling the washing machine. Would you use one of these five notices? Which one? Or would you change language/visual elements? Which ones and how?

A8.9 Conclusion and thanks (5 min.)

Final reflections on the discussion

Thank you very much for your participation, it has been very helpful. Before closing this session, I would like to ask, is there anything else you would like to say about the topics we have discussed today, and that we have not covered yet?

Thank participants for their participation, while reassuring them again of confidentiality.

Annex 9 Consumer survey

For the scripting of the survey the following text formatting is used:

- Red text is used to provide information on how switches in question formats (i.e. real versus hypothetical scenario) should be implemented
- Blue text indicates programming instructions to scripters
- Grey text indicates text which is shown to participants in the experiment (except for question numbers)

A9.1 General consumer survey

A9.1.1 Awareness, perception and attitudes regarding product safety

Q1.1: When you buy a product, how important are the following aspects for your purchasing decision?

[PROG: Single answer per row]

[PROG: Progressive Grid: Columns = 4 point scale]

- 1) 1 – Not important at all
- 2) 2
- 3) 3
- 4) 4 – Very important

[PROG: Progressive Grid: Rows = Options]

[PROG: Randomise options 1 - 8]

- 1) Price of the product
- 2) Product origin
- 3) Product safety (i.e. that there is no risk in using the product)
- 4) Environmental credentials of the product
- 5) Quality of the product
- 6) Brand
- 7) Expected lifetime of the product
- 8) Customer reviews of the product

Q1.2: The following question refers to product safety, i.e. whether using a product poses a risk to you or others. Thinking about all non-food products that can be purchased in the market. How strongly do you agree or disagree with the following statement?

[PROG: Single answer per row]

[PROG: Progressive Grid: Columns = 4 point scale]

- 1) 1 – Completely disagree
- 2) 2
- 3) 3
- 4) 4 – Completely agree

[PROG: Progressive Grid: Rows = Options]

[PROG: Display 1 first, then DISPLAY TEXT, Randomise options 2 – 8]

- 1) In general, products are safe

[DISPLAY TEXT:] And how about these specific product categories?

- 2) In general, toys / games for children (e.g. a doll, boardgame, construction toy) are safe
- 3) In general, personal cars and motorcycles are safe
- 4) In general, clothing and footwear are safe
- 5) In general, domestic electrical appliances (e.g. a fridge, washing machine, coffee maker) are safe
- 6) In general, communication devices (e.g. a mobile phone, computer, accessories) are safe
- 7) In general, children's articles and children's equipment (e.g. feeding equipment, high-chair, pushchair) are safe
- 8) In general, furniture is safe

Q1.3: To what extent do you trust or distrust the following sources for information on product risk?

[PROG: Single answer per row]

[PROG: Progressive Grid: Columns = 4 point scale]

- 1) 1 – Do not trust at all
- 2) 2 – Tend not to trust
- 3) 3 – Tend to trust
- 4) 4 – Totally trust
- 5) Don't know

[PROG: Progressive Grid: Rows = Options]

[PROG: Randomise options 1 - 8]

- 1) Scientists
- 2) Consumer associations / NGOs
- 3) National authorities
- 4) EU Institutions
- 5) Journalists
- 6) Industry / Producers
- 7) Celebrities, bloggers and influencers
- 8) Shops and Retailers

A9.1.2 Experience with product registration

Q2.1: Which of the following products did you buy for yourself or someone in your household or receive as a gift in the past 2 years?

[PROG: Multiple answer]

- 1) toys / games for children (e.g. a doll, boardgame, construction toy)
- 2) personal cars or motorcycles
- 3) domestic electrical appliances (e.g. a fridge, washing machine, coffee maker)
- 4) communication devices (e.g. a mobile phone, computer, accessories)
- 5) children's articles or children's equipment (e.g. feeding equipment, high-chair, pushchair)
- 6) None of the above [Exclusive]

Please note: There are three possible outcomes of Q2.1 that define the proceeding of questions:

- **Case 1: Participant selects just one of the products;** The participant continues with the real questions and they are asked about the selected product from Q2.1.

- **Case 2: Participant selects more than one product;** The participant continues with the real question but we need to assure that the cells over the sample are filled up equally.
- **Case 3: Participant selects “none of the above”;** The participant continues with the hypothetical questions and is randomly assigned to one product.

Case 1: One selected

IF Q2.1 = 1 or 2 or 3 or 4 or 5 THEN PROG: CREATE HIDDEN VARIABLE '**REAL_REG**':

- IF Q2.1 = 1 SET **REAL_REG=1 RG_TOY**
- IF Q2.1 = 2 SET **REAL_REG=2 RG_CAR**
- IF Q2.1 = 3 SET **REAL_REG=3 RG_ELECT**
- IF Q2.1 = 4 SET **REAL_REG=4 RG_COMM**
- IF Q2.1 = 5 SET **REAL_REG=5 RG_CHIL**

Q2.2_real [ASK IF Q2.1 = 1 or 2 or 3 or 4 or 5]: Thinking of [PROG: insert the last toy / game for children (e.g. a doll, boardgame, construction toy) if REAL_REG=1, the last personal car or motorcycle if REAL_REG=2, the last domestic electrical appliance (e.g. a fridge, washing machine, coffee maker) if REAL_REG=3, the last communication device (e.g. a mobile phone, computer, accessories) if REAL_REG=4, the last children’s article or children’s equipment (e.g. feeding equipment, high-chair, pushchair) if REAL_REG=5] that you bought or received as a gift in the past years, did you register the product with the manufacturer or seller?

[PROG: Single answer]

- 1) Yes
- 2) No
- 3) Don’t know

[IF Q2.2_real = 3 THEN continue with Q2.5]

Q2.3_real [ASK IF Q2.2_real = 1]: You indicated that you registered [PROG: insert the last toy / game for children (e.g. a doll, boardgame, construction toy) if REAL_REG=1, the last personal car or motorcycle if REAL_REG=2, the last domestic electrical appliance (e.g. a fridge, washing machine, coffee maker) if REAL_REG=3, the last communication device (e.g. a mobile phone, computer, accessories) if REAL_REG=4, the last children’s article or children’s equipment (e.g. feeding equipment, high-chair, pushchair) if REAL_REG=5] with the manufacturer or seller. Why did you register it?

[PROG: Multiple answers, randomise order 1 – 6, keeping 6 and 7 at the end]

- 1) To receive potential safety notices about the product
- 2) To receive a warranty
- 3) To receive marketing information
- 4) To have easier access to technical support or receive software updates
- 5) To receive a voucher, discount or gift card
- 6) Other [PROG: insert open field “Please specify:” _____]
- 7) Don’t know [Exclusive]

Q2.4_real [ASK IF Q2.2_real = 2]: You indicated that you did not register [PROG: insert the last toy / game for children (e.g. a doll, boardgame, construction toy) if REAL_REG=1, the last personal car or motorcycle if REAL_REG=2, the domestic electrical appliance (e.g. a fridge, washing machine, coffee maker) if REAL_REG=3, the last communication device (e.g. a mobile phone, computer, accessories) if REAL_REG=4, the children’s article or children’s equipment (e.g. feeding equipment, high-chair, pushchair) if REAL_REG=5] with the manufacturer or seller. Why did you not register it?

[PROG: Multiple answers, randomise order 1 – 10, keeping 11 and 12 at the end]

- 1) I did not know this was possible
- 2) I did not understand why I would do this / what the benefits would be
- 3) I was concerned about my personal data being misused / shared / accessed by others
- 4) It was too much effort / time consuming
- 5) It was not worth it because the product was not expensive
- 6) It was not worth it because the product had a short lifetime
- 7) It was not worth it because I only wanted to use the product for a short time
- 8) I forgot about it
- 9) I bought the product second hand
- 10) I was not successful in registering the product / registration was not possible
- 11) Other [PROG: insert open field "Please specify:" _____]
- 12) Don't know [Exclusive]

Case 2: More than one selected

Ask Q2.2_real, Q2.3_real and Q2.4_real as indicated above, but randomly assign to one of the products selected in Q2.1.

Case 3: "None of the above" (hypothetical question)

IF Q2.1 = 6 "None of the above" THEN PROG: CREATE HIDDEN VARIABLE '**HYPO_REG**': RANDOMLY ALLOCATE RESPONDENTS TO 1 of 5 VARIANTS: 1 **HG_TOY**; 2 **HG_CAR**; 3 **HG_ELECT**; 4 **HG_COMM**; 5 **HG_CHIL**

Q2.2_hypo [ASK IF Q2.1=6]: Imagine you buy or receive [PROG: insert a toy / game for children (e.g. a doll, boardgame, construction toy) if HYPO_REG=1, a personal car or motorcycle if HYPO_REG=2, a domestic electrical appliance (e.g. a fridge, washing machine, coffee maker) if HYPO_REG=3, a communication device (e.g. a mobile phone, computer, accessories) if HYPO_REG=4, a children's article or children's equipment (e.g. feeding equipment, high-chair, pushchair) if HYPO_REG=5] as a gift. Would you register the product with the manufacturer or seller?

[PROG: Single answer]

- 1) Yes
- 2) No
- 3) Don't know

[IF Q2.2_hypo = 3 THEN continue with Q2.5]

Q2.3_hypo [ASK IF Q2.2_hypo = 1]: You indicated that you would register [PROG: insert the toy / game for children (e.g. a doll, boardgame, construction toy) if HYPO_REG=1, the personal car or motorcycle if HYPO_REG=2, the domestic electrical appliance (e.g. a fridge, washing machine, coffee maker) if HYPO_REG=3, the communication device (e.g. a mobile phone, computer, accessories) if HYPO_REG=4, the children's article or children's equipment (e.g. feeding equipment, high-chair, pushchair) if HYPO_REG=5] with the manufacturer or seller. Why would you register it?

[PROG: Multiple answers, randomise order 1 – 6, keeping 6 and 7 at the end]

- 1) To receive potential safety notices about the product
- 2) To receive a warranty
- 3) To receive marketing information
- 4) To have easier access to technical support or receive software updates
- 5) To receive a voucher, discount or gift card
- 6) Other [PROG: insert open field "Please specify:" _____]
- 7) Don't know [Exclusive]

Q2.4_hypo [ASK IF Q2.2_hypo = 2]: You indicated that you would not register [PROG: insert the toy / game for children (e.g. a doll, boardgame, construction toy) if

HYPO_REG=1, the personal car or motorcycle if HYPO_REG=2, the domestic electrical appliance (e.g. a fridge, washing machine, coffee maker) if HYPO_REG=3, the communication device (e.g. a mobile phone, computer, accessories) if HYPO_REG=4, the children's article or children's equipment (e.g. feeding equipment, high-chair, pushchair) if HYPO_REG=5] with the manufacturer or seller. Why would you not register it?

[PROG: Multiple answers, randomise order 1 – 8, keeping 9 and 10 at the end]

- 1) I did not know this was possible
- 2) I do not understand why I would do this / what the benefits would be
- 3) I would be concerned about my personal data being misused / shared / accessed by others
- 4) It would be too much effort / time consuming
- 5) It would not be worth it because the product is not expensive
- 6) It would not be worth it because the product has a short lifetime
- 7) It would not be worth it because I only want to use the product for a short time
- 8) I would forget about it
- 9) Other [PROG: insert open field "Please specify:" _____]
- 10) Don't know [Exclusive]

A9.1.3 Experience with product recall

Q2.5: In the past 2 years, do you recall having seen or received any information notices or announcements concerning the recall of a specific product?

If you saw both a recall notice on a product you own and on a product you do not own, please select both answer-items.

[PROG: Multiple answer, keep order 1, 2, 3]

- 1) Yes, and it affected one of the products I own
- 2) Yes, and it affected a product I do not own
- 3) No [Exclusive]

Please note: There are two possible outcomes of Q2.5 that define the proceeding of questions:

- **Case 1: Participant selects Q2.5=2 or Q2.5=3 but NOT Q2.5=1;** The participant continues with the hypothetical questions. These are included below in the section "Case 1: Hypothetical scenario".
- **Case 2: Participant selects Q2.5=1 (this can also be that he selects both Q2.5=1 and Q2.5=2 as we allow for multiple answers);** The participant continues with the real questions. These are included below in the sections "Case 2 Real scenario".

Case 1: Hypothetical scenario

IF Q2.5 = 2 "Yes, but not affected" or 3 "No" THEN PROG: CREATE HIDDEN VARIABLE 'HYPO_REC': RANDOMLY ALLOCATE RESPONDENTS TO 1 of 7 VARIANTS: 1 **HC_TOY**; 2 **HC_CAR**; 3 **HC_ELECT**; 4 **HC_COMM**; 5 **HC_CHIL**; 6 **HC_CF**; 7 **HC_FU**

Q2.7_hypo [ASK IF Q2.5 = 2 or 3 or IF Q2.6_real = 8]: Imagine you own [PROG: insert a toy / game for children (e.g. a doll, boardgame, construction toy) if HYPO_REC=1, a personal car or motorcycle if HYPO_REC=2, a domestic electrical appliance (e.g. a fridge, washing machine, coffee maker) if HYPO_REC=3, a communication device (e.g. a mobile phone, computer, accessories) if HYPO_REC=4, a children's article or children's equipment (e.g. feeding equipment, high-chair, pushchair) if HYPO_REC=5, a piece of clothing or footwear if HYPO_REC=6; a piece of furniture if HYPO_REC=7] and you receive a notice or announcement concerning the recall of this product. What would you do in response to this recall?

[PROG: single answer, randomise order 1 – 4]

- 1) I would contact the recalling company to have the product repaired, replaced or refunded
- 2) I would dispose of the product
- 3) I would continue using the product with extra caution
- 4) I would take no action

[IF Q2.7_hypo = 1 CONTINUE WITH Q2.12]

Q2.9_hypo [ASK IF Q2.7_hypo = 2]: Why would you dispose of the product?

[PROG: Multiple answers, randomise order 1 – 6, keep 7 and 8 at the end]

- 1) The product is cheap
- 2) It would be easy to replace
- 3) The product has a short lifetime
- 4) I only would want to use the product for a short time
- 5) The recall process with the company would be too much effort / time consuming
- 6) Continuing to use the product would be too risky
- 7) Other [PROG: insert open field "Please specify:" _____]
- 8) Don't know [Exclusive]

Q2.10_hypo [ASK IF Q2.7_hypo = 3]: Why would you continue using the product with extra caution?

[PROG: Multiple answers, randomise order 1 – 5, keep 6 and 7 at the end]

- 1) The product is cheap
- 2) Continuing to use the product would not pose a risk
- 3) The product has a short lifetime
- 4) I only would want to use the product for a short time
- 5) The recall process with the company would be too much effort / time consuming
- 6) Other [PROG: insert open field "Please specify:" _____]
- 7) Don't know [Exclusive]

Q2.11_hypo [ASK IF Q2.7_hypo = 4]: Why would you take no action?

[PROG: Multiple answers, randomise order 1 – 5, keep 6 and 7 at the end]

- 1) The product is cheap
- 2) Continuing to use the product would not pose a risk
- 3) The product has a short lifetime
- 4) I only would want to use the product for a short time
- 5) The recall process with the company would be too much effort / time consuming
- 6) Other [PROG: insert open field "Please specify:" _____]
- 7) Don't know [Exclusive]

Case 2: Real scenario

Q2.6_real [ASK IF Q2.5=1 or (IF Q2.5=1 AND Q2.5=2 multiple answer)]: You indicated that you were affected by a recall in the past 2 years. What kind of product was it?

[PROG: Multiple answers]

- 1) toys / games for children (e.g. a doll, boardgame, construction toy)
- 2) personal cars or motorcycles
- 3) domestic electrical appliances (e.g. a fridge, washing machine, coffee maker)
- 4) communication devices (e.g. a mobile phone, computer, accessories)
- 5) children's articles or children's equipment (e.g. feeding equipment, high-chair, pushchair)
- 6) clothing or footwear
- 7) furniture

8) Other [PROG: insert open field "Please specify:" _____]

Case 2a: One product

IF Q2.6_real = 1 – 7 single answer THEN PROG: CREATE HIDDEN VARIABLE '**REAL_REC**':

- IF Q2.6_real = 1 SET **REAL_REC=1 RC_TOY**
- IF Q2.6_real = 2 SET **REAL_REC=2 RC_CAR**
- IF Q2.6_real = 3 SET **REAL_REC=3 RC_ELECT**
- IF Q2.6_real = 4 SET **REAL_REC=4 RC_COMM**
- IF Q2.6_real = 5 SET **REAL_REC=5 RC_CHIL**
- IF Q2.6_real = 6 SET **REAL_REC=6 RC_CF**
- IF Q2.6_real = 7 SET **REAL_REC=7 RC_FU**

[IF Q2.6_real = 8 THEN PROG: CREATE HIDDEN VARIABLE '**HYPO_REC**': RANDOMLY ALLOCATE RESPONDENTS TO 1 of 7 VARIANTS: 1 HC_TOY; 2 HC_CAR; 3 HC_ELECT; 4 HC_COMM; 5 HC_CHIL; 6 HC_CF; 7 HC_FU AND CONTINUE WITH Q2.7_hypo]

Case 2b: Multiple products

Q2.6b_real [ASK IF in Q2.6_real more than one selected OTHERWISE continue with Q2.7_real]: You indicated that several products that you own were affected by a recall. Which product was affected by the last recall incidence?

[PROG: Single answer]

- 1) toys / games for children (e.g. a doll, boardgame, construction toy) [display only if Q2.6_real=1]
- 2) personal cars or motorcycles [display only if Q2.6_real=2]
- 3) domestic electrical appliances (e.g. a fridge, washing machine, coffee maker) [display only if Q2.6_real=3]
- 4) communication devices (e.g. a mobile phone, computer, accessories) [display only if Q2.6_real=4]
- 5) children's articles or children's equipment (e.g. feeding equipment, high-chair, pushchair) [display only if Q2.6_real=5]
- 6) clothing or footwear [display only if Q2.6_real=6]
- 7) furniture [display only if Q2.6_real=7]
- 8) [display only if Q2.6_real=8; then display "text" from Q2.6_real]

IF Q2.6b_real = 1 – 7 single answer THEN PROG: CREATE HIDDEN VARIABLE '**REAL_REC**':

- IF Q2.6b_real = 1 SET **REAL_REC=1 RC_TOY**
- IF Q2.6b_real = 2 SET **REAL_REC=2 RC_CAR**
- IF Q2.6b_real = 3 SET **REAL_REC=3 RC_ELECT**
- IF Q2.6b_real = 4 SET **REAL_REC=4 RC_COMM**
- IF Q2.6b_real = 5 SET **REAL_REC=5 RC_CHIL**
- IF Q2.6b_real = 6 SET **REAL_REC=6 RC_CF**
- IF Q2.6b_real = 7 SET **REAL_REC=7 RC_FU**

[IF Q2.6b_real = 8 THEN PROG: CREATE HIDDEN VARIABLE '**HYPO_REC**': RANDOMLY ALLOCATE RESPONDENTS TO 1 of 7 VARIANTS: 1 **HC_TOY**; 2 **HC_CAR**; 3 **HC_ELECT**; 4 **HC_COMM**; 5 **HC_CHIL**; 6 **HC_CF**; 7 **HC_FU** AND CONTINUE WITH Q2.7_hypo]

Case 2: Continuing questions for real scenario

Q2.7_real [ASK IF Q2.5 = 1 or (IF Q2.5=1 AND Q2.5=2 multiple answer)]: Thinking about the recall of [PROG: insert the toy / game for children (e.g. a doll, boardgame, construction toy) if **REAL_REC=1**, the personal car or motorcycle if **REAL_REC=2**, the domestic electrical appliance (e.g. a fridge, washing machine, coffee maker) if **REAL_REC=3**, the communication device (e.g. a mobile phone, computer, accessories) if **REAL_REC=4**, the children's article or children's equipment (e.g. feeding equipment, high-chair, pushchair)

if REAL_REC=5, the piece of clothing or footwear if REAL_REC=6; the piece of furniture if REAL_REC=7], what did you do in response to the recall?

[PROG: single answer, randomise order 1 – 4]

- 1) I contacted the recalling company to have the product repaired, replaced or refunded
- 2) I disposed of the product
- 3) I continued using the product with extra caution
- 4) I took no action

Q2.8_real [AKS IF Q2.7_real = 1]: How satisfied were you with the handling of the recall by the company?

[PROG: Single answer]

- 1) 1 – Very unsatisfied
- 2) 2
- 3) 3
- 4) 4 – Very satisfied

Q2.9_real [ASK IF Q2.7_real = 2]: Why did you dispose of the product?

[PROG: Multiple answers, randomise order 1 – 6, keep 7 and 8 at the end]

- 1) The product was cheap
- 2) It was easy to replace
- 3) The product had a short lifetime
- 4) I only wanted to use the product for a short time
- 5) The recall process with the company would have been too much effort / time consuming
- 6) Continuing to use the product would have been too risky
- 7) Other [PROG: insert open field "Please specify:" _____]
- 8) Don't know [Exclusive]

Q2.10_real [ASK IF Q2.7_real = 3]: Why did you continue using the product with extra caution?

[PROG: Multiple answers, randomise order 1 – 5, keep 6 and 7 at the end]

- 1) The product was cheap
- 2) Continuing to use the product did not pose a risk
- 3) The product had a short lifetime
- 4) I only wanted to use the product for a short time
- 5) The recall process with the company would have been too much effort / time consuming
- 6) Other [PROG: insert open field "Please specify:" _____]
- 7) Don't know [Exclusive]

Q2.11_real [ASK IF Q2.7_real = 4]: Why did you take no action?

[PROG: Multiple answers, randomise order 1 – 5, keep 6 and 7 at the end]

- 1) The product was cheap
- 2) Continuing to use the product did not pose a risk
- 3) The product had a short lifetime
- 4) I only wanted to use the product for a short time
- 5) The recall process with the company would have been too much effort / time consuming
- 6) Other [PROG: insert open field "Please specify:" _____]
- 7) Don't know [Exclusive]

[PROG: ASK ALL PARTICIPANTS]

Q2.12: Would the type of product make a difference in your intention to respond to a product recall?

[PROG: Single answer]

- 1) Yes, the product type would make a difference
- 2) No, the product type would not make a difference

Q2.13: How likely or unlikely is it that you would contact the recalling company to have a product repaired, replaced or refunded for the following product categories?

[PROG: Single answer per row]

[PROG: Progressive Grid: Columns = 4 point scale]

- 1) 1 – Very unlikely
- 2) 2
- 3) 3
- 4) 4 – Very likely
- 5) Don't know

[PROG: Progressive Grid: Rows = Options]

[PROG: Randomise options 1 - 7]

- 1) toys / games for children (e.g. a doll, boardgame, construction toy)
- 2) personal cars and motorcycles
- 3) domestic electrical appliances (e.g. a fridge, washing machine, coffee maker)
- 4) communication devices (e.g. a mobile phone, computer, accessories)
- 5) children's articles and children's equipment (e.g. feeding equipment, high-chair, pushchair)
- 6) clothing and footwear
- 7) furniture

A9.1.4 Behavioural drivers

Q3.1: To what extent do you agree or disagree with the following statements?

[PROG: Single answer per row]

[PROG: Progressive Grid: Columns = 5 point scale]

- 1) 1 – Completely disagree
- 2) 2
- 3) 3
- 4) 4
- 5) 5 – Completely agree

[PROG: Progressive Grid: Rows = Options]

[PROG: Randomise options 1 - 3]

- 1) In general, one can trust people
- 2) In these days you can't rely on anybody else
- 3) When dealing with strangers it is better to be careful before you trust them

Q3.2: To what extent do you agree or disagree with the following statements?

[PROG: Single answer per row]

[PROG: Progressive Grid: Columns = 5 point scale]

- 1) 1 – Completely disagree
- 2) 2
- 3) 3
- 4) 4
- 5) 5 – Completely agree
- 6) Don't know / not applicable

[PROG: Progressive Grid: Rows = Options]

[PROG: Randomise options 1 - 3]

- 1) I am comfortable relying on businesses to meet their obligations
- 2) I always feel confident that I can rely on businesses to do their part when I interact with them
- 3) Most advertisements report objective facts, I trust most of the information provided in advertisements

Q3.3: Please rate the truth of each statement as it applies to you.

[PROG: Single answer per row]

[PROG: Progressive Grid: Columns = 6 point scale]

- 1) 1 – Never true
- 2) 2
- 3) 3
- 4) 4
- 5) 5
- 6) 6 – Always true

[PROG: Progressive Grid: Rows = Options]

[PROG: Randomise options 1 - 2]

- 1) I am able to persist with a course of action after experiencing difficulties
- 2) If I make a commitment and later fail to reach it, I then drop the commitment

Q3.4: I live for today and do not think about tomorrow

[PROG: Single answer]

- 1) 1 – Completely disagree
- 2) 2
- 3) 3
- 4) 4
- 5) 5
- 6) 6
- 7) 7 – Completely agree

Q3.5: To what extent do you agree or disagree with the following statements?

[PROG: Single answer per row]

[PROG: Progressive Grid: Columns = 6 point scale]

- 1) 1 – Completely disagree
- 2) 2
- 3) 3
- 4) 4

- 5) 5
- 6) 6
- 7) 7 – Completely agree

[PROG: Progressive Grid: Rows = Options]

[PROG: Randomise options 1 - 2]

- 1) I often rely upon, and act upon, the advice of others
- 2) I don't give in to others easily

A9.1.5 Further attributes and socio-demographic aspects

Q4.1: How frequently do you use the internet for the following activities?

[PROG: Single answer per row]

[PROG: Progressive Grid: Columns = 8 point scale]

- 1) Several times a day
- 2) Every day or almost every day
- 3) 2-3 times a week
- 4) Once a week
- 5) 2-3 times a month
- 6) Once a month
- 7) A couple of times a year or less often
- 8) Never

[PROG: Progressive Grid: Rows = Options]

[PROG: Randomise options 1 - 9]

- 1) Searching for information
- 2) Comparing prices of products / services
- 3) Online banking
- 4) Buying goods or services (holidays, books, music, etc.)
- 5) Selling goods or services
- 6) Using online social networks (Facebook, Twitter, Snapchat, etc.)
- 7) E-Mail
- 8) Smart home devices (light or heating control via app, etc.)
- 9) Voice assistants (Amazon Alexa, Google Assistant, Apple Siri, etc.)

Q4.2: The term 'Mbps' in an offer describes...?

[PROG: Single answer, randomise order 1-3, keep 4 at the end]

- 1) The speed of the internet connection
- 2) The maximum size of files I can download
- 3) The speed of my computer
- 4) Don't know

Q4.3: In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?

[PROG: Numerical answer, allow 0-99]

_____ Days

A9.2 Socio-demographics

Q5.1: How old are you?

[Respondent indicates age]

Q5.2: Are you a ...?

[PROG: Single answer]

- 1) Woman
- 2) Man

Q5.3: What is the highest level of education you have achieved?

[COUNTRY SPECIFIC / RECODED TO: LOW, MEDIUM, HIGH]

Q5.4: Which of the following best describes your current work status

[PROG: Recode into hidden variable: codes 1-5 as active and codes 6-11 as inactive]

[PROG: Single answer]

- 1) Employed full-time
- 2) Employed part-time
- 3) Self-employed full-time
- 4) Self-employed part-time
- 5) Unemployed but looking for a job
- 6) Unemployed and not looking for a job
- 7) Long-term sick or disabled
- 8) Housewife / Homemaker
- 9) Retired
- 10) Pupil / Student / In full time education
- 11) Studying in combination with a part-time job

Q5.5: Thinking about your household's financial situation, would you say that making ends meet every month is...?

[PROG: Single answer]

- 1) Very easy
- 2) Fairly easy
- 3) Fairly difficult
- 4) Very difficult
- 5) Prefer not to say

Annex 10 Scripting document for the behavioural experiment

A10.1 Scripting notes

For the scripting of the behavioural experiment the following text formatting is used:

- Red text is used to provide a summary of the environment features, in written English, before giving specific scripting instructions
- Blue text indicates instructions to scripters
- Grey text indicates text which is shown to participants in the experiment (except for question numbers)
- Green text refers to timers to record response times and the length of the questionnaire.

A10.1.1 Random allocations and hidden variables (unseen by respondents)

All random allocations should be done uniformly and independently from each other (see crossing of variables below)

[PROG: CREATE HIDDEN VARIABLE '**RM**': RANDOMLY ALLOCATE RESPONDENTS TO 1 of 6 VARIANTS: 1 **BASE**; 2 **SAFE**; 3 **NOINFO**; 4 **PUBLIC**; 5 **WARR**; 6 **STRONG**]

[PROG: CREATE HIDDEN VARIABLE '**TIMING**': RANDOMLY ALLOCATE RESPONDENTS TO 1 of 3 VARIANTS: 1 **POS**; 2 **PACKAGE**; 3 **RGGENERAL**]

[PROG: CREATE HIDDEN VARIABLE '**REFFORT**': RANDOMLY ALLOCATE RESPONDENTS TO 1 of 3 VARIANTS: 1 **RLOW**; 2 **RMODERATE**; 3 **RHIGH**]

These are the treatment allocations for the registration experiment. Crossing them results in $6 \times 3 \times 3 = 54$ cells.

[PROG: CREATE HIDDEN VARIABLE '**LM**': RANDOMLY ALLOCATE RESPONDENTS TO 1 of 8 VARIANTS: 1 **VOL**; 2 **SAFETY**; 3 **RECALL**; 4 **SEVERE**; 5 **SIMPLE**; 6 **IMAGE**; 7 **BORDER**; 8 **EMOTION**]

[PROG: CREATE HIDDEN VARIABLE '**CHANNEL**': RANDOMLY ALLOCATE RESPONDENTS TO 1 of 2 VARIANTS: 0 **DIRECT**, 1 **LGENERAL**]

[PROG: CREATE HIDDEN VARIABLE '**LEFFORT**': RANDOMLY ALLOCATE RESPONDENTS TO 1 of 3 VARIANTS: 1 **LLOW**; 2 **LMODERATE**; 3 **LHIGH**]

These are the treatment allocations for the recall experiment. Crossing them results in $8 \times 2 \times 3 = 48$ cells.

There are 2 experiments – the registration and the recall experiment – the order in which respondents see the experiments should be alternated. **50% of respondents see the registration experiment first, 50% see the recall experiment first.** This split should be independent from all other treatment allocations.

[PROG: CREATE HIDDEN VARIABLE '**L_FIRST**': RANDOMLY ALLOCATE RESPONDENTS TO 1 of 2 VARIANTS: 0 **REGISTRATION FIRST** and 1 **RECALL FIRST**]

Respondents carry out the registration experiment for ONE of THREE products: Smartphone, High chair, Toaster. Respondents carry out the recall experiment for THREE of FIVE products: Hatchback, Toy, Sweater, Washing machine, Office chair.

[PROG: Create hidden variable '**BUNDLE**' which takes values 1-6, assign a value at random to each respondent using a least full allocation.]

BUNDLE	PRODUCT IN REGISTRATION EXPERIMENT [PROG: CREATE HIDDEN VARIABLE REG_PROD]	PRODUCT 1 IN RECALL EXPERIMENT [PROG: CREATE HIDDEN VARIABLE REC_PROD_1]	PRODUCT 2 IN RECALL EXPERIMENT [PROG: CREATE HIDDEN VARIABLE REC_PROD_2]	PRODUCT 3 IN RECALL EXPERIMENT [PROG: CREATE HIDDEN VARIABLE REC_PROD_3]
1	Smartphone	Washing machine	Toy	Office chair
2	High chair	Washing machine	Sweater	Toy
3	Toaster	Hatchback	Office chair	Toy
4	Smartphone	Hatchback	Sweater	Office chair
5	High chair	Hatchback	Sweater	Washing machine
6	Toaster	Hatchback	Toy	Sweater

[PROG: CREATE HIDDEN VARIABLE `PROD_RECALLED`: RANDOMLY ALLOCATE TO RESPONDENTS TO 1 OF 5 VARIANTS: 1 **HATCHBACK**; 2 **TOY**; 3 **SWEATER**; 4 **WASHING MACHINE**; 5 **OFFICE CHAIR**]

[PROG: RESPONDENTS MUST BE ALLOCATED TO A BUNDLE SUCH THAT ONE (AND ONLY ONE) PRODUCT IS **PROD_RECALLED**]

PROG: CREATE HIDDEN VARIABLE `HEAVY` =1 IF PROD_RECALLED =1 OR 4 OR 5; 0 OTHERWISE.

PROG: CREATE HIDDEN VARIABLE `TIME_DISP` = 15 IF **HEAVY**=1, 5 OTHERWISE.

A10.1.2 Note to programmers for both experiments

BUTTONS, WEBSITE HEADERS, BANNERS ON MOCKED-UP WEBSITES AND TEXT THAT IS GENERATED TO BE DISPLAYED TO RESPONDENTS SHOULD BE TRANSLATED.

A10.2 Registration experiment

A10.2.1 Intro screens

[TIMER_EXPERIMENT_P: START]

[TIMER_INTRO_P: START]

BEGIN NEW SCREEN

[PROG: If L_FIRST=0 display:]

The following screens will not be like a standard survey.

[PROG: If L_FIRST=1 display:]

The following screens show **a new task**.

[PROG: SHOW TO ALL]

You will be asked to imagine purchasing products like smartphones, toasters, and children's high chairs.

You will not actually purchase products, but please behave as if you were in the described situations.

You can **earn up to** [PROG: INSERT 6 IF BUNDLE = 3 OR 6; 17 IF BUNDLE = 2 OR 5; 38 IF BUNDLE = 1 OR 4] **additional points** in this task. **You cannot lose any points you have earned so far.**

[PROG: DELAY THE APPEARANCE OF "Next" BUTTON BY 10 SECONDS]

[PROG: Add text following text, close to "Next" Button:]

You will be able to continue to the next screen after 10 seconds.

END SCREEN

BEGIN NEW SCREEN

[PROG: SHOW TO ALL]

Please read the task description carefully and answer the questions below:

TASK DESCRIPTION

In the next task, we would like to understand a bit how people buy products online.

We will first ask you to choose a product to buy among a number of options. Depending on your choices, we may ask you to answer some questions about the product you chose. You have a chance to get additional points here, so please look at the options carefully.

Like in real life, you get benefits from using a product, as long as it is in good shape and functions well. You will **receive the benefits in terms of additional points.**

Also as in real life, there is a chance that the product may not work well, which – depending on your decisions – could reduce the additional points you receive.

Please make decisions so that you have the best chance of having a product that is in good working order at the end of the task.

END SCREEN

[TIMER_INTROP: STOP]

A10.2.2 Setup product selection stage

In the product selection stage, respondents see a hypothetical online shopping website. They will see 2 products from which they may 'buy' 1. Each product is described by:

- A picture
- A price
- A brand label (including model number)
- Information about the product

The mock-up below shows the basic setup of this screen. All elements outlined in RED will vary as described below.

WarehouseShop

Search products...

Search

My basket | My account | Log out



Odyssey X20

€366

Long battery life. so your phone is ready whenever you are

Select



Atom Z7

€300

High-end cameras so your pictures look as good as you

Select

[PROG: Insert following text on top of the page as shown in mock-up]

Please select one product. Remember to make decisions so that you have a product in good working order at the end of the task.

Reminder: For every €100 you earn in this task, you will receive 1 survey point. You also earn points from using the product.

[PROG: create a website header as shown in mock up with a 'Search...' field, and the categories 'Basket | My account | Log out' at the right end of the header]

PRODUCT IN REGISTRATION EXPERIMENT	MID-RANGE SMARTPHONE	CHILDREN'S HIGH CHAIR	TOASTER
BRAND 1	Odyssey	Odyssey	Odyssey
MODEL 1	X20	X20	X20
BRAND 2	Atom	Atom	Atom
MODEL 2	Z7	Z7	Z7
PRICE OF PRODUCT 1	€366	€155	€44
PRICE OF PRODUCT 2	€300	€127	€36
TEXT FOR PRODUCT 1	"Long battery life, so your phone is ready whenever you are"	"Sturdy and long-lasting"	"Never miss breakfast with this reliable toaster!"
TEXT FOR PRODUCT 2	"High-end cameras, so your photos look as good as you"	"Available in a variety of colours for your baby boy or girl"	"Convenient defrost function!"

Pictures are selected as follows:

PROG: Insert, pictures **SM_1 – SM_2** for Mid-range smartphones, **HC_1 – HC_2** for Children’s high chair, **T_1 – T_2** for Toasters.

PROG: At the bottom of each product, show a button

Select

PROG: record the respondent’s selection after respondent clicks ‘select’.

PROG: CREATE SELECT_BRAND = Brand of product respondent selected.’

PROG: CREATE SELECT_PRICE = PRICE OF PRODUCT RESPONDENT SELECTED

PROG: CREATE VARIABLE OC =1 IF RESPONDENT SELECTS PRODUCT 1, 0 OTHERWISE.

PROG: RESPONDENT RECEIVES INCENTIVE POINTS IF OC=1.

[PROG: Insert a TIMER for the product selection stage]

[TIMER: SELECTION]

After the respondents have made their selection they are taken to the POINT-OF-SALE SCREEN.

A10.2.3 Point of sale screen

The point-of-sale screen has the following:

- A picture
- A price
- A brand label
- Information about the product

[PROG: create a website header as shown in mock up with a ‘Search...’ field, and the categories ‘Basket | My account | Log out’ at the right end of the header]

[PROG: show text: ‘Congratulations! You selected a’ [PROG: INSERT SELECT_BRAND] (include model number after SELECT_BRAND) [PROG: INSERT PRODUCT IN REGISTRATION EXPERIMENT]

The mock-up below shows the basic elements of the screen for all respondents. Elements outlined in red change as shown below.

WarehouseShop

Search products...

Search

My basket | My account | Log out

Congratulations!

You selected a: Odyssey X20 Smart Phone



€366

CLICK HERE TO PROCEED TO CHECKOUT

Screen: 6.5" Full HD Touchscreen

Camera: 12MP (back)/5MP (front)

Storage: 32GB

Battery: 4000 mAh

PRODUCT REGISTRATION EXPERIMENT	IN	SMARTPHONE	HIGH CHAIR	TOASTER
PRODUCT IMAGE		SAME AS PRODUCT SELECTED IN PRODUCT SELECTION STAGE		
YOU SELECTED A...		SELECT_BRAND + PRODUCT		
PRICE OF PRODUCT		SELECT_PRICE		
TEXT PRODUCT	1 FOR	Screen: 6.5" Full HD Touchscreen	Safety bar included	10 heating settings
TEXT PRODUCT	2 FOR	Camera: 12MP (back)/5MP (front)	Height-adjustable footrest	Defrost function
TEXT PRODUCT	3 FOR	Storage: 32GB	Easily wipe cleaned	Reheat function
TEXT PRODUCT	4 FOR	Battery: 4000 mAh	Folds down for easy storage	Manual eject function

IN ADDITION, respondents allocated to TIMING =1 see the following elements: the text outlined in red and the button 'Click here to proceed to checkout and registration'. The text outlined in red contains a prompt for respondents to register their product, and changes depending on the value of created variable **RM**. See table below.

WarehouseShop

Search products...

Search

My basket | My account | Log out

Congratulations!

You selected a: **Odyssey X20 Smart Phone**



€366

Screen: 6.5" Full HD Touchscreen

Camera: 12MP (back)/5MP (front)

Storage: 32GB

Battery: 4000 mAh

CLICK HERE TO PROCEED TO CHECKOUT

Please register your product; Odyssey would like to let you know about **exclusive offers!**

CLICK HERE TO PROCEED TO CHECKOUT AND REGISTRATION

PROG: CHANGE TEXT OUTLINED IN RED ABOVE DEPENDING ON THE VALUE OF VARIABLE RM, ACCORDING TO THE TABLE BELOW.

RM	TEXT
1	Please register your product; [PROG: INSERT SELECT_BRAND] would like to let you know about exclusive offers!
2	Please register your product so that [PROG: INSERT SELECT_BRAND] can contact you if your product presents a safety risk or other defect.
3	Please register your product so that [PROG: INSERT SELECT_BRAND] can contact you if your product presents a safety risk or other defect. Following EU data privacy regulations, the personal information you provide for this purpose cannot be used for marketing purposes.
4	The Product Safety Authority recommends that you register your product so that [PROG: INSERT SELECT_BRAND] can contact you if your product presents a safety risk or other defect. Following EU data privacy regulations, the personal information you provide for this purpose cannot be used for marketing purposes.
5	The Product Safety Authority recommends that you register your product so that [PROG: INSERT SELECT_BRAND] can contact you if your product presents a safety risk or other defect. Registering your product activates your extended warranty- don't miss out! Following EU data privacy regulations, the personal information you provide for this purpose cannot be used for marketing purposes
6	The Product Safety Authority recommends that you register your product so that [PROG: INSERT SELECT_BRAND] can contact you if your product presents a safety risk or other defect. Registering your product activates your extended warranty – don't miss out!

Following **EU data privacy** regulations, the **personal information** you provide for this purpose **cannot be used for marketing** purposes.

Register your product to **help protect yourself and your loved ones.**

The next screen that the respondent sees depends on the choice they make at the point-of-sale screen.

PROG: If the respondent chooses 'Click here to proceed to checkout' take them to the Post-purchase stage (Section A10.2.4).

PROG: If the respondent chooses 'Click here to proceed to checkout and registration' take them to the Registration stage (Section A10.2.5).

PROG: GENERATE HIDDEN VARIABLE REGISTRATION_BEGUN_POS=1 IF RESPONDENT CHOOSES 'CLICK HERE TO PROCEED TO CHECKOUT AND REGISTRATION', 0 OTHERWISE.

[TIMER: POINTOFSALE]

A10.2.4 Post-purchase stage

In this stage, respondents are shown a screen where they answer 5 questions about the product they selected in the product selection stage (Section A10.2.2).

Respondents can get additional points if they answer questions correctly.

PROG: Insert questions for the product included in the registration experiment.

Note to the reader: the mock-up below provides the questions asked about smart phones. The questions for toasters and children's high chairs follow the same pattern.

The correct answer might be different depending on the product selection in Section A10.2.2.

PROG: For each question 1 – 5, record the answer selected by the respondent. Generate variable **OCG_1**, **OCG_2** etc. **OCG_1**=1 if respondent chooses the correct answer for question 1.

Respondents see slightly different screens depending on the value of **TIMING**. Below is the basic screen FOR TIMING =1.

PROG: DISPLAY TEXT: 'In the next task, we ask you to answer some questions about the product you just chose as if answering an online quiz.

Remember that you can earn points by providing the correct answer.'

PROG: GENERATE BANNER 'QUIZ MASTER' 'QUIZZES| PRIZES|GAMES'

PROG: DISPLAY TEXT: 'How much do you really know about your shopping habits?'

PROG: GENERATE 'SUBMIT' BUTTON AT BOTTOM OF PAGE.

PROG: IF RESPONDENT CLICKS ON 'SUBMIT' BUTTON BEFORE PROVIDING AN ANSWER TO ALL QUESTIONS, DISPLAY TEXT 'Please provide an answer to all questions.'

In the next task, we ask you to answer some questions about the product you just chose as if answering an online quiz.

Remember that you can earn points by providing the correct answer.

Quiz · Master Quizzes | Prizes | Games

How much do you really know about your shopping habits?

Question 1: What was the price of the smart phone you just selected?

- €300
- €333
- €366
- €387

Question 2: How much storage did the smart phone have you just selected?

- 16GB
- 32GB
- 64GB
- 128GB

Question 3: How large was the smart phone you just selected?

- 6.5"
- 6.6"
- 6.7"
- 6.8"

Question 4: Which colour was the smart phone you selected?

- White
- Gold
- Black
- Red

Question 5: How many cameras does your selected smart phone have?

- 0
- 1
- 2
- 3

Submit

Note to reader: the correct answers for smart phones are as follows:

- Q1: €300 if selected brand is Atom; €366 if selected brand is Odyssey
- Q2: 32GB
- Q3: 6.5"
- Q4: Black
- Q5: 2

PROG: IF TIMING = 1 , ALLOW RESPONDENTS TO COMPLETE THE QUESTIONS IN THE POST-PURCHASE STAGE. ONCE THEY HAVE CLICKED 'SUBMIT' THAT IS THE END OF THE POST-PURCHASE STAGE AND THE REGISTRATION EXPERIMENT (SKIP TO SECTION A10.2.6).

In the post-purchase stage, approximately two-thirds of respondents will see a prompt to register a product. This prompt could be:

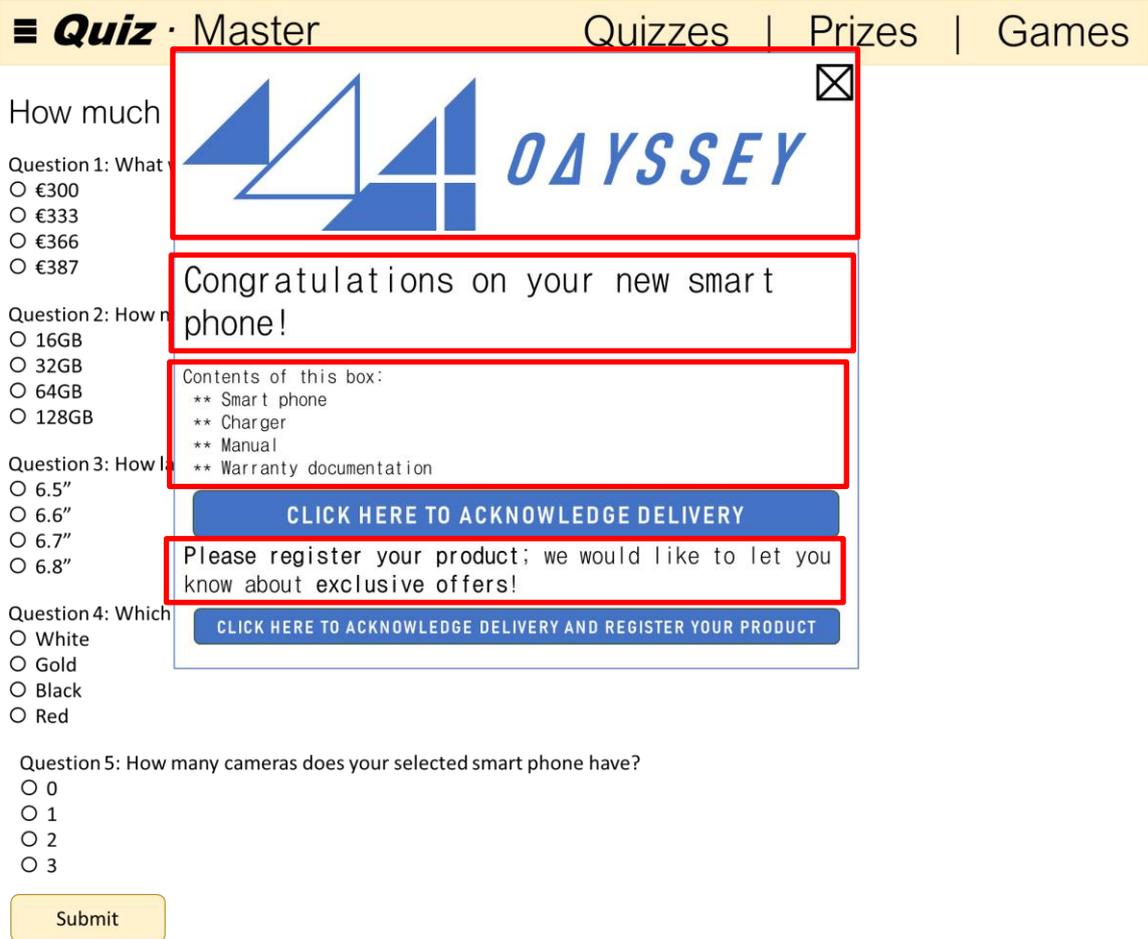
- Attached to a product i.e. respondents see a 'pop-up' notification. If they click on it, they see a message attached to a product with a prompt to register their product.
- In the form of a general ad campaign i.e. respondents see the basic screen above, but also banner ads. One of the ads contains a prompt to register the product.

PROG: IF TIMING = 2, THE SCREEN ABOVE HAS A POP-UP NOTIFICATION SHOWN IN THE MOCK-UP BELOW. DISPLAY AFTER 5 SECONDS.

Elements outlined in red change according to the table below.

In the next task, we ask you to answer some questions about the product you just chose as if answering an online quiz.

Remember that you can earn points by providing the correct answer.



PROG: INCLUDE AN `X` BUTTON ON TOP SO THAT RESPONDENTS CAN DISMISS THE MESSAGE. DISPLAY ON TOP AS IN MOCK-UP ABOVE: `CONGRATULATIONS ON YOUR NEW [PROG: INSERT PRODUCT IN REGISTRATION EXPERIMENT]`!

DISPLAY AT THE BOTTOM TWO BUTTONS AS IN MOCK-UP ABOVE: `CLICK HERE TO ACKNOWLEDGE DELIVERY` AND `CLICK HERE TO ACKNOWLEDGE DELIVERY AND REGISTER PRODUCT`, WHICH RESPONDENTS CAN CLICK.

PROG: IF RESPONDENT CLICKS ON `CLICK HERE TO ACKNOWLEDGE DELIVERY` THEY RETURN TO THE SCREEN AS IN THE PREVIOUS MOCK-UP.

PROG: IF RESPONDENT CLICKS ON `CLICK HERE TO ACKNOWLEDGE DELIVERY AND REGISTER PRODUCT` THEY ARE TAKEN TO THE REGISTRATION STAGE (SECTION A10.2.5).

PROG: CHANGE ELEMENTS OUTLINED IN RED ACCORDING TO THE TABLE BELOW.

PRODUCT REGISTRATION EXPERIMENT	IN	SMARTPHONE	HIGH CHAIR	TOASTER
BRAND		SELECT_BRAND		
LOGO		If SELECT_BRAND = Odyssey, use Odyssey_logo If SELECT_BRAND = Atom, use Atom_logo		

Congratulations on your new...	Smart phone!	High chair!	Toaster!
Contents of this box:	** Smart phone ** Charger ** Manual ** Warranty documentation	** Chair ** Safety bar ** Manual ** Warranty documentation	** Toaster ** Crumb tray ** Manual ** Warranty documentation
Text of prompt to register	Varies according to value of RM: see bottom table of Section A10.2.3		

IF TIMING = 2 AND (RESPONDENT CLICKS ON `X` BUTTON OR CLICKS ON `CLICK HERE TO ACKNOWLEDGE DELIVERY`), ALLOW THEM TO COMPLETE THE QUESTIONS IN THE POST-PURCHASE STAGE. ONCE THEY HAVE CLICKED `SUBMIT` THAT IS THE END OF THE POST-PURCHASE STAGE AND THE REGISTRATION EXPERIMENT (SKIP TO SECTION A10.2.6).

PROG: IF TIMING = 3, INSERT BANNER ADS AS SHOWN BELOW. THE BANNER AD (WITH LOGO FOR `REGISTER YOUR PRODUCT`) SHOULD CONTAIN AT THE BOTTOM: `CLICK HERE TO REGISTER`, WHICH RESPONDENTS CAN CLICK. RECORD IF RESPONDENT CLICKS ON THE BUTTON.

PROG: TEXT OUTLINED IN RED CHANGES ACCORDING TO VALUE OF RM. SEE BOTTOM TABLE IN SECTION A10.2.3.

PROG: LOGO IN THE LEFT HAND SIDE OF THE BANNER ("Register Your Product") IS AVAILABE IS NAMED "register". IMAGE FOR THE OTHER AD SHOULD BE TAKEN FROM IMAGE `MUTUAL`.

In the next task, we ask you to answer some questions about the product you just chose as if answering an online quiz.

Remember that you can earn points by providing the correct answer.

Quiz · Master Quizzes | Prizes | Games

How much do you really know about your shopping habits?

Question 1: What was the price of the smart phone you just selected?

- €300
- €333
- €366
- €387

Register
Your
Product

Please register your product; Odyssey would like to let you know about exclusive offers!

[Click here to register](#)

Question 2: How much storage did the smart phone have you just selected?

- 16GB
- 32GB
- 64GB
- 128GB

Question 3: How large was the smart phone you just selected?

- 6.5"
- 6.6"
- 6.7"
- 6.8"



saving for their future starts now



mutual national banking group

Sponsored content

Question 4: Which colour was the smart phone you selected?

- White
- Gold
- Black
- Red

Question 5: How many cameras does your selected smart phone have?

- 0
- 1
- 2
- 3

Submit

PROG: IF TIMING = 3 AND RESPONDENT CLICKS ON `CLICK HERE TO REGISTER`, THEY ARE TAKEN TO THE REGISTRATION SCREEN (SECTION A10.2.5)

IF TIMING =3 AND RESPONDENT DOES NOT CLICK ON AD, ALLOW THEM TO COMPLETE THE QUESTIONS IN THE POST-PURCHASE STAGE. ONCE THEY HAVE CLICKED `SUBMIT` THAT IS THE END OF THE POST-PURCHASE STAGE AND THE REGISTRATION EXPERIMENT (SKIP TO SECTION A10.2.6).

PROG: GENERATE VARIABLE REGISTRATION_BEGUN_PP=1 IF RESPONDENT CLICKS ON `CLICK HERE TO REGISTER` OR `CLICK HERE TO ACKNOWLEDGE DELIVERY AND REGISTER PRODUCT`, 0 OTHERWISE.

[TIMER: POSTPURCHASE]

A10.2.5 Registration stage

In the registration stage, respondents have the chance to register the product they selected in the product selection stage. We require respondents to enter product details to register

the product. They can choose to stop the process of registering their product. This ends the registration stage and the registration experiment.

We vary the amount of information respondents are asked to enter according to their allocation to variable **REFFORT**.

- If respondents are allocated to low levels of effort, they do not need to enter any details. The information is already entered. They simply need to click a button to register their product.
- If respondents are allocated to moderate level of effort, they need to manually enter some details and refer to a document.
- If respondents are allocated to a high level of effort, they need to manually enter more details and refer to two documents.

Respondents can click on buttons to reveal information in a pop-up about the product or payment. Respondents should be able to close the pop-ups and return to the registration screen.

PROG: IF **REFFORT** =1, respondents see a screen like the following, with responses already filled in. Elements outlined in red are changed according to the table below.

PROG: Display text: `You can now register your product. You may need to refer to extra information about your product. You can access this information by clicking on the relevant buttons below.`

PROG: DISPLAY HEADER AS IN MOCK-UP BELOW: `[PROG: INSERT SELECT_BRAND] REGISTRATION FORM`.

PROG: GENERATE BUTTON WITH TEXT: `I do not want to register my product anymore. Skip to next task.`

PROG: GENERATE BUTTON WITH TEXT: `PRODUCT INFORMATION`

PROG: DISPLAY TEXT: `Click the button below to find more information about your product`

RECORD WHICH BUTTON RESPONDENT CLICKS.

You can now register your product. You may need to refer to extra information about your product. You can access this information by clicking on the relevant buttons below.

**I do not want to register my product anymore
Skip to next task**

Odyssey registration form

Please provide the information below:

Brand of the product

Odyssey

Model

X20

Product code

6459966039

Submit

Click the button below to find more information about your product

Product information

PROG:IF REFFORT = 2, THEN RESPONDENTS SEE A SCREEN LIKE THE ONE ABOVE, BUT THIS TIME THE DETAILS ARE NOT ALREADY FILLED IN. RESPONDENTS NEED TO FILL IN THE DETAILS.

PROG: IF REFFORT =3, THEN RESPONDENTS SEE A SCREEN LIKE THE FOLLOWING. ELEMENTS OUTLINED IN RED CHANGE ACCORDING TO THE TABLE BELOW.

PROG: Display text: `You can now register your product. You may need to refer to extra information about your product. You can access this information by clicking on the relevant buttons below.`

PROG: GENERATE BUTTON WITH TEXT: `I do not want to register my product anymore. Skip to next task.`

PROG: GENERATE BUTTON WITH TEXT: `PRODUCT INFORMATION`

PROG: GENERATE BUTTON WITH TEXT: `PAYMENT INFORMATION`

PROG: DISPLAY TEXT: `Click the buttons below to find more information about your product`

You can now register your product. You may need to refer to extra information about your product. You can access this information by clicking on the relevant buttons below.

**I do not want to register my product anymore
Skip to next task**

Odyssey registration form

Please provide the information below:

Brand of the product

Model

Product code

Date of purchase

Retailer/seller

Submit

Click the buttons below to find more information about your product

Product information

Payment information

PRODUCT IN REGISTRATION EXPERIMENT	SMARTPHONE	HIGH CHAIR	TOASTER
"___" REGISTRATION FORM	SELECT_BRAND		
BRAND OF THE PRODUCT	SELECT_BRAND		
MODEL	If SELECT_BRAND = Odyssey: X20 If SELECT_BRAND = Atom: Z7		
PRODUCT CODE	6459966039		
DATE OF PURCHASE	05/07/2020		
RETAILER/SELLER	WarehouseShop		

PROG: IF RESPONDENT CLICKS ON BUTTON FOR 'PRODUCT INFORMATION' OPEN A POP-UP WINDOW WITH AN IMAGE OF PRODUCT DETAILS. INCLUDE THE FOLLOWING INFORMATION; EACH PIECE OF INFORMATION SHOULD APPEAR ON A NEW ROW:

PRODUCT IN REGISTRATION EXPERIMENT	SMARTPHONE	HIGH CHAIR	TOASTER
Brand	SELECT_BRAND		
Model	If SELECT_BRAND = Odyssey: X20		

	If SELECT_BRAND = Atom: Z7
Product code	6459966039
Production date	23/04/2019
Batch number	044

PROG: IF RESPONDENT CLICKS ON BUTTON FOR 'PAYMENT INFORMATION' OPEN A POP-UP WINDOW WITH AN IMAGE OF PAYMENT DETAILS. INCLUDE THE FOLLOWING INFORMATION; EACH PIECE OF INFORMATION SHOULD APPEAR ON A NEW ROW:

PRODUCT IN REGISTRATION EXPERIMENT	SMARTPHONE	HIGH CHAIR	TOASTER
Date of purchase	05/07/2020		
Retailer/Seller	WarehouseShop		
Shipping costs	€4.99		

PROG: RESPONDENTS SHOULD BE ABLE TO CLOSE THE POP-UPS AND RETURN TO THE REGISTRATION SCREEN.

PROG: IF REFFORT =2 OR 3 AND RESPONDENTS CLICK ON 'SUBMIT' BUTTON WITHOUT ENTERING ALL THE DETAILS, SHOW AN ERROR MESSAGE 'PLEASE FILL IN ALL THE INFORMATION'.

PROG: IF RESPONDENT CLICKS ON 'I DO NOT WANT TO REGISTER MY PRODUCT ANYMORE' AND TIMING IS NOT 1, THAT IS THE END OF THE POST-PURCHASE STAGE AND THE REGISTRATION EXPERIMENT (SKIP TO SECTION A10.2.6).

PROG: IF RESPONDENT CLICKS ON 'I DO NOT WANT TO REGISTER MY PRODUCT ANYMORE' AND TIMING IS 1, DIRECT THEM TO THE POST-PURCHASE STAGE (SECTION A10.2.4).

PROG: IF RESPONDENT HITS 'SUBMIT' AND TIMING =1, DIRECT THEM TO THE POST-PURCHASE STAGE (SECTION A10.2.4); OTHERWISE IF RESPONDENT HITS 'SUBMIT THIS IS THE END OF THE REGISTRATION EXPERIMENT (SKIP TO SECTION A10.2.6).

PROG: GENERATE VARIABLE REGISTRATION_COMPLETE=1 IF RESPONDENT HITS 'SUBMIT' AND 0 OTHERWISE.

[TIMER: REGSTAGE]

A10.2.6 Calculating incentives for registration experiment

Respondents are subjected to a random 'shock' i.e. 10% of respondents, randomly selected, receive a negative payment IF they have failed to register their product.

PROG: GENERATE HIDDEN VARIABLE REG_SHOCK=1 SHOCK; 0 OTHERWISE.

RANDOMLY ALLOCATE RESPONDENTS SO THAT REG_SHOCK=1 FOR [PROG: TAKE % OF RESPONDENTS REG_SHOCK FROM TABLE BELOW] OF RESPONDENTS.

ELEMENT OF INCENTIVES	SMARTPHONE	HIGH CHAIR	TOASTER
REG_SHOCK	10%	10%	10%

REG_FACTOR_SHOCK	20	10	10
------------------	----	----	----

Respondents receive a payment for

- making the correct choice in the product selection stage (Section A10.2.2)
- answering questions correctly in the post-purchase stage (Section A10.2.4)

In addition, respondents may receive a negative payment if they have failed to register their product.

The incentive payment = PRICE OF PRODUCT SELECTED IN REGISTRATION STAGE/10 + (TOTAL QUESTIONS ANSWERED CORRECTLY IN POST-PURCHASE STAGE)/5 + NEGATIVE SHOCK IF RESPONDENT HAS BEEN RANDOMLY ALLOCATED TO GROUP RECEIVING NEGATIVE SHOCK AND HAS NOT REGISTERED PRODUCT.

```

PROG: GENERATE VARIABLE REG_INC = SELECT_PRICE/10
+(OCG_1+OCG_2+OCG_3+OCG_4+OCG_5)/5
-SELECT_PRICE/REG_FACTOR_SHOCK [PROG: FROM TABLE ABOVE] * (1-
REGISTRATION_COMPLETE)
    
```

A10.2.7 End of registration experiment

NEW SCREEN

[TIMER_endreg: START]

PROG: DISPLAY TO RESPONDENTS: `Thank you for your responses! Your additional points have been calculated.`

[PROG: If L_FIRST=1 AND REG_INC+REC_INC>0 display IN ADDITION]
 You have won [PROG: INSERT REG_INC + REC_INC] additional points.

We will now ask you a series of survey questions.

[TIMER_endreg: STOP]

END SCREEN

[TIMER_EXPERIMENT_P: STOP]

A10.3 Recall experiment

In the recall experiment, respondents are given a 'basket' of products and answer questions about the products.

One of the products is subject to a recall i.e. it has developed a fault and needs to be returned. Respondents receive messages asking them to return this product.

Respondents may choose to ignore these messages, or click on them. If they click on the messages, they have the following options:

- Keep the product i.e. do nothing;
- Dispose of the product i.e. go to another screen and wait for some time;
- Return the product i.e. answer some questions about the product.

Respondents receive additional incentive points if they answer questions correctly, and if they return the product that has been recalled.

A10.3.1 Intro screens

[TIMER_EXPERIMENT_L: START]

[TIMER_INTRO_L: START]

NEW SCREEN

[PROG: If L_FIRST=1 display:]

The following screens will not be like a standard survey.

[PROG: If L_FIRST=0 display:]

The following screens show **a new task**.

[PROG: SHOW TO ALL]

You will be asked to answer questions about products like washing machines, cars or sweaters.

You will not actually own these products, but please behave as if you were in the described situations.

You can **earn up to [PROG: INSERT 244 IF PROD_RECALL = HATCHBACK; 12 IF PROD_RECALLED = TOY; 33 IF PROD_RECALLED = SWEATER; 78 IF PROD_RECALLED = WASHING MACHINE; 44 IF PROD_RECALLED = OFFICE CHAIR] additional points** in this task. **You cannot lose points.**

[PROG: DELAY THE APPEARANCE OF "Next" BUTTON BY 10 SECONDS]

[PROG: Add text following text, close to "Next" Button:]

You will be able to continue to the next screen after 10 seconds.

END SCREEN

NEW SCREEN

Please read the task description carefully:

TASK DESCRIPTION

In the next task, we will ask you some questions about the products you may own in your everyday life. You have a chance to add to your points by answering these questions correctly.

We would also like to understand a bit how you interact with the products you may own in your day-to-day life.

To keep the task simple, we will focus on three products:

. PROG: INSERT REC_PROD_1

. PROG: INSERT REC_PROD_2

. PROG: INSERT REC_PROD_3

Like in real life, you will get some 'benefits' from using these products so long as they are in good shape and function well at the end of the experiment. You will receive these benefits in terms of additional points, but only if the products are in good shape. If you feel these products are not in good shape, you can decide to dispose of them or return them to the manufacturer. Otherwise, simply keep using these products.

Please pay attention to the information about the products so that you have the best chance of answering questions correctly and having a product that functions well at the end of the experiment.

[PROG: DELAY THE APPEARANCE OF "Next" BUTTON BY 15 SECONDS]

[PROG: Add text following text, close to "Next" Button:]

You will be able to continue to the next screen after 15 seconds.

[TIMER_INTRO_L: STOP]

A10.3.2 Background task stage

Respondents answer questions about the products they own. As they answer questions, they are shown different messages informing them that a product they own has been recalled. Respondents must decide whether to respond to these messages.

The messages can be either:

- A direct notification i.e. an e-mail informing them that their product has been recalled; or,
- A general ad campaign telling them that a number of products (including the product the respondent owns) has been recalled.

The mock-up below shows the basic set-up of the screen. This will be varied depending on the type of recall notification the respondent is shown. The elements outlined in red change according to the table below.

[PROG: Insert a TIMER for background task]

[TIMER_BACKGROUND:START]

In the next task, we ask you to answer some questions about the products you own.

Remember that you can earn points by providing the correct answer.

Products you own

Fleece sweater

Find out more

Office chair

Find out more

Washing machine

Find out more

Question 1: Which of the products in your endowment did you purchase most recently?

- Fleece sweater
- Office chair
- Washing machine

Question 2: Which of the products you own has electronic parts?

- Fleece sweater
- Office chair
- Washing machine

Question 3: Which of the products you own is the most expensive?

- Fleece sweater
- Office chair
- Washing machine

Question 4: Which of the products you own has the shortest product code?

- Fleece sweater
- Office chair
- Washing machine

Question 5: Which one has the longest expected lifespan?

- Fleece sweater
- Office chair
- Washing machine

Submit

[PROG: Insert following text on top of the page as shown in mock-up]

In the next task, we ask you to answer some questions about the products you own.

Remember that can earn points by providing the correct answer.

PROG: create a text box as shown in mock-up with the header text: Products you own

PROG: Underneath the header text, create three buttons as shown in mock-up with the text `Find out more`

PROG: On top of the button on the left, as shown in mock-up, display `[PROG: INSERT REC_PROD_1]`

PROG: On top of the middle button, as shown in mock-up, display `[PROG: INSERT REC_PROD_2]`

PROG: On top of the right button, as shown in mock-up, display `[PROG: INSERT REC_PROD_3]`

PROG: Record if respondent clicks on each button.

PROG: If respondent clicks on any of the buttons marked `Find out more`, show a pop-up window with product information.

For example, if the respondent clicks on the button underneath `Washing machine`, the pop-up looks like the below. Items outlined in red change for each product.

In the next task, we ask you to answer some questions about the products you own.

Remember that you can earn points by providing the correct answer.

Products you own

Fleece sweater
Office chair
Washing machine

Find out more

Washing Machine

Waterfall 4XE

Find out more

	<table style="width: 100%; border-collapse: collapse;"> <tr><td style="border-bottom: 1px solid black;">Price:</td><td style="border-bottom: 1px solid black;">€386</td></tr> <tr><td style="border-bottom: 1px solid black;">Product code:</td><td style="border-bottom: 1px solid black;">33254656257</td></tr> <tr><td style="border-bottom: 1px solid black;">Max. load:</td><td style="border-bottom: 1px solid black;">8 kg</td></tr> <tr><td style="border-bottom: 1px solid black;">Energy rating:</td><td style="border-bottom: 1px solid black;">A++</td></tr> <tr><td style="border-bottom: 1px solid black;">Spin cycle speed:</td><td style="border-bottom: 1px solid black;">1400 rpm</td></tr> <tr><td style="border-bottom: 1px solid black;">Quick wash time:</td><td style="border-bottom: 1px solid black;">30 min for 7 kg</td></tr> <tr><td style="border-bottom: 1px solid black;">Date of purchase:</td><td style="border-bottom: 1px solid black;">10/04/2018</td></tr> <tr><td style="border-bottom: 1px solid black;">Expected lifespan:</td><td style="border-bottom: 1px solid black;">10 years</td></tr> </table>	Price:	€386	Product code:	33254656257	Max. load:	8 kg	Energy rating:	A++	Spin cycle speed:	1400 rpm	Quick wash time:	30 min for 7 kg	Date of purchase:	10/04/2018	Expected lifespan:	10 years
Price:	€386																
Product code:	33254656257																
Max. load:	8 kg																
Energy rating:	A++																
Spin cycle speed:	1400 rpm																
Quick wash time:	30 min for 7 kg																
Date of purchase:	10/04/2018																
Expected lifespan:	10 years																

Question 1: Which of the products you own did you purchase most recently?

Fleece sweater

Office chair

Washing machine

Question 2: Which of the products you own has electronic parts?

Fleece sweater

Office chair

Washing machine

Question 3: Which of the products you own is the most expensive?

Fleece sweater

Office chair

Washing machine

Question 4: Which of the products you own has the shortest product code?

Fleece sweater

Office chair

Washing machine

Question 5: Which one has the longest expected lifespan?

Fleece sweater

Office chair

Washing machine

Submit

PROG: Display the following text to all respondents.

[PROG: FOR ALL QUESTIONS, RANDOMISE OPTIONS, RESPONDENT ONLY SELECTS ONE]

- [PROG: INSERT REC_PROD_1]
- [PROG: INSERT REC_PROD_2]
- [PROG: INSERT REC_PROD_3]

Q1. Which of the products you own did you purchase most recently?

Q2. Which of the products you own has electronic parts?

Q3. Which of the following products you own is the most expensive?

Q4. Which of the products you own has the shortest product code?

Q5. Which one has the longest expected lifespan?

Respondents get additional points for each question they answer correctly.

PROG: RECORD RESPONSE TO EACH QUESTION.

PROG: FOR EACH QUESTION 1 – 5, THE CORRECT RESPONSE IS DEFINED FOR EACH VALUE OF THE VARIABLE **BUNDLE**.

PROG: FOR EACH QUESTION 1 – 5, CREATE VARIABLE OCL_1, OCL_2 ETC.

PROG: OCL_1=1 IF RESPONDENT CHOSE THE CORRECT RESPONSE. SIMILARLY OCL_2, OCL_3 ETC.

PROG: INSERT BUTTON AS SHOWN IN MOCK-UP ABOVE WITH TEXT `Submit`.

PROG: RESPONDENT NEEDS TO SELECT AN ANSWER FOR ALL 5 QUESTIONS BEFORE SHE CLICKS `SUBMIT`. IF SHE CLICKS `SUBMIT` BEFORE SELECTING AN ANSWER FOR ALL 5 QUESTIONS, DISPLAY TEXT: `Please complete all questions.`

PROG: ONCE RESPONDENT HAS COMPLETED ALL 5 QUESTIONS AND CLICKS `SUBMIT`, THIS IS THE END OF THE BACKGROUND TASK AND RECALL EXPERIMENT. TAKE RESPONDENT TO THE END SCREEN (SKIP TO SECTION A10.3.7).

The basic mock-up above will change depending on the type of recall message respondents are shown.

PROG: IF CHANNEL =0, THE BASIC MOCK-UP ABOVE HAS A POP-UP. THE POP-UP SHOULD DISPLAY TEXT AS IN MOCK-UP BELOW `YOU RECEIVED AN E-MAIL`.

DISPLAY THE POP-UP AFTER 15 SECONDS.

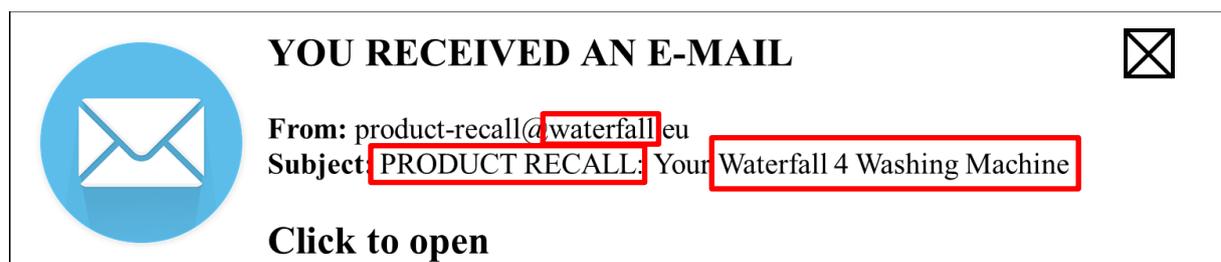
RESPONDENTS SHOULD BE ABLE TO CLICK ON THE `X` BUTTON AS IN THE MOCK-UP BELOW TO DISMISS THE POP-UP.

DISPLAY TEXT AS IN MOCK-UP BELOW: `Click to open`. IF RESPONDENT CLICKS ON THE POP-UP, TAKE THEM TO THE RECALL NOTIFICATION SCREEN (SECTION A10.3.3).

GENERATE VARIABLE RECALL_OPEN_DIRECT=1 IF RESPONDENT CLICKS `CLICK TO OPEN`, 0 OTHERWISE.

IF RESPONDENTS DO NOT PRESS `CLICK TO OPEN` , THEY SHOULD ANSWER THE 5 QUESTIONS BEFORE CLICKING `SUBMIT`, AS ABOVE.

The mock-up below illustrates the pop-up for a washing machine. Elements outlined in red change depending on the product and treatment allocation for the recall experiment, according to the table below.



PRODUCT	HATCHBACK	TOY	SWEATER	WASHING MACHINE	OFFICE CHAIR
Product-recall@...eu	Durand	we-toys	g-n	waterfall	upholst-chairs
Subject: ...	<ul style="list-style-type: none"> - PROG: IF LM =1 DISPLAY `VOLUNTARY PRODUCT RECALL:` - PROG: IF LM=2 DISPLAY `IMPORTANT SAFETY ANNOUNCEMENT:` - PROG: IF LM>=3 DISPLAY `PRODUCT RECALL:` 				

YOUR ...	Durand hatchback car	WE-Toys shape sorter	G&N Fleece Sweater	Waterfall 4 Washing Machine	Upholst chair	Comfort office
----------	----------------------	----------------------	--------------------	-----------------------------	---------------	----------------

The remaining respondents see the same basic mock-up as above, but with added 'banner ads'. One of these banner ads contains the recall message. Respondents can click on the banner ad with the recall notification.

PROG: IF CHANNEL =1, DISPLAY TEXT AS IN MOCK-UP BELOW, 'Click for more information.' RESPONDENTS SHOULD BE ABLE TO CLICK ON THE LINK. IF RESPONDENTS CLICK ON THE LINK TAKE THEM TO THE RECALL NOTIFICATION SCREEN (SECTION A10.3.3). IF RESPONDENTS DO NOT CLICK ON THE LINK TAKE THEM BACK TO PREVIOUS SCREEN WITH THE QUESTIONS. ALLOW THEM TO ANSWER QUESTIONS AS BEFORE, BEFORE THEY CLICK 'SUBMIT'.

GENERATE VARIABLE RECALL_OPEN_AD=1 IF RESPONDENT CLICKS 'CLICK FOR MORE INFORMATION', 0 OTHERWISE.

Elements outlined in red in the mock-up below change depending on the product and treatment allocation, according to the table below.

In the next task, we ask you to answer some questions about the products you own.

Remember that you can earn points by providing the correct answer.

Products you own

Fleece sweater

Find out more

Office chair

Find out more

Washing machine

Find out more

Question 1: Which of the products you own did you purchase most recently?

- Fleece sweater
- Office chair
- Washing machine

Product Recall

Waterfall 4 Washing Machines

Click for more information



Question 2: Which of the products you own has electronic parts?

- Fleece sweater
- Office chair
- Washing machine

ALL-IN



WORLD

7 DAYS ON THE BEACH

WITHOUT HASSLE

FROM €540,-



Question 3: Which of the products you own is the most expensive?

- Fleece sweater
- Office chair
- Washing machine

Question 4: Which of the products you own has the shortest product code?

- Fleece sweater
- Office chair
- Washing machine

Question 5: Which one has the longest expected lifespan?

- Fleece sweater
- Office chair
- Washing machine

Submit

PRODUCT	HATCHBACK	TOY	SWEATER	WASHING MACHINE	OFFICE CHAIR
TEXT IN LEFT OUTLINE D BOX	<ul style="list-style-type: none"> - PROG: IF LM =1 DISPLAY `VOLUNTARY PRODUCT RECALL:´ - PROG: IF LM=2 DISPLAY `IMPORTANT SAFETY ANNOUNCEMENT:´ - PROG: IF LM>=3 DISPLAY `PRODUCT RECALL:´ 				
TEXT IN TOP MIDDLE OUTLINE D BOX	Durand hatchback car	WE-Toys shape sorter	G&N Fleece Sweater	Waterfall Washing Machine	4 Upholst Comfort office chair
LOGO ON THE RIGHT	Durand_logo_alt	WE_logo_alt	GN_logo_alt	Waterfall_logo_alt	Upholst_logo_alt

PROG: IF RESPONDENT DOES NOT CLICK ON RECALL MESSAGES THEN AS BEFORE THEY NEED TO COMPLETE ALL 5 QUESTIONS BEFORE CLICKING `SUBMIT' AND ENDING THE BACKGROUND TASK AND RECALL EXPERIMENT.

[TIMER_BACKGROUND: STOP]

A10.3.3 Recall notification screen

If a respondent clicks on a recall message, she is shown a more detailed recall notification. The basic recall notification contains:

- A description of the danger (why the product is being recalled);
- Some information about what the respondent should do in response to the recall; and
- A link that the respondent can click if she wants to take action about the recall notification

We vary the language, layout and graphical elements of the recall notification, as seen below.

The basic form of the recall notifications is also different depending on the channel of the notification (discussed above in Section A10.3.2).

We first show the mock-ups for the direct notification (**CHANNEL** =0), then for the general ad campaign (**CHANNEL** =1).

The mock-up below shows the basic setup of this screen for **CHANNEL** =0 and LM=3. All elements in RED will vary as described below.

[TIMER_NOTIFICATION: START]

URL

From: product-recall@waterfall.eu Model + PROD_RECALLED
Sent: 04 February 2021 18:00
Subject: VOLUNTARY PRODUCT RECALL: Your Waterfall 4 Washing Machine

Dear Mr Johnson, INTRO TEXT

We, Waterfall Corp, have identified issues with Waterfall 4DE, 4XE and 4ZE Washing Machines manufactured after 23 June 2016. Our records show that you purchased a Waterfall 4XE, which is subject to this recall.

In some circumstances, the water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine may start leaking. Leakage may damage your property and cause electrical faults. You should stop using the product. You are entitled to a free fully-functioning replacement. Go to recall.waterfall.eu, call +1 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience. MAIN TEXT

Yours sincerely,

James Sullivan
 Vice-President; Quality and product safety

 LOGO Click here to learn more

PROG: The following elements change depending on PROD_RECALLED, but stay the SAME for all LM for CHANNEL=0.

- URL;
- Model + PROD_RECALLED;
- INTRO TEXT;
- LOGO

Note to the reader: The mock-ups below show the content of the recall notifications for washing machines. The notifications for other products follow the same pattern.

PROG: For ALL LM for CHANNEL=0, add a button on bottom right saying "Click here to learn more". Record if respondent clicks on button. If respondent clicks on button TAKE THEM TO THE RESPONSE SCREEN (SECTION A10.3.4).

PROG: RESPONDENTS SHOULD BE ABLE TO CLICK ON THE `X` BUTTON TO DISMISS THE MESSAGE.

PROG: RESPONDENTS SHOULD BE ABLE TO CLICK ON THE TEXT `Go to recall.waterfall.eu` (or relevant URLs for other products) WHICH TAKES THEM TO THE RESPONSE SCREEN (SECTION A10.3.4).

GENERATE VARIABLE RECALL_RESPOND_DIRECT=1 IF RESPONDENT CLICKS ON 'GO TO RECALL...' OR 'Click here to learn more' button, 0 OTHERWISE.

PROG: If CHANNEL=0 AND LM=2, the mock-up is identical to the one above, EXCEPT WE REPLACE THE TEXT 'VOLUNTARY PRODUCT RECALL' WITH 'IMPORTANT SAFETY ANNOUNCEMENT'.

PROG: IF CHANNEL =0 AND LM = 3, the mock-up is identical to the one above, EXCEPT we replace the text 'VOLUNTARY PRODUCT RECALL' WITH 'PRODUCT RECALL'.

Below we illustrate the mock-up for **CHANNEL=0** and **LM=3**

From: product-recall@waterfall.eu 
Sent: 04 February 2021 18:00
Subject: PRODUCT RECALL: Your Waterfall 4 Washing Machine

Dear Mr Johnson,

We, Waterfall Corp, have identified issues with Waterfall 4DE, 4XE and 4ZE Washing Machines manufactured after 23 June 2016. Our records show that you purchased a Waterfall 4XE, which is subject to this recall.

In some circumstances, the water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine may start leaking. Leakage may damage your property and cause electrical faults. You should stop using the product. You are entitled to a free fully-functioning replacement. Go to recall.waterfall.eu, call +1 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

Yours sincerely,

James Sullivan
 Vice-President; Quality and product safety



[Click here to learn more](#)

PROG: IF CHANNEL =0 AND LM=4, the mock-up is identical to the one above (i.e. mock-up for CHANNEL=0 AND LM=3), EXCEPT we replace the MAIN TEXT WITH THE FOLLOWING:

The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property and cause flooding and dangerous electrical faults leading to electrocution. You should immediately stop using the product. You are entitled to a free fully-functioning replacement. Go to recall.waterfall.eu, call +1 [PROG: REPLACE WITH RELEVANT COUNTRY

CODE] 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

PROG: IF **CHANNEL=0** AND **LM=5**, the mock-up is identical to the one above, EXCEPT we replace the MAIN TEXT WITH THE FOLLOWING:

Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +1 [PROG: REPLACE WITH RELEVANT COUNTRY CODE] 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

The screen should now have the main text organised in paragraphs, as in the mock-up below.

From: product-recall@waterfall.eu 
Sent: 04 February 2021 18:00
Subject: PRODUCT RECALL: Your Waterfall 4 Washing Machine

Dear Mr Johnson,

We, Waterfall Corp, have identified issues with Waterfall 4DE, 4XE and 4ZE Washing Machines manufactured after 23 June 2016. Our records show that you purchased a Waterfall 4XE, which is subject to this recall.

Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property, and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

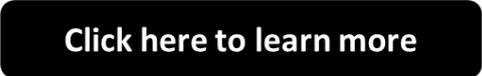
Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +1 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

Yours sincerely,

James Sullivan
 Vice-President; Quality and product safety

PROG: IF **CHANNEL** =0 AND **LM** = 6, the screen is identical to the mock-up above, EXCEPT with a picture of the product between INTRO TEXT AND MAIN TEXT

The mock-up should now look like the below.

From: product-recall@waterfall.eu

Sent: 04 February 2021 18:00

Subject: PRODUCT RECALL: Your Waterfall 4 Washing Machine



Dear Mr Johnson,

We, Waterfall Corp, have identified issues with Waterfall 4DE, 4XE and 4ZE Washing Machines manufactured after 23 June 2016. Our records show that you purchased a Waterfall 4XE, which is subject to this recall.



Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property, and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +1 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

Yours sincerely,

James Sullivan

Vice-President; Quality and product safety



[Click here to learn more](#)

PROG: IF CHANNEL=0 AND LM=7, the screen is identical to the above, EXCEPT we add a hazard sign and red graphical border around picture of product and MAIN TEXT.

The mock-up should now look like the below.

From: product-recall@waterfall.eu

Sent: 04 February 2021 18:00

Subject: PRODUCT RECALL: Your Waterfall 4 Washing Machine



Dear Mr Johnson,

We, Waterfall Corp, have identified issues with Waterfall 4DE, 4XE and 4ZE Washing Machines manufactured after 23 June 2016. Our records show that you purchased a Waterfall 4XE, which is subject to this recall.



Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property, and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +1 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

Yours sincerely,

James Sullivan

Vice-President; Quality and product safety



[Click here to learn more](#)

PROG: IF **CHANNEL** =0 AND **LM** =8, the screen is identical to the one above, EXCEPT we display the following text BELOW MAIN TEXT:

`Most people in your situation return dangerous products to protect their loved ones.'

The mock-up should now look like the below.

From: product-recall@waterfall.eu

Sent: 04 February 2021 18:00

Subject: PRODUCT RECALL: Your Waterfall 4 Washing Machine



Dear Mr Johnson,

We, Waterfall Corp, have identified issues with Waterfall 4DE, 4XE and 4ZE Washing Machines manufactured after 23 June 2016. Our records show that you purchased a Waterfall 4XE, which is subject to this recall.



Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property, and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +1 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

Most people in your situation return dangerous products to protect their loved ones

We apologise for the inconvenience.

Yours sincerely,

James Sullivan

Vice-President; Quality and product safety



[Click here to learn more](#)

The remaining respondents see a general ad campaign. Here they are told that a number of products are being recalled, including their own. Respondents need to confirm if the notification is relevant for a product they own. They can click on the information about the products they own (see similar screen in Section A10.3.2) to check.

As with the direct notification above, we vary the language, layout and graphical elements of the message depending on the value of **LM**.

Below is the basic mock-up for CHANNEL=1. The elements outlined in red vary according to product as described below.

PROG: create a text box as shown in mock-up with the header text: Products you own

PROG: Underneath the header text, create three buttons as shown in mock-up with the text `Find out more`

PROG: On top of the button on the left, as shown in mock-up, display `[PROG: INSERT REC_PROD_1]`

PROG: On top of the middle button, as shown in mock-up, display `[PROG: INSERT REC_PROD_2]`

PROG: On top of the right button, as shown in mock-up, display `[PROG: INSERT REC_PROD_3]`

PROG: Record if respondent clicks on each button.

PROG: If respondent clicks on any of the buttons marked `Find out more`, show a pop-up window with product information. (see Section A10.3.2 for how this might look).

PROG: GENERATE TWO BUTTONS AS IN MOCK-UP BELOW: `Click here to learn more` AND `Close this message`.

PROG: IF RESPONDENT CLICKS ON `Close this message` TAKE RESPONDENT TO END OF RECALL EXPERIMENT (SECTION A10.3.7).

PROG: IF RESPONDENT CLICKS ON `Click here to learn more`, TAKE THEM TO THE RESPONSE SCREEN (SECTION A10.3.4).

GENERATE VARIABLE RECALL_RELEVANT_AD=1 IF RESPONDENT CLICKS ON `Click here to learn more`, 0 OTHERWISE.

Products you own

Fleece sweater Find out more	Office chair Find out more	Washing machine Find out more
---------------------------------	-------------------------------	----------------------------------

HEADER

Voluntary Product Recall

INTRO TEXT

Waterfall recalls the following items
 Waterfall 4DE washing machine
 Waterfall 4XE washing machine
 Waterfall 4ZX washing machine
 Sold between February 2019 and December 2019

MAIN TEXT

In some circumstances, the water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine may start leaking. Leakage may damage your property and cause electrical faults. You should stop using the product. You are entitled to a free fully-functioning replacement. Go to recall.waterfall.eu, call +1 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

Click to learn more Close this message

PROG: INTRO TEXT CHANGES FOR EACH PRODUCT BUT DOES **NOT** CHANGE FOR **LM**.

Note to the reader: The mock-ups below show the content of the recall notifications for washing machines. The notifications for other products follow the same pattern.

PROG: HEADER DOES NOT CHANGE ACCORDING TO PRODUCT, BUT DOES CHANGE FOR **LM**.

PROG: IF CHANNEL=1 AND LM=1, DISPLAY HEADER TEXT `VOLUNTARY RECALL`

PROG: IF CHANNEL=1 AND LM=2, screen is identical to the above, but DISPLAY HEADER TEXT `IMPORTANT SAFETY ANNOUNCEMENT`

PROG: IF CHANNEL=1 AND LM=3, screen is identical to the above, but DISPLAY HEADER TEXT `PRODUCT RECALL`

The recall notification should now look similar to the mock-up below.

Product Recall

Waterfall recalls the following items

Waterfall 4DE washing machine

Waterfall 4XE washing machine

Waterfall 4ZX washing machine

Sold between February 2019 and December 2019

In some circumstances, the water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine may start leaking. Leakage may damage your property and cause electrical faults. You should stop using the product. You are entitled to a free fully-functioning replacement. Go to recall.waterfall.eu, call +1 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

PROG: IF **CHANNEL**=1 AND **LM**=4, the recall notification looks similar to the mock-up above, but the MAIN TEXT is replaced with the following:

The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property and cause flooding and dangerous electrical faults leading to electrocution. You should immediately stop using the product. You are entitled to a free fully-functioning replacement. Go to recall.waterfall.eu, call +1 [PROG: replace with relevant country code] 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

PROG: IF **CHANNEL**=1 AND **LM** = 5, the recall notification looks similar to the mock-up above, but the MAIN TEXT has a different layout. Insert the following text:

Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +1 [PROG: replace with relevant country code] 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

The recall notification should now look similar to the mock-up below.

Product Recall

Waterfall recalls the following items
Waterfall 4DE washing machine
Waterfall 4XE washing machine
Waterfall 4ZX washing machine
Sold between February 2019 and December 2019

Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property, and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +1 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

PROG: IF CHANNEL =1 AND LM = 6, the recall notification looks similar to the mock-up above, EXCEPT that a picture of the product is inserted between INTRO TEXT AND MAIN TEXT.

The recall notification should now look similar to the mock-up below.

Product Recall

Waterfall recalls the following items
Waterfall 4DE washing machine
Waterfall 4XE washing machine
Waterfall 4ZX washing machine
Sold between February 2019 and December 2019



Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property, and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +1 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

PROG: IF **CHANNEL** =1 AND **LM** = 7, the recall notification looks similar to the mock-up above, but add a red graphical border and a hazard sign as in the mock-up below.



Product Recall

Waterfall recalls the following items

Waterfall 4DE washing machine

Waterfall 4XE washing machine

Waterfall 4ZX washing machine

Sold between February 2019 and December 2019



Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property, and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +1 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

We apologise for the inconvenience.

PROG: IF CHANNEL=1 AND LM = 8, the recall notification is similar to the mock-up above, but display the following text below the MAIN TEXT as in the mock-up below: `Most people in your situation return dangerous products to protect their loved ones.`



Product Recall

Waterfall recalls the following items
 Waterfall 4DE washing machine
 Waterfall 4XE washing machine
 Waterfall 4ZX washing machine
 Sold between February 2019 and December 2019



Hazard The water level sensor may fail, causing the machine to fill with water without draining. If the defect occurs, the machine can start leaking. Leakage can damage your property, and cause flooding and dangerous electrical faults leading to electrocution.

What to do You should immediately stop using the product.

Remedy You are entitled to a free fully-functioning replacement.

Contact Go to recall.waterfall.eu, call +1 800 11 11 1 or e-mail product-recall@waterfall.eu for more information about your options.

Most people in your situation return dangerous products to protect their loved ones

[TIMER_NOTIFICATION: STOP]

A10.3.4 Response screen

If respondents click on the link in the recall notification or confirm that the recall is relevant for them, they are shown the response screen. Respondents have three options:

- Keep the product
- Dispose of the product
- Return the product

If respondents choose the option to keep the product, they complete the recall experiment.

If respondents dispose of the product, they are directed to another screen where they wait for a few seconds: 5 seconds for light products (i.e. HEAVY =0) and 15 seconds for heavy products (i.e. HEAVY =1).

If respondents return the product, they have to answer some questions and maybe click through an additional screen.

Below we show the basic set-up of this screen.

PROG: DISPLAY TEXT AS IN MOCK-UP `You now have the option to keep, dispose of or return the product below.

You need to make a decision within 2 minutes.'

PROG: GENERATE THREE SECTIONS OF THE SCREEN AS IN THE MOCK-UP BELOW.

ON THE LEFT-HAND SIDE GENERATE HEADER AS IN MOCK-UP BELOW WITH THE TEXT `KEEP'. INSERT IMAGE OF THE RECALLED PRODUCT.

DISPLAY TEXT AS IN MOCK-UP: `You keep using the [PROG: INSERT PROD_RECALLED] as before.

To keep the product, you need take no further action.'

GENERATE BUTTON AS IN MOCK-UP: `KEEP'. RECORD IF RESPONDENT CLICKS ON THIS BUTTON. IF RESPONDENT CLICKS ON `KEEP' OR IF RESPONDENT TAKES NO DECISION FOR 2 MINUTES, TAKE RESPONDENT TO END OF RECALL EXPERIMENT (SECTION A10.3.7).

GENERATE VARIABLE RESPONSE_KEEP=1 IF RESPONDENT CLICKS ON `KEEP', 0 OTHERWISE.

IN THE MIDDLE GENERATE HEADER AS IN MOCK-UP BELOW WITH THE TEXT `DISPOSE'.

INSERT IMAGE AS IN MOCK-UP BELOW

DISPLAY TEXT AS IN MOCK-UP: `You dispose of the [PROG: INSERT PROD_RECALLED].

To dispose of the product, you need to click on the button and wait for a few seconds.'

GENERATE BUTTON AS IN MOCK-UP: `DISPOSE'. RECORD IF RESPONDENT CLICKS ON THIS BUTTON. IF THE RESPONDENT CLICKS ON THIS BUTTON TAKE THEM TO THE DISPOSAL SCREEN (SECTION A10.3.5).

GENERATE VARIABLE DISPOSE_BEGUN=1 IF RESPONDENT CLICKS ON `DISPOSE'.

ON THE RIGHT-HAND SIDE GENERATE HEADER AS IN MOCK-UP BELOW WITH THE TEXT `RETURN'.

INSERT IMAGE AS IN MOCK-UP BELOW.

DISPLAY TEXT AS IN MOCK-UP: `You return the [PROG: INSERT PROD_RECALLED] to the manufacturer.

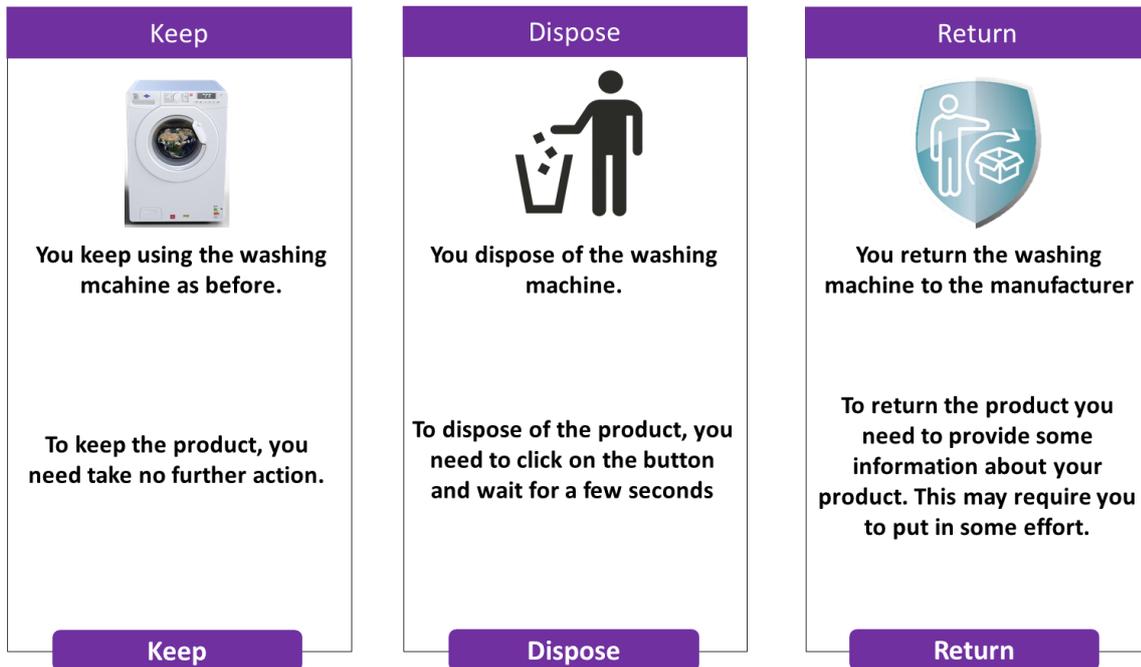
To return the product you need to provide some information about your product. This may require you to put in some effort.'

GENERATE BUTTON AS IN MOCK-UP: `RETURN'. RECORD IF RESPONDENT CLICK ON THIS BUTTON. IF THE RESPONDENT CLICKS ON THIS BUTTON TAKE THEM TO THE RETURN SCREEN (SECTION A10.3.6).

GENERATE VARIABLE RETURN_BEGUN=1 IF RESPONDENT CLICKS ON `RETURN'.

You now have the option to keep dispose or return the product below.

You need to make a decision within 2 minutes.



[TIMER: RESPONSE_SCREEN]

A10.3.5 Disposal screen

If respondents click on 'dispose' in the previous screen, they are taken to a screen where they wait for a few seconds.

Below is the basic look of the screen. If the product being recalled is a 'heavy' product respondents need to wait for 15 seconds, otherwise they wait 5 seconds.

PROG: DISPLAY TEXT AS IN MOCK-UP BELOW: 'You have decided to dispose of the item. Please wait [PROG: INSERT **TIME_DISP**] seconds.'

PROG: DISPLAY AMOUNT OF TIME REMAINING ON THE SCREEN.

PROG: GENERATE BUTTON AS IN MOCK-UP BELOW: 'I do not want to dispose of the product anymore'

Skip to next task'.

PROG: GENERATE HIDDEN VARIABLE 'DISPOSE_COMPLETE' =1 if respondent waits at the screen, 0 if respondent clicks on button 'I do not want to dispose of the product anymore'

PROG: IN EITHER CASE, ONCE THE RESPONDENT HAS FINISHED WAITING OR CLICKED ON THE BUTTON, THEY HAVE COMPLETED THE RECALL EXPERIMENT AND ARE TAKEN TO THE END SCREEN (SECTION A10.3.7).

You have decided to dispose of the item. Please wait 5 seconds.

I do not want to dispose of my product anymore
Skip to next task

00:02

[TIMER: DISPOSAL_SCREEN]

A10.3.6 Return screen

If respondent clicks on 'Return' in Section A10.3.4, she is taken to the return screen. Here the respondent answers some information about her purchase. This task may be easy or difficult depending on whether the respondent has been allocated to a treatment with low, medium, or high effort.

Below is the basic screen that respondents see.

PROG: DISPLAY TEXT AS IN MOCK-UP `You have decided to return the item. You have to provide some information about the product to arrange the return of the product.

You may need to refer to extra information about your product. You can access the information by clicking on the relevant buttons below.'

PROG: GENERATE HEADER `PRODUCT RETURN FORM' AS IN THE MOCK-UP BELOW.

PROG: GENERATE BUTTON `I do not want to return my product anymore. Skip to next task' as in mock-up below. RECORD IF RESPONDENT CLICKS ON BUTTON. IF RESPONDENT CLICKS ON BUTTON SHE FINISHES THE RECALL EXPERIMENT (SECTION A10.3.7).

PROG: GENERATE BOX AS IN MOCK-UP BELOW. DISPLAY TEXT `Click the buttons below to find more information about your product.'

PROG: GENERATE BUTTON WITH TEXT `Product manual' AS IN MOCK-UP BELOW. IF THE PRODUCT = SWEATER, THE TEXT ON THE BUTTON SHOULD BE `Product information'.

When respondents click on the button they should see information about their product in a pop-up. Take information for each PROD_RECALLED from the table below. Record if respondent clicks on the button. Respondents should be able to dismiss the pop-up to complete answering the information on the screen.

PROG: The text `Product manual' and the table of contents should **NOT** appear if PRODUCT = SWEATER.

Product	HATCHBACK	TOY	SWEATER	WASHING MACHINE	OFFICE CHAIR
Logo	Durand_logo	WE_logo	GN_logo	Waterfall_logo	Upholst_logo
Brand	Durand	WE-Toys	G&N	Waterfall	Upholst Chairs

Model	Sud	3772 shape sorter	Fleece	4XE	Comfort
-------	-----	-------------------	--------	-----	---------

PRODUCT MANUAL

Logo


Brand
Waterfall
Model

4XE

Brand: Waterfall
 Model: 4XE
 Product code: 9862893930

TABLE OF CONTENTS

Product overview.....1
 Environmental accreditation.....2
 Production details.....3
 Product features.....4

PROG: DISPLAY TEXT `Please provide the information below.`

PROG: GENERATE FIELDS AS IN MOCK-UP BELOW FOR `Brand of the product`, `Model` AND `Product code`.

PROG: GENERATE BUTTON `SUBMIT` AS IN MOCK-UP BELOW.

Below is the basic mock-up for **LEFFORT=1**. Note that the fields are already filled in.

PROG: IF **LEFFORT=1**, TAKE RESPONSES FOR FIELDS BELOW AS FOLLOWS.

Product	HATCHBACK	TOY	SWEATER	WASHING MACHINE	OFFICE CHAIR
Brand of the product	Durand	WE-Toys	G&N	Waterfall	Upholst Chairs
Model	Sud	3772 shape sorter	Fleece	4XE	Comfort
Product code	9862893930				

You have decided to return the item. You have to provide some information about the product to arrange the return of your product

You may need to refer to extra information about your product. You can access this information by clicking on the relevant buttons below.

I do not want to return my product anymore
Skip to next task

Product return form

Please provide the information below:

Brand of the product

Waterfall

Model

4XE

Product code

9862893930

Submit

Click the buttons below to find more information about your product

Product manual

PROG: IF LEFFORT=2, the screen is identical to the one above, BUT respondents need to manually enter the information.

PROG: If respondents click `Submit` without entering the information, please display text `Please enter the information requested`.

PROG: IF LEFFORT =3, the screen is similar to the one above, BUT respondents need to manually enter the information AND the button `Submit` is replaced with one saying `Schedule appointment` as in the mock-up below.

PROG: RESPONDENTS SHOULD ANSWER ALL THE QUESTIONS ON THE SCREEN BEFORE CLICKING `SCHEDULE APPOINTMENT`. IF THEY CLICK THE BUTTON `SCHEDULE APPOINTMENT` BEFORE ANSWERING ALL THE QUESTIONS PLEASE DISPLAY TEXT AS ABOVE `Please enter the information requested.`

You have decided to return the item. You have provided some information about the product to arrange the return of your product

You may need to refer to extra information about your product. You can access this information by clicking on the relevant buttons below.

I do not want to return my product anymore
Skip to next task

Product return form

Please provide the information below:

Brand of the product

Model

Product code

Schedule appointment

Click the buttons below to find more information about your product

Product manual

PROG: IF RESPONDENTS CLICK ON THE BUTTON `SCHEDULE APPOINTMENT` THEY ARE TAKEN TO ANOTHER SCREEN SIMILAR TO THE ONE ABOVE, EXCEPT:

- Button `Schedule appointment` is replaced with button saying `Submit`
- Text `Please provide the information below` IS REPLACED WITH `To schedule your appointment, please indicate your preferred date and time of appointment.`
- Display drop-down lists for the following fields as in mock-up below: `Preferred date`, `Preferred time slot` AND `Country of residence`.

Content for the drop list should be as follows:

Position	Preferred date	Preferred time slot	Country of residence
1	07 September 2020	08:00-09:00	Belgium
2	08 September 2020	09:00-10:00	Bulgaria
3	09 September 2020	10:00-11:00	Croatia
4	10 September 2020	11:00-12:00	Czech Republic
5	11 September 2020	12:00-13:00	Denmark
6		13:00-14:00	Germany
7		14:00-15:00	Ireland
8		15:00-16:00	Latvia
9		16:00-17:00	Portugal
10		17:00-18:00	Spain

11		18:00-19:00	Other
12		19:00-20:00	

You have decided to return the item. You have provided some information about the product to arrange the return of your product

You may need to refer to extra information about your product. You can access this information by clicking on the relevant buttons below.

**I do not want to return my product anymore
Skip to next task**

Product return form

To schedule your appointment, please indicate your preferred date and time of appointment:

Preferred date

Preferred time slot

Country of residence

Submit

PROG: GENERATE HIDDEN VARIABLE RETURN_COMPLETE =1 IF RESPONDENT HITS `SUBMIT` AND 0 OTHERWISE.

PROG: IN EITHER CASE, WHETHER RESPONDENT HITS `SUBMIT OR `I DO NOT WANT TO RETURN MY PRODUCT ANYMORE..' THE RESPONDENT HAS COMPLETED THE RECALL EXPERIMENT AND IS TAKEN TO THE END RECALL EXPERIMENT SCREEN (SECTION A10.3.7).

GENERATE VARIABLE KEEP=1 IF DISPOSE_COMPLETE=0 AND RETURN_COMPLETE=0.

END SCREEN

[TIMER: RETURN_SCREEN]

A10.3.7 Payoff screen

Respondents receive incentive payments for:

- Returning a recalled product;
- correctly answering questions in the background task

Respondents receive:

- a payoff of zero for disposing of a recalled product, but
- randomly a NEGATIVE incentive payment if they keep a recalled product

PROG: FOR ALL VARIABLES THAT ARE NOT CALCULATED BELOW, TAKE VALUES FROM THE TABLE BELOW

Product	HATCHBACK	TOY	SWEATER	WASHING MACHINE	OFFICE CHAIR
PRICE_RECACLED	€23,300	€10.84	€40.60	€386	€107
REC_FACTOR	100	1	1.25	5	2.5
REC_PROB_SHOCK	2%	5%	5%	2%	5%
REC_FACTOR_SHOCK	1	1	2	1	2

PROG: GENERATE HIDDEN VARIABLE RECALL_SHOCK =1 RANDOMLY WITH PROBABILITY [PROG: PROBABILITY THAT RECALL_SHOCK=1 TO BE TAKEN FROM REC_PROB_SHOCK], 0 OTHERWISE.

Respondents have different payoffs depending on the decisions they make in the experiment.

PROG: IF KEEP=1 GENERATE HIDDEN VARIABLE REC_INC_KEEP=(OCL_1+OCL_2+OCL_3+OCL_4+OCL_5)/5+ PRICE_RECALLED/REC_FACTOR - RECALL_SHOCK*PRICE_RECALLED/(REC_FACTOR*REC_FACTOR_SHOCK).

IF DISPOSE_COMPLETE=1, GENERATE HIDDEN VARIABLE REC_INC_DISPOSE=(OCL_1+OCL_2+OCL_3+OCL_4+OCL_5)/5

IF RETURN_COMPLETE=1, GENERATE HIDDEN VARIABLE REC_INC_RETURN=(OCL_1+OCL_2+OCL_3+OCL_4+OCL_5)/5+PRICE_RECALLED/REC_FACTOR

PROG: GENERATE HIDDEN VARIABLE REC_INC=REC_INC_KEEP IF KEEP =1, REC_INC_DISPOSE IF DISPOSE_COMPLETE=1, REC_INC_RETURN OTHERWISE.

Thank you for your responses! Your responses have been recorded and your points have been calculated.

[PROG: If L_FIRST=0 AND REG_INC+REC_INC>0 display IN ADDITION]
You have won [PROG: INSERT REG_INC + REC_INC] additional points.

We will now ask you a series of survey questions.

A10.4 Follow-up questions

[TIMER_FR: START]

This section present survey-style questions about the **last choice respondents made in this task.**

Follow-up questions will be asked AFTER respondents have finished BOTH registration experiment AND recall experiment.

Registration experiment

ASK TO ALL RESPONDENTS:

RG1. Thinking of the product you were asked to purchase earlier, do you think the product was safe? Please select your answer below.

1 – Not at all safe

2 – Not very safe

3 – Rather safe

4 – Very safe

9 – Don't know/can't say

ASK TO ALL RESPONDENTS

RG2. Again thinking of the product you were asked to purchase earlier, would you say you trust the information provided about the product? Please select your answer below

1 – Not at all

2 – Not very much

3 – I somewhat trust the information

4 – I completely trust the information

9 – Don't know/can't say

ASK TO RESPONDENTS IF:

- REGISTRATION_BEGUN_POS=1, OR
- REGISTRATION_BEGUN_PP=1

RG3. Again thinking of the product you were asked to purchase earlier, especially when you were asked to register this product. Would you say the invitation to register your product was easy or difficult to understand? Please select your answer below.

1 – Very difficult to understand

2 – Difficult to understand

3 – Easy to understand

4 – Very easy to understand

9 – Don't know/can't say

ASK TO RESPONDENTS IF:

- REGISTRATION_BEGUN_POS=1, OR
- REGISTRATION_BEGUN_PP=1

RG4. Again thinking of the product you were asked to purchase earlier, especially when you were asked to register this product. Would you say the process was easy or difficult? Please select your answer below.

1 – Very difficult

2 – Difficult

3 – Easy

4 – Very easy

9 – Don't know/can't say

Recall experiment

PROG: For the inserts (i.e. 'INSERT PROD_RECALLED') for the question, use the following table:

PROD_RECALLED	INSERT
WASHING MACHINE	the washing machine
TOY	the toy
OFFICE CHAIR	the office chair
SWEATER	the sweater
HATCHBACK	the hatchback car

ASK RESPONDENTS WHERE RECALL_OPEN_DIRECT=0 AND RECALL_OPEN_AD=0:

RL1. Earlier, you were asked to answer questions about a number of products you possess. Did you see a message giving you safety information about one of the products?

1. Yes
2. No
3. Don't know/can't say

ASK RESPONDENTS WHO ANSWER 'YES' TO RL1:

RL2. And did you think the message was easy to notice or remember?

1. Yes
2. No
3. Don't know/can't say

ASK RESPONDENTS WHERE RECALL_OPEN_DIRECT=1 OR RECALL_OPEN_AD=1:

RL3. Earlier, when you were asked to answer questions about a number of products you possess, you clicked on a message giving you safety information about one of the products. Did you think the message was easy to understand?

- 1 – Very difficult to understand
- 2 – Difficult to understand
- 3 – Easy to understand
- 4 – Extremely easy to understand
- 9 – Don't know/can't say

ASK TO RESPONDENTS WHERE DISPOSE_BEGUN=1 OR RETURN_BEGUN=1

RL4. What made you choose the actions you took about [PROG: INSERT PROD_RECALLED]? Please select all that apply.

[PROG: MULTIPLE RESPONSE, RANDOMISE EXCEPT FOR OPTION 4 WHICH IS AT THE BOTTOM. OPTION 4 IS OPEN TEXT.]

1. Risk of losing functionality of the product
2. Risk of harm to me or my family
3. I didn't feel comfortable holding the product anymore for other reasons
4. Other [please specify]

ASK TO RESPONDENTS WHERE DISPOSE_BEGUN=1 OR RETURN_BEGUN=1

RL5. And did you find it easy or difficult to understand what you needed to do with [PROG: INSERT PROD_RECALLED]?

- 1 – Very difficult to understand
- 2 – Difficult to understand
- 3 – Easy to understand
- 4 – Very easy to understand
- 9 – Don't know/can't say

ASK TO RESPONDENTS WHERE RETURN_BEGUN=1

RL6. And did you think it was easy or difficult to return [PROG: INSERT PROD_RECALLED]?

- 1 – Very difficult
- 2 – Difficult
- 3 – Easy
- 4 – Very easy
- 9 – Don't know/can't say

ASK RESPONDENTS WHERE RECALL_OPEN_DIRECT=1 OR RECALL_OPEN_AD=1:

RL7. And what opinion do you have of the manufacturer of [PROG: INSERT PROD_RECALLED] after seeing the message?

- 1 – Very untrustworthy
- 2 – Untrustworthy
- 3 – Trustworthy
- 4 – Very trustworthy
- 9 – Don't know/can't say

ASK RESPONDENTS WHO ANSWER 1 OR 2 TO RL7

RL7a. And why do you think so? Please select all that apply.

[PROG: MULTIPLE RESPONSES ALLOWED, RANDOMISE EXCEPT FOR OPTION 5, WHICH IS AT THE BOTTOM]

1. The product they manufactured is risky

2. I didn't understand what I needed to do
3. I prefer a refund rather than a replacement
4. The recall message was not clear
5. Other [please specify]

ASK RESPONDENTS WHO ANSWER 3 OR 4 TO RL7

RL7b. And why do you think so? Please select all that apply.

[PROG: MULTIPLE RESPONSES ALLOWED, RANDOMISE EXCEPT FOR OPTION 5, WHICH IS AT THE BOTTOM]

1. They were honest about the risks of the product
2. The message was clear
3. They gave me a free replacement
4. I easily understood what I needed to do
5. Other [please specify]

ASK RESPONDENTS WHERE RECALL_OPEN_DIRECT=1 OR RECALL_OPEN_AD=1:

RL8. Thinking again of the manufacturer of [PROG: INSERT PROD_RECALLED], imagine that this is a real manufacturer. In your opinion, would you be willing to purchase products from this manufacturer in the future?

- 1 – Very unlikely
- 2 – Unlikely
- 3 – Likely
- 4 – Very likely
- 9 – Don't know/can't say

ASK RESPONDENTS WHERE RECALL_OPEN_DIRECT=1 OR RECALL_OPEN_AD=1:

RL9. Thinking again of the manufacturer of [PROG: INSERT PROD_RECALLED], imagine that this is a real manufacturer. In your opinion, would you be willing to recommend this manufacturer to friends and family?

- 1 – Very unlikely
- 2 – Unlikely
- 3 – Likely
- 4 – Very likely
- 9 – Don't know/can't say

[TIMER_FR: STOP]

Annex 11 Follow-up questions for the lab experiments

A11.1 Follow-up questions – sessions with vulnerable consumers

Question 1: Who noticed the invitation to register the product?

Follow-up questions:

- Do you have experience with this type of invitations? For which products and in what context e.g. at point of sale, advertising, online campaigns etc.?
- What is your opinion about the language used in the invitation in the experiment task, and the tone of the message?

Question 2: Who decided to register their product? Why (not)?

Follow-up questions:

- Does the timing of the invitation to register make a difference? Why (not)?
- What is typically your response to such messages? Have you registered any products in real life? Why (not)?
- Do data privacy concerns affect your decisions as to whether or not to register a product (online)?

Question 3: Did you notice the pop-email or the banner, what was this message about? What was your reaction?

Follow-up questions:

- Do you have experience of such product safety messages? Where, for what products, and in what context (in stores, messages in media, online etc.)?
- What would make these warnings more visible? What do you think about this kind of communication (via a website/via email)? What would encourage you to spread information on unsafe products using word-of-mouth?

Question 4: What is your opinion about the recall notice in the experiment task – in terms of language, tone, graphical imagery?

Follow-up question: Do you normally pay attention to such messages? Why or why not?

Question 5: In the exercise, after the recall notice, you were asked to choose what you would do next. Which choice did you make, and why?

Follow-up question:

- How would your behaviour/reaction change if the product risk is a personal risk, a risk to children, a risk to the environment, a risk to others in society?
- What would make you more likely to act and stop using an unsafe product? E.g. free replacement, easy disposal etc.

A11.2 Additional follow-up questions – sessions with “general public”

Question 1: How would you feel about registering your product using a smartphone app (or another internet-connected product)?

Question 2: And how would you feel about a manufacturer contacting you via this smartphone app in case there is a problem with one of the products that you registered?

Question 3: Imagine you own a smart fridge. How would you feel about a manufacturer contacting you via your smart fridge in case there’s a problem with the fridge, even if you did not sign up for such messages?

Question 4: Imagine that there is a fault detected with your smartphone model and the manufacturer decides to disable your phone (from a distance). How do you feel about this? Can you imagine a situation where you feel this would be justified or needed?

Annex 12 Industry survey results

This section presents a summary of the results of the closed-ended and/or quantitative questions in the industry survey. As such, this section does not provide a summary of the qualitative results of the industry survey nor of answer to open-ended questions following the “other” option.

For questions for which no summary is provided, the number of responses is still provided.

A12.1 Screening questions

Table 24: Q1 – Type of stakeholder

	Count	Percentage
Manufacturer	77	51.3%
Wholesaler	39	26.0%
Retailer (brick & mortar)	46	30.7%
Retailer (online shop)	41	27.3%
<i>Base</i>	<i>150</i>	

Note: multiple answers possible. As such, percentage may sum to more than 100%.

Table 25: Q2 – Products sold

	Count	Percentage
Toys/games for children (of less than 14 years old)	53	35.3%
Personal cars and motorcycles	22	14.7%
Clothing and footwear (including sports gear)	35	23.3%
Domestic electrical appliances (e.g. fridges, washing machines, coffee makers)	41	27.3%
Communication devices (e.g. mobile phones, computers, accessories)	29	19.3%
Childcare articles and children’s equipment (e.g. feeding equipment, high-chairs, pushchairs)	24	16.0%
Furniture	23	15.3%
Other	74	49.3%
<i>Base</i>	<i>150</i>	

Note: multiple answers possible. As such, percentage may sum to more than 100%.

Table 26: Q3 – Size of company

	Count	Percentage
Micro (fewer than 10 employees)	26	17.3%
Small (between 10 and 50 employees)	24	16.0%
Medium-sized (between 51 and 250 employees)	36	24.0%
Large (>250 employees)	64	42.7%
<i>Base</i>	<i>150</i>	

Table 27: Q4 – Please select all countries of operations

	Count	Percentage
Austria	42	28.0%
Belgium	47	31.3%
Bulgaria	28	18.7%

	Count	Percentage
Croatia	26	17.3%
Cyprus	25	16.7%
Czechia	32	21.3%
Denmark	33	22.0%
Estonia	16	10.7%
Finland	27	18.0%
France	50	33.3%
Germany	60	40.0%
Greece	35	23.3%
Hungary	29	19.3%
Iceland	15	10.0%
Ireland	37	24.7%
Italy	45	30.0%
Latvia	19	12.7%
Liechtenstein	14	9.3%
Lithuania	20	13.3%
Luxembourg	25	16.7%
Malta	28	18.7%
Netherlands	45	30.0%
Norway	32	21.3%
Poland	33	22.0%
Portugal	26	17.3%
Romania	27	18.0%
Slovakia	26	17.3%
Slovenia	24	16.0%
Spain	41	27.3%
Sweden	30	20.0%
Switzerland	33	22.0%
United Kingdom	60	40.0%
United States	25	16.7%
Canada	21	14.0%
Australia	24	16.0%
Other	12	8.0%
<i>Base</i>	<i>150</i>	

Note: multiple answers possible. As such, percentage may sum to more than 100%.

Q5 not included here. This question received 34 responses.

A12.2 Product registration and other methods of identifying customers in case of a product recall

Table 28: Q6 – Do you offer your customers the possibility to register their products?

	Count	Percentage
Yes	27	18.0%
No	123	82.0%

	Count	Percentage
<i>Base</i>	150	

Table 29: Q7 – For which of the following product categories is registration possible?

	Count	Percentage
Toys/games for children	3	12.5%
Personal cars and motorcycles	8	33.3%
Clothing and footwear	3	12.5%
Domestic electrical appliances	5	20.8%
Communication devices	4	16.7%
Childcare articles and children’s equipment	3	12.5%
Furniture	2	8.3%
Other	7	29.2%
<i>Base</i>	24	

Note: multiple answers possible. As such, percentage may sum to more than 100%.

Table 30: Q8 – Which of the following registration methods are currently offered to your customers for registering their products and how would you rate their effectiveness?

	Not applicable	Not at all effective	Not very effective	Somewhat effective	Effective	Very effective	Total
At the moment of sale							
In-store	3	1	1	3	4	9	21
Online	4	1	3	4	3	5	20
Post-purchase							
Through a pre-paid return product registration form	7	0	3	1	1	0	12
On our company’s website	7	0	1	4	3	1	16
On our company’s website via membership of a loyalty scheme/card	8	0	1	1	2	1	13
On the website of another company, industry association or other organisation	10	1	1	0	0	0	12
Registration by phone	8	1	0	2	1	1	13
Registration by e-mail	9	0	0	3	1	2	15
Mobile scanning with a QR code	10	0	0	1	0	0	11
Registration at delivery	9	0	0	1	2	5	17

Note: table provides counts of each answer only.

Q9 not included here. This question received 2 responses.

Table 31: Q10 – For those product categories where registration is possible, please estimate the percentage of products sold per category that are registered.

	Average	Number of responses
Toys/games for children	0.95%	3
Personal cars and motorcycles	0.88%	8
Clothing and footwear	0.92%	3
Domestic electrical appliances	0.47%	4
Communication devices	1%	3
Childcare articles and children’s equipment	0.93%	2
Furniture	50.5%	2
Other	0.81%	5

Note: Average provides the average response across all available responses. The number of responses gives the number of responses on which the average is based.

Q11 not included here. This question received 14 responses.

Q12 not included here. This question received 15 responses.

Table 32: Q13 – Do you use customer information obtained through product registration for the following purposes?

	Count	Percentage
To contact customers in case of safety issues, e.g. a product recall	21	91.3%
To offer after-sale service and support	12	52.2%
To send information about new products and special offers	11	47.8%
<i>Base</i>	23	

Note: multiple answers possible. As such, percentage may sum to more than 100%.

Table 33: Q14 – Do you use customer data collected for other purposes (e.g. loyalty schemes, online sales, digital receipts etc.) to contact customers in case there is a safety issue with their product?

	Count	Percentage
Yes	66	44.9%
No	41	27.9%
Not applicable (my company does not collect customer data)	40	27.2%
<i>Base</i>	147	

Table 34: Q15 – Which of the following means of communication do you use to contact customers in case of safety issues?

	Count	Percentage
Email	56	80.0%
Phone call	37	52.9%
Text message or push notifications via mobile	11	15.7%
Letter	32	45.7%
Other	10	14.3%
<i>Base</i>	70	

Note: multiple answers possible. As such, percentage may sum to more than 100%.

A12.3 Current practices on product recalls

Table 35: Q16 – Have you recalled a product from end consumers in the past 5 years to avoid a risk to health or safety?

	Count	Percentage
Yes	42	39.6%
No	64	60.4%
<i>Base</i>	<i>106</i>	

Table 36: Q16 – How often did you recall a product

	Average	Number of responses
If recall has happened	10.6	25

Note: Average provides the average response across all available responses. The number of responses gives the number of responses on which the average is based; only responses providing an exact number have been included.

Table 37: Q17 – Please indicate which of the following product categories were concerned by the product recall.

	Count	Percentage
Toys/games for children	9	22.5%
Personal cars and motorcycles	8	20.0%
Clothing and footwear	6	15.0%
Domestic electrical appliances	12	30.0%
Communication devices	5	12.5%
Childcare articles and children’s equipment	5	12.5%
Furniture	4	10.0%
Other	19	47.5%
<i>Base</i>	<i>40</i>	

Note: multiple answers possible. As such, percentage may sum to more than 100%.

Table 38: Q18 – Could you estimate the percentage of your company’s products sold on the EU market that has been recalled over the past 5 years for each of the following product categories?

	Average	Number of responses
Toys/games for children	0.005%	8
Personal cars and motorcycles	0.093%	10
Clothing and footwear	0.004%	7
Domestic electrical appliances	0.004%	9
Communication devices	0.006%	8
Childcare articles and children’s equipment	0.011%	7
Furniture	0.004%	7
Other	0.216%	9

Note: Average provides the average response across all available responses. The number of responses gives the number of responses on which the average is based.

Table 39: Q19 – Could you estimate the percentage of products that your company has successfully retrieved from consumers following a product recall over the past 5 years?

	Average	Number of responses
Toys/games for children	0.17%	6
Personal cars and motorcycles	0.39%	12
Clothing and footwear	0.00%	5
Domestic electrical appliances	0.27%	8
Communication devices	0.13%	6
Childcare articles and children’s equipment	0.31%	6
Furniture	0.00%	5
Other	0.35%	12

Note: Average provides the average response across all available responses. The number of responses gives the number of responses on which the average is based.

Table 40: Q20 – Have you ever used one of the following channels to encourage customer participation in a product recall?

	Count	Percentage
Direct contact with consumers known to have the product (e.g. by letter, email or phone)	30	81.1%
Your company’s website	29	78.4%
Your company’s social media	15	40.5%
Television campaigns	4	10.8%
Newspaper advertisements	13	35.1%
Newsletters	5	13.5%
Influencers	1	2.7%
Specialised online groups / fora	2	5.4%
Other (please specify)	13	35.1%
<i>Base</i>	37	

Note: multiple answers possible. As such, percentage may sum to more than 100%.

Table 41: Q21 – In your opinion, which channels prove most impactful in encouraging consumers to participate in a product recall?

	Not at all effective	Not very effective	Somewhat effective	Effective	Very effective	Total
Direct contact with consumers known to have the product (e.g. by letter, email or phone)	0	0	3	13	19	35
Your company’s website	2	4	13	9	2	30
Your company’s social media	1	4	6	7	5	23
Television campaigns	2	2	3	5	2	14
Newspaper advertisements	4	7	6	4	0	21
Newsletters	1	5	6	2	0	14

	Not at all effective	Not very effective	Somewhat effective	Effective	Very effective	Total
Influencers	6	1	2	3	0	12
Specialised online groups / fora	3	2	4	4	1	14
Other	2	0	3	3	3	11

Note: table provides counts of each answer only.

Q22 not included here. This question received 26 responses.

Q23 not included here. This question received 25 responses.

Q24 not included here. This question received 25 responses.

Q25 not included here. This question received 14 responses.

Q26 not included here. This question received 22 responses.

Table 42: Q27 – Could you estimate the cost for your company related to the last/average product recall?

a) Estimated cost in Euro

	Average	Number of responses
Operational damage related to disruption to operations while managing a recall	€22,256,000	9
<i>(excluding outlier)</i>	€38,000	8
Direct costs of implementing a recall (e.g. cost of collecting repairing/replacing/refunding/destroying recalled products, paid recall announcements etc.)	€39,650	8
Indirect costs (e.g. negative impact on reputation from incidents caused by recalled products)	€26,220	5
Other costs	€0	1

b) Estimated cost in percentage of annual turnover

	Average	Number of responses
Operational damage related to disruption to operations while managing a recall	0.55%	4
Direct costs of implementing a recall (e.g. cost of collecting repairing/replacing/refunding/destroying recalled products, paid recall announcements etc.)	0.10%	3
Indirect costs (e.g. negative impact on reputation from incidents caused by recalled products)	0.00%	1
Other costs	N/A	0

Note: Average provides the average response across all available responses. The number of responses gives the number of responses on which the average is based; only responses providing an exact number have been included.

Table 43: Q28 – Do you have a written procedure in place in case a product needs to be recalled from end consumers to avoid a risk to health or safety?

	Count	Percentage
Yes	54	53.5%
No	47	46.5%
<i>Base</i>	<i>101</i>	

Q29 not included here. This question received 43 responses.

Table 44: Q30 – Does the procedure envisage the use of one of the following channels to encourage customer participation in a product recall?

	Count	Percentage
Direct contact with consumers known to have the product (e.g. by letter, email or phone)	15	71.4%
Your company’s website	15	71.4%
Your company’s social media	11	52.4%
Television campaigns	1	4.8%
Newspaper advertisements	6	28.6%
Newsletters	4	19.0%
Influencers	1	4.8%
Specialised online groups / fora	3	14.3%
Other	4	19.0%
<i>Base</i>	<i>21</i>	

Note: multiple answers possible. As such, percentage may sum to more than 100%.

Q31 not included here. This question received 18 responses.

Q32 not included here. This question received 17 responses.

Table 45: Q33 – Does your company have an insurance policy covering potential product recalls?

	Count	Percentage
Yes	40	41.2%
No	57	58.8%
<i>Base</i>	<i>97</i>	

Table 46: Q34 – If yes, could you indicate the approximate cost of your insurance policy covering potential product recalls?

	Average	Number of responses
In Euro	€225,831	6
<i>(Excluding outlier)</i>	<i>€70,997</i>	<i>5</i>
In percent of your annual turnover	5.2%	5

Note: Average provides the average response across all available responses. The number of responses gives the number of responses on which the average is based; only responses providing an exact number have been included.

Table 47: Q35 – If no, how much would your company be willing to pay for such insurance covering potential product recalls?

	Average	Number of responses
In Euro	€3,132	19
In percent of your annual turnover ^[a]	0.34%	14

Note: Average provides the average response across all available responses. The number of responses gives the number of responses on which the average is based; only responses providing an exact number have been included.

[a] Excludes respondent providing an impossible answer.

Annex 13 Supplementary consumer survey results

Importance of product safety by consumers' characteristics

The following note applies to Table 48 up to Table 51:

The question was Q1.1 "When you buy a product, how important are the following aspects for your purchasing decision?". Answer options were given on a four-point scale from "1 – not important at all" to "4 – very important". Results are reported as averages by transforming the categorical data. A value of 10 therefore corresponds with "very important", 3 1/3 with "important", -3 1/3 with "not important" and -10 with "not important at all".

Table 48: Importance of product safety by age

	Total	Age			
		18-34	35-54	55-64	65+
Importance of product safety (mean)	7.10	5.80	7.24	7.82	8.23

Number of observations N=10,013.

Table 49: Importance of product safety by financial situation and education

	Total	Financial Situation				Education		
		Very easy	Fairly easy	Fairly difficult	Very difficult	Low	Medium	High
Importance of product safety (mean)	7.10	6.95	7.01	7.13	7.89	7.33	6.91	7.09

Number of observations by financial situation N=9,435 (does not include replies of participants that did not indicate their financial situation); number of observations by education N=9,889 (does not include replies of participants that did not indicate their educational level)

Table 50: Importance of product safety by occupational status

	Total	Occupational Status		
		Employed	Not Employed	Retired
Importance of product safety (mean)	7.10	6.96	6.71	8.09

Number of observations N=10,013.

Table 51: Importance of product safety by internet use

	Total	Internet Use		
		Low	Medium	High
Importance of product safety (mean)	7.10	7.23	7.03	7.04

Number of observations N=10,013.

Share of consumers having seen or received recall information by consumers' characteristics

The following note applies to Table 52 up to Table 55:

The question was Q2.5 "In the past 2 years, do you recall having seen or received any information notices or announcements concerning the recall of a specific product? If you saw both a recall notice on a product you own and on a product you do not own, please select both answer-items". Given the question format the percentages do not sum up to 100%. Percentages were rounded to whole numbers.

Table 52: Share of consumers having seen or received recall information by age

	Total	Age			
		18-34	35-54	55-64	65+
Yes, and it affected one of the products I own	14	20	13	12	10
Yes, and it affected a product I do not own	29	29	29	30	30
No [Exclusive]	58	53	60	59	62

Number of observations N=10,013.

Table 53: Share of consumers having seen or received recall information by financial situation and education

	Total	Financial Situation				Education		
		Very easy	Fairly easy	Fairly difficult	Very difficult	Low	Medium	High
Yes, and it affected one of the products I own	14	20	14	14	11	11	17	14
Yes, and it affected a product I do not own	29	29	31	28	29	26	29	36
No [Exclusive]	58	53	57	59	62	64	55	51

Number of observations for total N=10,013; number of observations by financial situation N=9,435 (does not include replies of participants that did not indicate their financial situation); number of observations by education N=9,889 (does not include replies of participants that did not indicate their educational level).

Table 54: Share of consumers having seen or received recall information by occupational status

	Total	Occupational Status		
		Employed	Not Employed	Retired
Yes, and it affected one of the products I own	14	16	13	9

	Total	Occupational Status		
		Employed	Not Employed	Retired
Yes, and it affected a product I do not own	29	29	26	32
No [Exclusive]	58	56	61	61

Number of observations N=10,013.

Table 55: Share of consumers having seen or received recall information by internet use

	Total	Internet Use		
		Low	Medium	High
Yes, and it affected one of the products I own	14	9	12	21
Yes, and it affected a product I do not own	29	27	30	30
No [Exclusive]	58	65	59	50

Number of observations N=10,013.

Response to recalls by consumers' characteristics (self-reported past behaviour)

The following note applies to Table 56 up to Table 61:

The question was Q2.7_real "Thinking about the recall of [insert product], what did you do in response to the recall?". Percentages were rounded to whole numbers.

Table 56: Response to recall by age (self-reported past behaviour)

	Total	Age			
		18-34	35-54	55-64	65+
I contacted the recalling company to have the product repaired, replaced or refunded	50	40	52	58	70
I disposed of the product	13	13	13	17	11
I continued using the product with extra caution	24	31	21	17	13
I took no action	13	16	14	8	6

Number of observations N=1,147.

Table 57: Response to recall by financial situation and education (self-reported past behaviour)

	Total	Financial Situation				Education		
		Very easy	Fairly easy	Fairly difficult	Very difficult	Low	Medium	High
I contacted the recalling company to have the product repaired, replaced or refunded	50	36	58	46	45	55	45	58
I disposed of the product	13	29	9	11	11	10	17	10
I continued using the product with extra caution	24	25	22	25	27	22	26	19
I took no action	13	10	11	18	16	13	12	13

Number of observations for total N=1,147; number of observations by financial situation N=1,110 (does not include replies of participants that did not indicate their financial situation); number of observations by education N=1,138 (does not include replies of participants that did not indicate their educational level).

Table 58: Response to recall by occupational status (self-reported past behaviour)

	Total	Occupational Status		
		Employed	Not Employed	Retired
I contacted the recalling company to have the product repaired, replaced or refunded	50	53	27	70
I disposed of the product	13	14	16	7
I continued using the product with extra caution	24	21	38	16
I took no action	13	12	19	8

Number of observations N=1,147.

Table 59: Response to recall by trust in companies and present bias (self-reported past behaviour)

	Total	Trust in Companies			Present Bias	
		Low	Medium	High	Low	High
I contacted the recalling company to have the product repaired, replaced or refunded	50	53	55	47	55	47
I disposed of the product	13	13	9	15	9	16
I continued using the product with extra caution	24	18	22	26	19	26
I took no action	13	16	13	12	17	10

Number of observations by trust in companies and present bias N=1,147.

Table 60: Response to recall by internet use (self-reported past behaviour)

	Total	Internet Use		
		Low	Medium	High
I contacted the recalling company to have the product repaired, replaced or refunded	50	47	55	49
I disposed of the product	13	17	7	15
I continued using the product with extra caution	24	21	25	24
I took no action	13	16	12	12

Number of observations N=1,147.

Table 61: Response to recall by importance of product safety (self-reported past behaviour)

	Total	Importance of Product Safety	
		Low	High
I contacted the recalling company to have the product repaired, replaced or refunded	50	43	56
I disposed of the product	13	12	14
I continued using the product with extra caution	24	26	21

	Total	Importance of Product Safety	
		Low	High
I took no action	13	18	9

Number of observations N=1,147.

Response to recalls by consumers' characteristics (hypothetical behaviour)

The following note applies to Table 62 up to Table 67:

The question was Q2.7_hypo "Imagine you own [insert product] and you receive a notice or announcement concerning the recall of this product. What would you do in response to this recall?". Percentages were rounded to whole numbers.

Table 62: Response to recall by age (hypothetical behaviour)

	Total	Age			
		18-34	35-54	55-64	65+
I would contact the recalling company to have the product repaired, replaced or refunded	85	78	86	88	87
I would dispose of the product	7	9	6	7	6
I would continue using the product with extra caution	5	8	5	2	4
I would take no action	3	4	3	3	3

Number of observations N=8,866.

Table 63: Response to recall by financial situation and education (hypothetical behaviour)

	Total	Financial Situation				Education		
		Very easy	Fairly easy	Fairly difficult	Very difficult	Low	Medium	High
I would contact the recalling company to have the product repaired, replaced or refunded	85	85	85	84	85	87	83	85
I would dispose of the product	7	6	7	8	5	5	9	7
I would continue using the	5	5	5	5	6	4	6	5

	Total	Financial Situation				Education		
		Very easy	Fairly easy	Fairly difficult	Very difficult	Low	Medium	High
product with extra caution								
I would take no action	3	4	3	3	4	3	3	3

Number of observations for total N=8,866; number of observations by financial situation N=8,235 (does not include replies of participants that did not indicate their financial situation); number of observations by education N=8,751 (does not include replies of participants that did not indicate their educational level).

Table 64: Response to recall by occupational status (hypothetical behaviour)

	Total	Occupational Status		
		Employed	Not Employed	Retired
I would contact the recalling company to have the product repaired, replaced or refunded	85	84	84	88
I would dispose of the product	7	7	7	6
I would continue using the product with extra caution	5	5	6	3
I would take no action	3	3	4	2

Number of observations N=8,866.

Table 65: Response to recall by trust in companies and present bias (hypothetical behaviour)

	Total	Trust in Companies			Present Bias	
		Low	Medium	High	Low	High
I would contact the recalling company to have the product repaired, replaced or refunded	85	87	83	84	87	82
I would dispose of the product	7	5	9	7	6	8
I would continue using the product with extra caution	5	5	5	6	4	6

	Total	Trust in Companies			Present Bias	
		Low	Medium	High	Low	High
I would take no action	3	3	3	3	2	4

Number of observations by trust in companies and present bias N=8,866.

Table 66: Response to recall by internet use (hypothetical behaviour)

	Total	Internet Use		
		Low	Medium	High
I would contact the recalling company to have the product repaired, replaced or refunded	85	85	85	83
I would dispose of the product	7	7	7	7
I would continue using the product with extra caution	5	5	4	6
I would take no action	3	3	3	3

Number of observations N=8,866.

Table 67: Response to recall by importance of product safety (hypothetical behaviour)

	Total	Importance of Product Safety	
		Low	High
I would contact the recalling company to have the product repaired, replaced or refunded	85	78	89
I would dispose of the product	7	9	6
I would continue using the product with extra caution	5	8	3
I would take no action	3	5	2

Number of observations N=8,866.

Likelihood of contacting the recalling company by consumers' characteristics

The following note applies to Table 68 up to Table 71:

The question was Q2.13 "How likely or unlikely is it that you would contact the recalling company to have a product repaired, replaced or refunded for the following product categories?". Answer options were given on a four-point scale from "1 – very unlikely" to "4 – very likely". Results are reported as averages by transforming the categorical data. "Don't know"-answers were excluded from the calculation of averages. A value of 10 therefore corresponds with "very likely", 3 1/3 with "likely", -3 1/3 with "unlikely" and -10 with "very unlikely". (calculation of average does not include "don't know"-replies).

Table 68: Likelihood of contacting the recalling company by age

	Total	Age			
		18-34	35-54	55-64	65+
Toys / games for children	5.08	4.04	5.57	5.15	5.55
Personal cars and motorcycles	8.73	8.07	8.95	8.88	9.15
Domestic electrical appliances	8.47	7.52	8.68	8.73	9.23
Communication devices	8.45	7.67	8.57	8.66	9.19
Children’s articles and children’s equipment	6.82	5.83	7.12	6.93	7.62
Clothing and footwear	4.26	3.06	4.60	4.43	5.22
Furniture	6.99	5.83	7.09	7.55	8.12

Number of observations N=9,683-9,936

Table 69: Likelihood of contacting the recalling company by financial situation and education

	Total	Financial Situation				Education		
		Very easy	Fairly easy	Fairly difficult	Very difficult	Low	Medium	High
Toys / games for children	5.08	5.02	5.18	4.96	5.14	5.39	4.93	4.85
Personal cars and motorcycles	8.73	8.88	8.72	8.67	8.51	8.79	8.69	8.80
Domestic electrical appliances	8.47	8.55	8.44	8.49	8.59	8.66	8.39	8.29
Communication devices	8.45	8.48	8.41	8.40	8.74	8.62	8.35	8.34
Children’s articles and children’s equipment	6.82	6.39	6.89	6.78	7.03	7.12	6.66	6.58
Clothing and footwear	4.26	3.73	4.34	4.23	4.97	4.63	4.13	3.64
Furniture	6.99	6.57	7.17	6.84	7.12	7.13	7.15	6.32

Number of observations for total N=9,683-9,936 number of observations by financial situation N=9,140-9,374 (calculation of average does not include “don’t know”-replies for Q2.13 nor replies of participants that did not indicate their financial situation), number of observations by education N=9,573-9,871 (calculation of average does not include “don’t know”-replies for Q2.13 nor replies of participants that did not indicate their education).

Table 70: Likelihood of contacting the recalling company by occupational status

	Total	Occupational Status		
		Employed	Not Employed	Retired
Toys / games for children	5.08	5.07	4.88	5.35
Personal cars and motorcycles	8.73	8.67	8.61	9.11
Domestic electrical appliances	8.47	8.39	8.13	9.14
Communication devices	8.45	8.29	8.32	9.18
Children's articles and children's equipment	6.82	6.66	6.73	7.54
Clothing and footwear	4.26	4.18	3.68	5.21
Furniture	6.99	6.87	6.57	7.96

Number of observations N=9,683-9,936

Table 71: Likelihood of contacting the recalling company by occupational status

	Total	Internet Use		
		Low	Medium	High
Toys / games for children	5.08	5.29	5.29	4.67
Personal cars and motorcycles	8.73	8.81	8.84	8.55
Domestic electrical appliances	8.47	8.59	8.62	8.20
Communication devices	8.45	8.56	8.52	8.26
Children's articles and children's equipment	6.82	7.09	6.92	6.48
Clothing and footwear	4.26	4.18	4.26	4.33
Furniture	6.99	7.10	7.17	6.74

Number of observations N=9,683-9,936

Registration behaviour by consumers' characteristics (self-reported past behaviour)

The following note applies to Table 72 up to Table 77:

The question was Q2.2_real "Thinking of [insert product] that you bought or received as a gift in the past years, did you register the product with the manufacturer or seller?". Percentages were rounded to whole numbers.

Table 72: Registration behaviour by age (self-reported past behaviour)

	Total	Age			
		18-34	35-54	55-64	65+
Yes	32	30	27	38	39

	Total	Age			
		18-34	35-54	55-64	65+
No	59	60	63	53	52
Don't know	10	10	10	9	10

Number of observations N=9,320.

Table 73: Registration behaviour by financial situation and education (self-reported past behaviour)

	Total	Financial Situation				Education		
		Very easy	Fairly easy	Fairly difficult	Very difficult	Low	Medium	High
Yes	32	37	32	30	26	29	32	35
No	59	57	59	60	59	60	58	59
Don't know	10	6	9	9	14	11	10	5

Number of observations for total N=9,320; number of observations by financial situation N=8,805 (does not include replies of participants that did not indicate their financial situation); number of observations by education N=9,223 (does not include replies of participants that did not indicate their educational level).

Table 74: Registration behaviour by occupational status (self-reported past behaviour)

	Total	Occupational Status		
		Employed	Not Employed	Retired
Yes	32	31	26	40
No	59	60	61	50
Don't know	10	8	13	10

Number of observations N=9,320.

Table 75: Registration behaviour by trust in companies and present bias (self-reported past behaviour)

	Total	Trust in Companies			Present Bias	
		Low	Medium	High	Low	High
Yes	32	25	29	39	30	33
No	59	65	60	53	60	58
Don't know	10	10	11	8	10	9

Number of observations by trust in companies and present bias N=9,320.

Table 76: Registration behaviour by internet use (self-reported past behaviour)

	Total	Internet Use		
		Low	Medium	High
Yes	32	27	29	37
No	59	61	61	54
Don't know	10	11	9	8

Number of observations N=9,320.

Table 77: Registration behaviour by importance of product safety (self-reported past behaviour)

	Total	Importance of Product Safety	
		Low	High
Yes	32	28	34
No	59	63	56
Don't know	10	9	10

Number of observations N=9,320.

Registration behaviour by consumers' characteristics (hypothetical behaviour)

The following note applies to Table 78 up to Table 83:

The question was Q2.2_hypo "Imagine you buy or receive [insert product] as a gift. Would you register the product with the manufacturer or seller?". Percentages were rounded to whole numbers.

Table 78: Registration behaviour by age (hypothetical behaviour)

	Total	Age			
		18-34	35-54	55-64	65+
Yes	35	36	32	33	41
No	32	38	32	35	23
Don't know	33	26	37	32	36

Number of observations N=693.

Table 79: Registration behaviour by financial situation and education (hypothetical behaviour)

	Total	Financial Situation				Education		
		Very easy	Fairly easy	Fairly difficult	Very difficult	Low	Medium	High
Yes	35	55	38	33	34	38	40	21
No	32	32	29	34	40	32	30	36

	Total	Financial Situation				Education		
		Very easy	Fairly easy	Fairly difficult	Very difficult	Low	Medium	High
Don't know	33	13	32	33	26	31	30	43

Number of observations for total N=693; number of observations by financial situation N=630 (does not include replies of participants that did not indicate their financial situation); number of observations by education N=666 (does not include replies of participants that did not indicate their educational level).

Table 80: Registration behaviour by occupational status (hypothetical behaviour)

	Total	Occupational Status		
		Employed	Not Employed	Retired
Yes	35	30	40	43
No	32	39	30	20
Don't know	33	31	30	37

Number of observations N=693.

Table 81: Registration behaviour by trust in companies and present bias (hypothetical behaviour)

	Total	Trust in Companies			Present Bias	
		Low	Medium	High	Low	High
Yes	35	32	29	44	37	35
No	32	37	29	30	32	32
Don't know	33	31	42	26	32	33

Number of observations N=693.

Table 82: Registration behaviour by internet use (hypothetical behaviour)

	Total	Internet Use		
		Low	Medium	High
Yes	35	28	38	61
No	32	36	34	12
Don't know	33	36	28	27

Number of observations N=693.

Table 83: Registration behaviour by importance of product safety (hypothetical behaviour)

	Total	Importance of Product Safety	
		Low	High
Yes	35	30	40

	Total	Importance of Product Safety	
		Low	High
No	32	41	25
Don't know	33	29	35

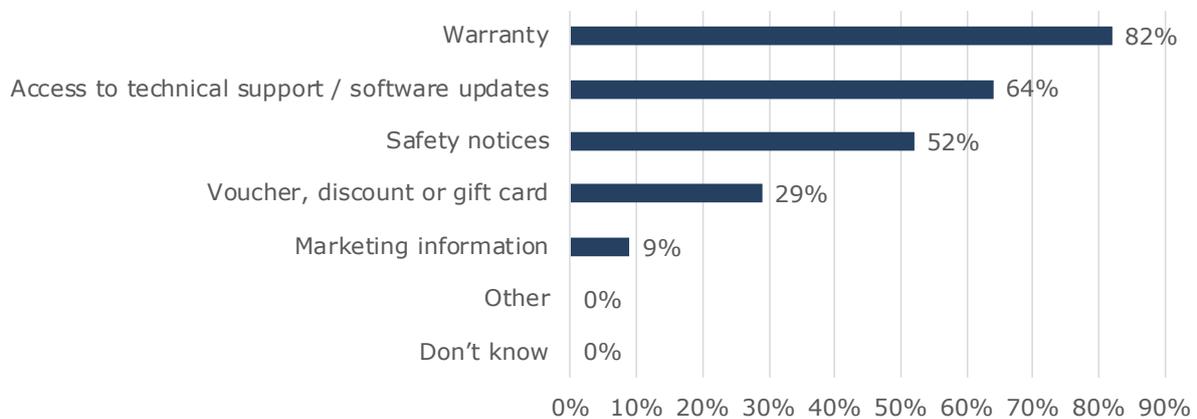
Number of observations N=693.

Reasons to register a product (hypothetical behaviour)

The following note applies to Figure 14 and Table 84:

The question was Q2.3_hypo "You indicated that you would register [insert product] with the manufacturer or seller. Why would you register it?". The question allowed for multiple answers, hence, the percentages do not sum up to 100%. Percentages were rounded to whole numbers.

Figure 14: Reasons to register a product (hypothetical behaviour)



Number of observations N=259.

Table 84: Reasons to register a product by product type (hypothetical behaviour)

	Toys / games for children	Personal cars and motorcycle	Domestic electrical appliances	Communication devices	Children's articles and children's equipment
To receive potential safety notices about the product	40	74	42	40	57
To receive a warranty	70	86	88	78	87
To receive marketing information	13	9	14	3	4
To have easier access to technical support or receive software updates	32	74	68	64	65

	Toys / games for children	Personal cars and motorcycle	Domestic electrical appliances	Communication devices	Children's articles and children's equipment
To receive a voucher, discount or gift card	30	36	28	29	15
Other	0	0	0	0	0
Don't know	0	0	1	0	0

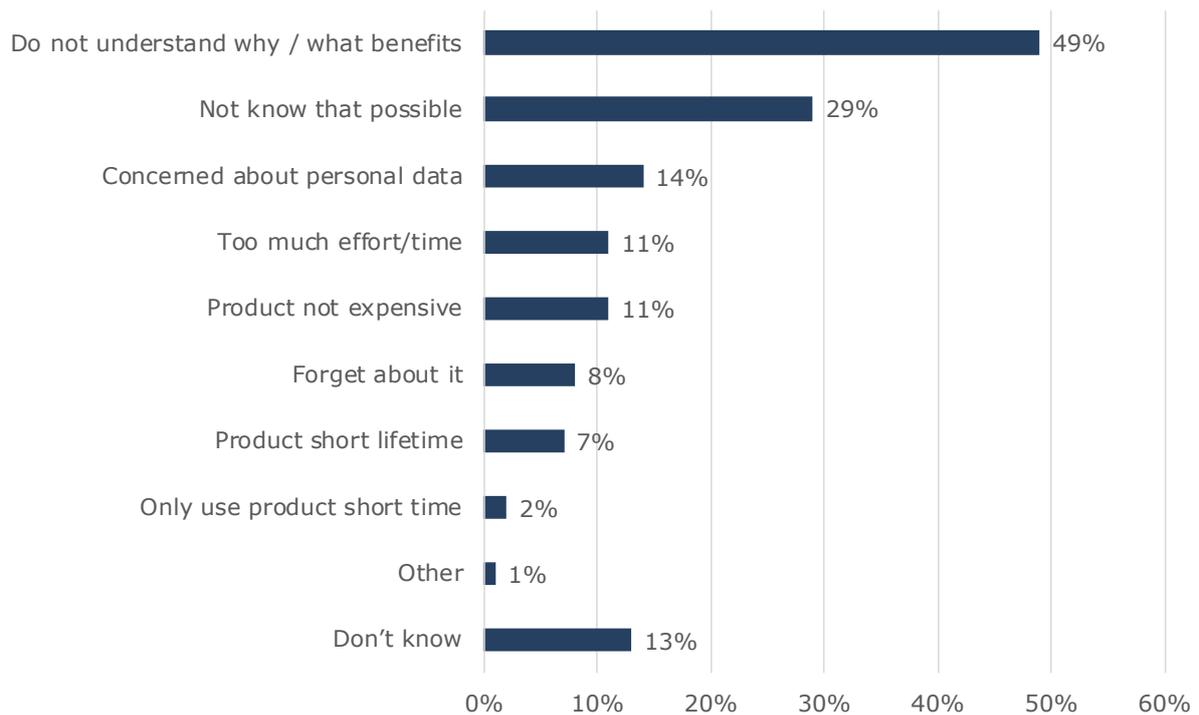
Number of observations N=259.

Reasons not to register a product (hypothetical behaviour)

The following note applies to Figure 15 and Table 85:

The question was Q2.4_hypo "You indicated that you would not register [insert product] with the manufacturer or seller. Why would you not register it?". The question allowed for multiple answers, hence, the percentages do not sum up to 100%. Percentages were rounded to whole numbers.

Figure 15: Reasons not to register a product (hypothetical behaviour)



Number of observations N=197.

Table 85: Reasons not to register a product by product type (hypothetical behaviour)

	Toys / games for children	Personal cars and motorcycle	Domestic electrical appliances	Communication devices	Children's articles and children's equipment
I did not know this was possible	39	45	24	21	17
I do not understand why I would do this /	56	48	35	56	50

	Toys / games for children	Personal cars and motorcycle	Domestic electrical appliances	Communication devices	Children's articles and children's equipment
what the benefits would be					
I would be concerned about my personal data being misused / shared / accessed by others	13	1	11	27	15
It would be too much effort / time consuming	9	1	12	16	16
It would not be worth it because the product is not expensive	27	14	2	2	6
It would not be worth it because the product has a short lifetime	17	0	4	2	5
It would not be worth it because I only want to use the product for a short time	1	1	0	8	0
I would forget about it	9	0	19	10	2
Other	1	0	1	1	1
Don't know	10	18	16	6	17

Number of observations N=197.

Annex 14 Supplementary results of the experiments

A14.1 Overall outcomes of the experiments by demographic groups and products

The tables below show the outcomes for respectively the recall and registration experiments for the full sample and each demographic group or per product. The χ^2 test shows whether the relevant percentages within each relevant group differ significantly.

A14.1.1 Recall experiment

Table 86: Outcomes for the recall experiment per group

Group	Percentage of people engaging with recall message in background task	Percentage of respondents reaching response screen ^[a]	Percentage of completing return ^[b]
Full sample	21.2%	54.9%	87.7%
By country			
Belgium	20.7%	51.7%	89.3%
Bulgaria	28.5%	53.7%	88.3%
Croatia	24.2%	54.1%	97.2%
Czech Republic	15.4%	50.3%	89.5%
Germany	20.4%	58.0%	81.8%
Ireland	23.0%	49.5%	90.4%
Denmark	25.6%	47.2%	88.9%
Latvia	19.1%	50.0%	87.9%
Portugal	24.4%	48.2%	92.3%
Spain	21.6%	55.2%	95.3%
<i>P-value of χ^2 test</i>	<i>< 0.001</i>	<i>0.490</i>	<i>0.060</i>
By age category			
18-34	19.1%	47.3%	90.0%
35-54	21.8%	60.0%	90.2%
55-64	21.7%	55.0%	85.5%
65+	22.9%	53.7%	80.0%
<i>P-value of χ^2 test</i>	<i>0.266</i>	<i>0.053</i>	<i>0.320</i>
By financial status (four categories)			
Very easy to make ends meet	21.4%	56.0%	95.7%
Easy to make ends meet	22.0%	54.2%	85.2%
Difficult to make ends meet	19.8%	56.0%	90.7%
Very difficult to make ends meet	21.3%	48.4%	97.5%
<i>P-value of χ^2 test</i>	<i>0.601</i>	<i>0.816</i>	<i>0.045</i>
By financial status (two categories)			
(Very) easy to make ends meet	21.9%	54.5%	87.1%

Group	Percentage of people engaging with recall message in background task	Percentage of respondents reaching response screen ^[a]	Percentage of completing return ^[b]
(Very) difficult to make ends meet	20.0%	54.6%	91.8%
<i>P-value of χ^2 test</i>	<i>0.207</i>	<i>0.978</i>	<i>0.260</i>
By educational level			
Low (up to and including secondary education)	20.3%	56.5%	87.2%
Medium (up to and including bachelor's degree)	21.3%	54.1%	86.3%
High (Master's degree or higher)	23.7%	52.6%	90.7%
<i>P-value of χ^2 test</i>	<i>0.223</i>	<i>0.704</i>	<i>0.724</i>
By internet use			
Low	21.0%	52.5%	83.8%
Medium	22.5%	53.6%	85.3%
High	20.3%	58.9%	97.8%
<i>P-value of χ^2 test</i>	<i>0.446</i>	<i>0.317</i>	<i>0.100</i>
By importance of product safety			
Very important	24.3%	57.0%	88.1%
Not very important	16%	49.8%	86.3%
<i>P-value of χ^2 test</i>	<i>< 0.001</i>	<i>0.084</i>	<i>0.728</i>
By occupational status (three categories)			
Employed	20.5%	56.0%	87.9%
Retired	22.4%	53.0%	82.9%
Neither employed nor retired	22.6%	53.5%	90.8%
<i>P-value of χ^2 test</i>	<i>0.339</i>	<i>0.753</i>	<i>0.442</i>
By occupational status (two categories)			
Employed	20.5%	56.0%	87.9%
Not employed	22.5%	53.3%	87.3%
<i>P-value of χ^2 test</i>	<i>0.153</i>	<i>0.472</i>	<i>0.881</i>
By product			
Hatchback car	21.1%	63.9%	87.1%
Shape sorter toy	17.3%	57.8%	88.4%
Fleece sweater	28.2%	50.4%	85.1%
Washing machine	21.9%	46.8%	91.2%
Office chair	17.6%	58.6%	87.8%

Group	Percentage of people engaging with recall message in background task	Percentage of respondents reaching response screen ^[a]	Percentage of completing return ^[b]
<i>P-value of χ^2 test</i>	<i>< 0.001</i>	<i>0.020</i>	<i>0.891</i>

[a] Provided that they previously engaged with the recall message in the background task.

[b] Provided they first started the return task.

A14.1.2 Registration experiment

Table 87: Outcomes for the registration experiment per group

Group	Percentage of respondents starting registration	Percentage of respondents completing registration ^[a]
Full sample	22.7%	73.2%
By country		
Belgium	28.5%	73.3%
Bulgaria	28.3%	81.6%
Croatia	25.9%	82.9%
Czech Republic	18.1%	71.1%
Germany	20.7%	70.8%
Ireland	31.9%	81.9%
Denmark	27.4%	71.5%
Latvia	24.6%	81.7%
Portugal	30.4%	79.4%
Spain	21.7%	71.5%
<i>P-value of χ^2 test</i>	<i>< 0.001</i>	<i>< 0.001</i>
By age category		
18-34	21.5%	75.9%
35-54	22.8%	73.0%
55-64	22.2%	71.0%
65+	25.0%	71.5%
<i>P-value of χ^2 test</i>	<i>0.447</i>	<i>0.715</i>
By financial status (four categories)		
Very easy to make ends meet	23.9%	77.3%
Easy to make ends meet	23.1%	72.4%
Difficult to make ends meet	22.9%	72.8%
Very difficult to make ends meet	18.2%	77.9%
<i>P-value of χ^2 test</i>	<i>0.400</i>	<i>0.671</i>
By financial status (two categories)		
(Very) easy to make ends meet	23.3%	73.3%
(Very) difficult to make ends meet	22.1%	73.6%

Group	Percentage of respondents starting registration	Percentage of respondents completing registration ^[a]
<i>P-value of χ^2 test</i>	0.438	0.934
By educational level		
Low (up to and including secondary education)	20.0%	67.8%
Medium (up to and including bachelor's degree)	24.4%	75.0%
High (Master's degree or higher)	24.8%	81.3%
<i>P-value of χ^2 test</i>	0.006	0.008
By internet use		
Low	24.3%	69.0%
Medium	23.0%	73.6%
High	20.9%	77.5%
<i>P-value of χ^2 test</i>	0.125	0.091
By importance of product safety		
Very important	25.3%	75.7%
Not very important	18.5%	67.4%
<i>P-value of χ^2 test</i>	< 0.001	0.019
By occupational status (three categories)		
Employed	22.4%	74.1%
Retired	24.1%	68.5%
Neither employed nor retired	22.7%	74.6%
<i>P-value of χ^2 test</i>	0.648	0.347
By occupational status (two categories)		
Employed	22.4%	74.1%
Not employed	23.3%	71.7%
<i>P-value of χ^2 test</i>	0.507	0.453
By product		
Smart phone	23.9%	73.6%
High chair	20.9%	67.6%
Toaster	23.5%	77.7%
<i>P-value of χ^2 test</i>	0.180	0.034

[a] Provided they started the registration task

A14.2 Supplementary experiment results in support of survey findings

A14.2.1 Recall experiment

Table 88: Decision to return, dispose or keep in the response stage of the recall experiment

Group	Return	Dispose	Keep	# observations ^[a]
Full sample	77.1%	5.5%	17.4%	1,148
By country note: ordered by percentage returning the product				

Group	Return	Dispose	Keep	# observations ^[a]
Ireland	88.6%	4.5%	6.9%	114
Belgium	84.9%	3.2%	11.9%	106
Denmark	83.9%	5.8%	10.3%	121
Croatia	78.1%	5.0%	17.0%	124
Germany	77.58%	1.7%	20.5%	119
Spain	75.5%	10.5%	14.0%	119
Bulgaria	73.8%	3.9%	22.3%	148
Portugal	71.1%	14.1%	14.8%	121
Czech Republic	70.6%	7.8%	21.6%	80
Latvia	62.6%	13.0%	24.4%	96
By product note: ordered by percentage returning the product				
Washing machines	82.3%	6.2%	12.6%	222
Shape sorter toy	80.9%	6.1%	13.0%	193
Fleece sweater	79.0%	5.4%	15.7%	266
Office chair	78.0%	8.3%	13.7%	205
Hatchback car	67.47%	3.1%	29.1%	262

Note: percentages calculated based on the number of respondents reaching the response stage in the recall experiment only.

[a] Unweighted number of observations. Percentages are calculated based on weighted data.

A14.2.2 Registration experiment

Table 89: Percentage of respondents registering their product in the registration experiment

Group	Did register	Did not register	# observations ^[a]
Full sample	16.6%	83.4%	10,013
By country note: ordered by percentage registering the product			
Ireland	26.1%	73.9%	1,000
Portugal	24.1%	75.9%	1,000
Bulgaria	23.1%	76.9%	1,000
Croatia	21.4%	78.6%	1,001
Belgium	20.9%	79.1%	1,003
Latvia	20.1%	79.9%	1,003
Denmark	19.6%	80.4%	1,003
Spain	15.5%	84.5%	1,003
Germany	14.6%	85.4%	1,000
Czech Republic	12.9%	87.1%	1,000
By product note: ordered by percentage registering the product			
Toaster	18.2%	81.8%	3,329
Smart phone	17.6%	82.4%	3,361
High chair	14.1%	85.9%	3,323

Note: base is all respondents. This means that "did not register" captures both respondents who did not start or did not complete the registration procedure. As such, the percentage "did register" in this table differs from the percentage "completing registration" provided in Table 87.

[a] Unweighted number of observations. Percentages are calculated based on weighted data.

A14.3 Significant results from the experiment analysis

The treatments of both the recall and registration experiment were analysed as follows. Firstly, a χ^2 test was run, testing whether the percentage of respondents performing a specific action⁵¹ significantly differed across **all variants** within a treatment. If the χ^2 test was significant at, at least, the 5% level, bilateral Wald tests⁵² were run to investigate the drivers of behaviour. These bilateral Wald tests tested whether the percentage of respondents performing a specific action differed across **two particular variants**. This analysis was first applied to the full sample, and then to each of the demographic subgroups in turn.

The tables below provide the significant results following this pattern, i.e. the tables below provide the results of the χ^2 tests if, and only if, they are significant at the 5% level. If the χ^2 tests are significant, the tables also provide the results of any underlying bilateral tests provided that these are significant themselves at, at least, the 5% level. For the bilateral tests, the tables provide the treatment effects, i.e. the difference in the relevant percentages under different treatment variants.

The exclusion of any subgroup from the tables below implies that the χ^2 test was **not** significant at the 5% level. Exclusion of any results of the bilateral tests within each group, implies that this bilateral test was not significant at the 5% level.

A14.3.1 Content and layout of recall notices

In the background task (stage 1)

Table 90: Content and layout of recall messages (stage 1)

Group	P-value χ^2 test	Safety v Voluntary ^[a]	Recall v Safety ^[b]	Recall v Voluntary ^[c]
Full sample	0.043	- 7.1pp (17.4%-25.6%) $p = 0.012$		
By financial status (four categories) note: two category version not used for this analysis				
Difficult to make ends meet	0.045	-10.8pp (16.4% - 27.3%) $p = 0.034$		
By educational level				
Medium (up to and including bachelor's degree)	0.002	-14.3pp (12.5% - 26.7%) $p < 0.001$	9.4pp (21.9%-12.5%) $p < 0.001$	
By importance of product safety				
Not very important	0.041			-8.7pp (15.2% - 23.8%) $p = 0.030$

⁵¹ For the recall experiment:

- Percentage engaging with the recall notification in stage 1 (background task);
- Percentage engaging with the full recall notification in stage 2 (recall notification screen), provided that respondents first engaged with the notification in stage 1; and,
- Percentage completing return, provided respondents started return.

For the registration experiment:

- Percentage starting registration; and,
- Percentage completing registration, provided respondents started registration.

⁵² Under normal circumstances, a Wald test of proportions is equivalent to a z-test of proportions. However, a z-test cannot accommodate for sample weights, and a Wald test can. As such, the Wald test is the appropriate metric.

Group	P-value χ^2 test	Safety v Voluntary ^[a]	Recall v Safety ^[b]	Recall v Voluntary ^[c]
By occupational status (three categories) note: two category version not used for this analysis				
Retired	0.024	-14.4pp (13.4% - 27.8%) $p = 0.009$	9.8pp (23.3% - 13.4%) $p = 0.002$	
By product				
Office chair	0.030	-12.9pp (9.0% - 21.8%) $p = 0.031$	9.9pp (18.8% - 9.0%) $p = 0.002$	

[a] Treatment effect calculated as the difference in the percentage engaging with the recall notification in stage 1 under the "important safety announcement" and "voluntary product recall" variants

[b] Treatment effect calculated as the difference in the percentage engaging with the recall notification in stage 1 under the "Product recall" and "important safety announcement" variants

[c] Treatment effect calculated as the difference in the percentage engaging with the recall notification in stage 1 under the "Product recall" and "voluntary product recall" variants
pp = percentage point

In the recall notification stage (stage 2)

Table 91: Content and layout of recall messages (stage 2)

Group	P-value χ^2 test	Safety v Voluntary ^[a]	Recall v Safety ^[b]	Recall v Voluntary ^[c]
By financial status (two categories) note: four category version not used for this analysis				
(Very) difficult to make ends meet	0.019		-25.5pp (47.7% - 73.2%) $p = 0.032$	-25.4pp (47.7% - 73.1%) $p = 0.031$
By educational level				
Low (up to and including secondary education)	0.045			
By importance of product safety				
Very important	0.012	-16.2pp (60.8% - 77.0%) $p = 0.040$		-27.7pp (49.3% - 77.0%) $p < 0.001$

[a] Treatment effect calculated as the difference in the percentage engaging with the recall notification in stage 2 under the "important safety announcement" and "voluntary product recall" variants

[b] Treatment effect calculated as the difference in the percentage engaging with the recall notification in stage 2 under the "Product recall" and "important safety announcement" variants

[c] Treatment effect calculated as the difference in the percentage engaging with the recall notification in stage 2 under the "Product recall" and "voluntary product recall" variants
pp = percentage point

A14.3.2 Channel of recall notification

For the channel of notification, there are only two variants; direct or generic. In this case, testing whether the percentage of people engaging with the recall message differs with a χ^2 test or bilateral Wald test is equivalent. As such, the table below only provides the result for the Wald test, if it is significant at, at least, the 5% level.

Table 92: Channel of notification (stage 1 and 2)

Group	Direct v Generic (stage 1) ^[a]	Direct v Generic (stage 2) ^[b]
Full sample	7.8pp (25.1% - 17.3%)	40.8% (71.5% - 30.7%)

Group	Direct v Generic (stage 1) ^[a]	Direct v Generic (stage 2) ^[b]
	$p < 0.001$	$p < 0.001$
By country		
Belgium		46.3pp (71.7% - 25.4%) $p < 0.001$
Bulgaria		43.3pp (76.9% - 33.6%) $p < 0.001$
Croatia	5.7pp (27.4% - 21.4%) $p = 0.048$	34.5pp (69.4% - 34.9%) $p < 0.001$
Czech Republic		30.9pp (65.6% - 34.7%) $p < 0.001$
Germany	12.0pp (26.4% - 14.4%) $p < 0.001$	35.7pp (70.6% - 34.9%) $p < 0.001$
Ireland		44.0pp (70.1% - 26.1%) $p < 0.001$
Denmark	11.7pp (31.4% - 19.8%) $p < 0.001$	35.4% (60.8% - 25.4%) $p < 0.001$
Latvia	8.2pp (23.1% - 14.9%) $p = 0.002$	43.2% (66.5% - 23.4%) $p < 0.001$
Portugal		46.0pp (70.1% - 24.1%) $p < 0.001$
Spain	5.9pp (24.4% - 18.6%) $p = 0.031$	48.1pp (75.6% - 27.5%) $p < 0.001$
By age category		
18-34	7.4pp (23.0% - 15.6%) $p = 0.006$	38.2pp (63.6% - 24.4%) $p < 0.001$
35-54	8.4pp (25.9% - 17.5%) $p < 0.001$	43.8pp (77.0% - 33.2%) $p < 0.001$
55-64		38.6pp (71.0% - 32.4%) $p < 0.001$
65+	9.7pp (27.9% - 18.2%) $p < 0.001$	38.0pp (69.4% - 31.4%) $p < 0.001$
By financial status (four categories) note: two category version not used for this analysis		
Very easy to make ends meet		38.7pp (72.8% - 34.0%) $p < 0.001$

Group	Direct v Generic (stage 1) ^[a]	Direct v Generic (stage 2) ^[b]
Easy to make ends meet	8.2pp (26.0% - 17.8%) $p < 0.001$	47.1pp (72.7% - 25.6%) $p < 0.001$
Difficult to make ends meet	8.9pp (24.3% - 15.3%) $p < 0.001$	29.7pp (67.6% - 37.9%) $p < 0.001$
Very difficult to make ends meet		42.8pp (66.4% - 23.6%) $p = 0.004$
By educational level		
Low (up to and including secondary education)	10.9pp (25.7% - 14.8%) $p < 0.001$	33.2pp (68.6% - 35.4%) $p < 0.001$
Medium (up to and including bachelor's degree)	8.6pp (25.5% - 16.9%) $p < 0.001$	44.1pp (71.2% - 27.1%) $p < 0.001$
High (Master's degree or higher)		49.5pp (78.3% - 28.9%) $p < 0.001$
By internet use		
Low		31.5pp (67.2% - 35.7%) $p < 0.001$
Medium	9.2pp (26.9% - 17.8%) $p < 0.001$	43.3pp (70.3% - 27.0%) $p < 0.001$
High	10.6pp (25.5% - 14.9%) $p < 0.001$	48.2pp (76.3% - 28.1%) $p < 0.001$
By importance of product safety		
Very important	9.0pp (28.6% - 19.6%) $p < 0.001$	44.6pp (74.5% - 29.9%) $p < 0.001$
Not very important	5.2pp (19.0% - 13.8%) $p = 0.012$	30.9pp (63.4% - 32.5%) $p < 0.001$
By occupational status (three categories) note: two category version not used for this analysis		
Employed	7.7pp (24.2% - 16.5%) $p < 0.001$	46.0pp (73.9% - 27.9%) $p < 0.001$
Retired	6.9pp (26.0% - 19.2%) $p = 0.018$	38.4pp (70.2% - 31.8%) $p < 0.001$
Neither employed nor retired	9.4pp (27.5% - 18.1%) $p = 0.005$	27.5pp (65.0% - 37.4%) $p < 0.001$
By product		
Hatchback car	12.7pp (26.7% - 14.0%)	26.9pp (71.8% - 44.9%)

Group	Direct v Generic (stage 1) ^[a]	Direct v Generic (stage 2) ^[b]
	$p < 0.001$	$p = 0.001$
Shape sorter toy	11.8pp (23.5% - 11.6%) $p < 0.001$	47.1pp (74.3% - 27.2%) $p < 0.001$
Fleece sweater		43.9pp (72.35 - 28.4%) $p < 0.001$
Washing machine	11.6pp (28.1% - 16.5%) $p < 0.001$	45.4pp (65.3% - 19.9%) $p < 0.001$
Office chair	7.6pp (21.8% - 14.2%) $p = 0.010$	35.9pp (74.5% - 38.5%) $p < 0.001$

[a] Treatment effect is calculated as the difference in the percentage engaging with the recall notification in stage 1 under the "direct notification" and "generic notification" variants

[b] Treatment effect is calculated as the difference in the percentage engaging with the recall notification in stage 2 under the "direct notification" and "generic notification" variants

pp = percentage point

A14.3.3 Effort to return the product

Table 93: Effort to return the product

Group	P-value χ^2 test	Medium v High ^[a]
By internet use		
High	0.024	
By occupational status (two categories) note: three category version not used for this analysis		
Not employed	0.043	
By product		
Hatchback car	0.020	-26.6pp (69.9% - 96.5%) $p = 0.018$
Washing machine	0.030	

[a] Treatment effect is calculated as the difference in the percentage completing return under the "medium effort" and "high effort" variants

pp = percentage point

A14.3.4 Content of the prompt to register

Table 94: Content of the prompt to register

Group	P-value χ^2 test	Safety v Baseline ^[a]	No marketing v Safety ^[b]	Public authority v No marketing ^[c]	Warranty v Public Authority ^[d]	Strong v Warranty ^[e]
Full sample	< 0.001				5.1pp (28.2% - 23.1%) $p = 0.040$	
By country						
Belgium	< 0.001			15.0pp (41.3% - 26.3%) $p = 0.004$	-11.1pp (30.1% - 41.3%) $p = 0.039$	
Bulgaria	0.001		13.0pp (33.8% - 20.8%) $p = 0.009$	-9.9pp (23.9% - 33.8%) $p = 0.049$	14.7pp (38.6% - 23.9%) $p = 0.005$	
Croatia	0.005				10.7pp (34.0% - 23.3%) $p = 0.039$	
Czech Republic	< 0.001		10.3pp (18.9% - 8.6%) $p = 0.006$			-9.3pp (16.2% - 25.4%) $p = 0.040$
Germany	< 0.001	-13.6pp (14.9% - 28.5%) $p = 0.004$			11.1pp (24.2% - 13.1%) $p = 0.011$	
Ireland	0.006			12.4pp (44.0% - 31.6%) $p = 0.032$	-13.5pp (30.6% - 44.0%) $p = 0.021$	
Denmark	0.013					16.0pp (38.0% - 22.0%) $p = 0.003$
Portugal	< 0.001	12.9pp (31.1% - 18.2%) $p = 0.010$		10.3pp (33.9% - 23.6%) $p = 0.047$		

Group	P-value χ^2 test	Safety v Baseline ^[a]	No marketing v Safety ^[b]	Public authority v No marketing ^[c]	Warranty v Public Authority ^[d]	Strong v Warranty ^[e]
Spain	< 0.001			13.1pp (30.3% - 17.2%) $p = 0.008$		-17.0pp (14.3% - 31.3%) $p < 0.001$
By age category						
18-34	0.047				13.6pp (29.1% - 15.5%) $p = 0.003$	
35-54	0.004					
55-64	0.048			15.9pp (32.9% - 17.1%) $p = 0.017$		
By financial status (four categories) note: two category version not used for this analysis						
Easy to make ends meet	0.040					
By educational level						
Medium (up to and including bachelor's degree)	0.022				7.9pp (31.6% - 23.8%) $p = 0.044$	
By importance of product safety						
Very important	0.031					
Not very important	0.006	-8.4pp (13.3% - 21.7%) $p = 0.033$				
By occupational status (three categories) note: two category version not used for this analysis						
Employed	< 0.001	-7.2pp (16.1% - 23.3%) $p = 0.017$			7.8pp (29.0% - 21.2%) $p = 0.013$	
By product						

Group	P-value χ^2 test	Safety v Baseline ^[a]	No marketing v Safety ^[b]	Public authority v No marketing ^[c]	Warranty v Public Authority ^[d]	Strong v Warranty ^[e]
High chair	0.001				9.3pp (30.9% - 21.6%) $p = 0.034$	
Toaster	0.001	13.1pp (29.9% - 16.8%) $p = 0.006$	-13.4pp (16.6% - 29.9%) $p = 0.003$	8.3pp (24.9% - 16.6%) $p = 0.029$		

[a] Treatment effect is calculated as the difference in the percentage starting registration under the "Safety" and "Baseline" variants

[b] Treatment effect is calculated as the difference in the percentage starting registration under the "No marketing" and "safety" variants

[a] Treatment effect is calculated as the difference in the percentage starting registration under the "Public authority" and "No marketing" variants

[a] Treatment effect is calculated as the difference in the percentage starting registration under the "Warranty" and "Public authority" variants

[a] Treatment effect is calculated as the difference in the percentage starting registration under the "Strong" and "Warranty" variants

pp = percentage point

A14.3.5 Timing of the prompt to register

Table 95: Timing of the prompt to register

Group	P-value χ^2 test	PoS v Package ^[a]	PoS v General ^[b]	Package v General ^[c]
Full sample	< 0.001	30.9pp (44.7% - 13.9%) <i>p</i> < 0.001	35.1pp (44.7% - 9.6%) <i>p</i> < 0.001	4.2pp (13.9% - 9.6%) <i>p</i> < 0.001
By country				
Belgium	< 0.001	39.9pp (57.9% - 18.0%) <i>p</i> < 0.001	48.8% (57.9% - 9.1%) <i>p</i> < 0.001	8.9pp (18.0% - 9.1%) <i>p</i> < 0.001
Bulgaria	< 0.001	29.3pp (46.8% - 17.5%) <i>p</i> < 0.001	26.2pp (46.8% - 20.6%) <i>p</i> < 0.001	
Croatia	< 0.001	26.2pp (43.4% - 17.2%) <i>p</i> < 0.001	26.2pp (43.4% - 17.1%) <i>p</i> < 0.001	
Czech Republic	< 0.001	32.0pp (40.3% - 8.4%) <i>p</i> < 0.001	34.5pp (40.3% - 5.8%) <i>p</i> < 0.001	
Germany	< 0.001	33.8pp (43.% - 9.6%) <i>p</i> < 0.001	34.5pp (43.4% - 9.0%) <i>p</i> < 0.001	
Ireland	< 0.001	32.1pp (54.8% - 22.6%) <i>p</i> < 0.001	36.3pp (54.8% - 18.5%) <i>p</i> < 0.001	
Denmark	< 0.001	29.3pp (50.4% - 21.1%) <i>p</i> < 0.001	40.1pp (50.4% - 10.3%) <i>p</i> < 0.001	10.8pp (21.15 - 10.3%) <i>p</i> < 0.001
Latvia	< 0.001	36.4pp (48.0% - 11.7%) <i>p</i> < 0.001	34.2pp (48.0% - 13.9%) <i>p</i> < 0.001	
Portugal	< 0.001	37.0pp (58.8% - 21.8%) <i>p</i> < 0.001	49.3pp (58.8% - 9.5%) <i>p</i> < 0.001	12.3pp (21.8% - 9.5%) <i>p</i> < 0.001
Spain	< 0.001	22.0pp (39.6% - 17.6%) <i>p</i> < 0.001	31.1pp (39.6% - 8.5%) <i>p</i> < 0.001	9.1pp (17.6% - 8.5%) <i>p</i> < 0.001
By age category				
18-34	< 0.001	33.4pp (45.5% - 12.1%) <i>p</i> < 0.001	36.7pp (45.2% - 8.8%) <i>p</i> < 0.001	
35-54	< 0.001	29.6pp (44.0% - 14.4%) <i>p</i> < 0.001	34.8pp (44.0% - 9.2%) <i>p</i> < 0.001	5.2pp (14.4% - 9.2%) <i>p</i> = 0.012
55-64	< 0.001	30.4pp (45.2% - 14.7%) <i>p</i> < 0.001	38.7pp (45.2% - 6.5%) <i>p</i> < 0.001	8.2pp (14.7% - 6.5%) <i>p</i> = 0.005
65+	< 0.001	30.3pp (45.2% - 14.9%)	30.1pp (45.2% - 15.1%)	

Group	P-value χ^2 test	PoS v Package ^[a]	PoS v General ^[b]	Package v General ^[c]
		$p < 0.001$	$p < 0.001$	
By financial status (four categories) note: two category version not used for this analysis				
Very easy to make ends meet	< 0.001	31.7pp (47.6% - 15.9%) $p < 0.001$	38.3pp (47.6% - 9.4%) $p < 0.001$	
Easy to make ends meet	< 0.001	33.3pp (45.6% - 12.3%) $p < 0.001$	35.3pp (45.6% - 10.3%) $p < 0.001$	
Difficult to make ends meet	< 0.001	29.9pp (44.6% - 14.7%) $p < 0.001$	36.0pp (44.6% - 14.7%) $p < 0.001$	6.2pp (14.7% - 8.6%) $p = 0.009$
Very difficult to make ends meet	< 0.001	21.5pp (36.1% - 14.6%) $p = 0.002$	26.2pp (36.1% - 9.9%) $p < 0.001$	
By educational level				
Low (up to and including secondary education)	< 0.001	27.5pp (39.9% - 12.4%) $p < 0.001$	32.1pp (39.9% - 7.7%) $p < 0.001$	4.7pp (12.4% - 7.7%) $p = 0.018$
Medium (up to and including bachelor's degree)	< 0.001	34.7pp (49.3% - 14.6%) $p < 0.001$	38.5pp (49.3% - 10.8%) $p < 0.001$	
High (Master's degree or higher)	< 0.001	29.7pp (45.1% - 15.4%) $p < 0.001$	33.4pp (45.1% - 11.8%) $p < 0.001$	
By internet use				
Low	< 0.001	30.7pp (45.0% - 14.4%) $p < 0.001$	32.4pp (45.0% - 12.7%) $p < 0.001$	
Medium	< 0.001	31.2pp (45.9% - 14.7%) $p < 0.001$	36.8pp (45.9% - 9.1%) $p < 0.001$	5.6pp (14.7% - 9.1%) $p = 0.011$
High	< 0.001	30.7pp (43.4% - 12.7%) $p < 0.001$	36.2pp (43.4% - 7.1%) $p < 0.001$	5.5pp (12.7% - 7.1%) $p = 0.005$
By importance of product safety				
Very important	< 0.001	31.2pp (48.3% - 17.0%) $p < 0.001$	37.6pp (48.3% - 10.7%) $p < 0.001$	6.3pp (17.0% - 10.7%) $p < 0.001$
Not very important	< 0.001	30.2pp (38.9% - 8.7%) $p < 0.001$	31.0pp (38.9% - 7.9%) $p < 0.001$	
By occupational status (three categories) note: two category version not used for this analysis				
Employed	< 0.001	31.3pp (44.6% - 13.4%) $p < 0.001$	36.1pp (44.6% - 8.5%) $p < 0.001$	4.9pp (13.4% - 8.5%) $p = 0.002$
Retired	< 0.001	32.2pp (45.6% - 13.4%) $p < 0.001$	31.8pp (45.6% - 13.7%) $p < 0.001$	

Group	P-value χ^2 test	PoS v Package ^[a]	PoS v General ^[b]	Package v General ^[c]
Neither employed nor retired	< 0.001	28.4pp (44.5% - 16.1%) $p < 0.001$	34.9pp (44.5% - 9.6%) $p < 0.001$	6.5pp (16.1% - 9.6%) $p = 0.042$
By product				
Smart phone	< 0.001	29.3pp (44.8% - 15.5%) $p < 0.001$	35.3pp (44.8% - 9.5%) $p < 0.001$	6.1pp (15.5% - 9.5%) $p = 0.011$
High chair	< 0.001	32.8pp (44.5% - 11.7%) $p < 0.001$	35.8pp (44.5% - 8.7%) $p < 0.001$	
Toaster	< 0.001	30.5pp (44.9% - 14.4%) $p < 0.001$	33.7pp (44.9% - 11.2%) $p < 0.001$	

[a] Treatment effect is calculated as the difference in the percentage starting registration under the "Point-of-Sale" and "With package" variants

[b] Treatment effect is calculated as the difference in the percentage starting registration under the "Point-of-Sale" and "General prompt" variants

[c] Treatment effect is calculated as the difference in the percentage starting registration under the "With package" and "General prompt" variants

pp = percentage point

A14.3.6 Effort to complete registration

Table 96: Effort to complete registration

Group	P-value χ^2 test	Low v Medium ^[a]	Medium v High ^[b]
Full sample	< 0.001	15.4pp (87.2% - 71.8%) $p < 0.001$	9.0pp (71.8% - 62.9%) $p = 0.025$
By country			
Belgium	< 0.001	24.6pp (91.2% - 66.6%) $p < 0.001$	
Bulgaria	0.021	13.3pp (92.2% - 79.0%) $p = 0.010$	
Croatia	0.017	13.4pp (91.8% - 78.4%) $p = 0.011$	
Germany	0.024		
Ireland	< 0.001	16.8pp (96.6% - 79.9%) $p < 0.001$	
Denmark	0.005	15.7pp (84.7% - 69.0%) $p = 0.023$	
Latvia	0.003	18.8pp (94.1% - 75.4%) $p = 0.001$	
Portugal	< 0.001	10.8pp (94.1% - 83.3%) $p = 0.016$	24.8pp (83.3% - 58.4%) $p < 0.001$
Spain	0.002	19.7pp	

Group	P-value χ^2 test	Low v Medium ^[a]	Medium v High ^[b]
		(86.9% - 67.2%) $p = 0.006$	
By age category			
18-34	0.016	13.8pp (89.1% - 75.4%) $p = 0.041$	
35-54	< 0.001	12.1pp (87.1% - 74.9%) $p = 0.028$	16.6pp (74.9% - 58.3%) $p = 0.012$
55-64	0.043	23.1pp (86.3% - 63.2%) $p = 0.010$	
65+	0.005	21.3pp (86.0% - 64.7%) $p = 0.003$	
By financial status (four categories) note: two category version not used for this analysis			
Very easy to make ends meet	0.002	17.0pp (95.7% - 78.6%) $p = 0.013$	
Easy to make ends meet	0.002	13.4pp (84.4% - 70.9%) $p = 0.012$	
Difficult to make ends meet	< 0.001	24.1pp (91.6% - 67.5%) $p < 0.001$	
By educational level			
Low (up to and including secondary education)	< 0.001	20.8pp (85.2% - 64.4%) $p < 0.001$	
Medium (up to and including bachelor's degree)	< 0.001	11.8pp (87.3% - 75.5%) $p = 0.017$	
By internet use			
Low	< 0.001	19.0pp (84.3% - 65.3%) $p = 0.002$	
Medium	0.007		13.7pp (76.4% - 62.7%) $p = 0.042$
High	< 0.001	20.1pp (95.6% - 75.5%) $p < 0.001$	
By importance of product safety			
Very important	< 0.001	15.0pp (89.0% - 74.0%) $p < 0.001$	
Not very important	0.005	15.7pp (82.7% - 67.0%) $p = 0.023$	
By occupational status (three categories) note: two category version not used for this analysis			

Group	P-value χ^2 test	Low v Medium ^[a]	Medium v High ^[b]
Employed	< 0.001	13.8pp (87.8% - 74.0%) $p = 0.002$	11.2pp (74.0% - 62.8%) $p = 0.032$
Retired	0.035	18.8pp (82.6% - 63.8%) $p = 0.028$	
Neither employed nor retired	0.007	18.8pp (89.4% - 70.6%) $p = 0.010$	
By product			
Smart phone	< 0.001	15.1pp (92.9% - 77.8%) $p < 0.001$	20.6pp (77.8% - 57.1%) $p = 0.001$
High chair	0.008	21.6pp (82.3% - 60.7%) $p = 0.003$	
Toaster	0.033	12.3pp (86.7% - 74.5%) $p = 0.034$	

[a] Treatment effect is calculated as the difference in the percentage completing registration under the “low effort” and “medium effort” variants

[b] Treatment effect is calculated as the difference in the percentage completing registration under the “medium effort” and “high effort” variants

pp = percentage point

A14.4 Results of multivariate logistic regression analysis

Multivariate logistic regression analysis was conducted for each group of treatment variants. Since all outcomes are binary in nature (e.g. a product is either returned in the recall experiment or it is not), binary regression techniques such as logistic regression are appropriate. Logistic regression has the added benefit that coefficients can be converted into interpretable odds ratios.

The tables below provide an analysis for six regression models, where each model builds on the previous. More precisely, the models are as follows:

- **Model 1:** regressions including only the treatment variable. This model provides a direct validation of the main results presented in the report.
- **Model 2:** regressions including the treatment variable and country of residence.
- **Model 3:** regressions including all variables in model 2 and the product used in the experiment.
- **Model 4:** regressions including all variables in model 3 and age.
- **Model 5:** regressions including all variables in model 4 and financial status, educational attainment and occupational status. Financial status, educational attainment and occupational status represent interrelated socio-demographics.
- **Model 6:** regressions including internet use and importance of product safety.

Model 6 contains all demographics groups used for subgroup analysis of the experimental results; see e.g. section A14.1.

The tables below provide odds-ratios. Odds-ratios provide insights into whether a variable increases or decreases the likelihood of observing an outcome. These are evaluated relative to odds-ratios of 1. More specifically:

- If the odds-ratio for a particular variable is statistically significantly larger than 1, then the underlying variable has a positive impact on the likelihood of observing an outcome;

- If the odds-ratio is statistically significantly smaller than 1, then the underlying variable has a negative impact on the likelihood of observing an outcome;
- If the odds-ratio is **not** statistically significantly different from 1, then the underlying variable has no impact on the likelihoods.

A14.4.1 Content and layout of recall notices

In the background task (stage 1)

The outcome variable of interest for the tables below is whether a respondent engaged with the initial prompt to recall in stage 1 of the recall experiment.

Table 97 below only shows the results for the models taking “Voluntary recall” as the baseline of the treatment variable. For completeness, Table 98 provides the results for the models taking “Safety” as the baseline. A change in the baseline for the treatment variable does not impact the results for the demographic variables. Therefore, odds-ratios for demographics are not reproduced in Table 98.

Table 97: Content and layout of recall messages (stage 1) – multivariate analysis

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Messaging within the recall notification (<i>baseline: Voluntary recall</i>)						
Safety	0.650** (0.012)	0.649** (0.012)	0.708** (0.044)	0.704** (0.042)	0.695** (0.036)	0.695** (0.038)
Regular recall	0.832 (0.144)	0.831 (0.144)	0.843 (0.180)	0.848 (0.193)	0.840 (0.172)	0.846 (0.199)
Country (<i>baseline: Belgium</i>)						
Bulgaria		1.523*** (<0.001)	1.527*** (<0.001)	1.524*** (<0.001)	1.499*** (<0.001)	1.417*** (0.003)
Croatia		1.218* (0.080)	1.215* (0.086)	1.212* (0.091)	1.249* (0.053)	1.175 (0.165)
Czech Republic		0.698*** (0.003)	0.696*** (0.003)	0.693*** (0.003)	0.719** (0.010)	0.692*** (0.005)
Germany		0.978 (0.848)	0.968 (0.774)	0.968 (0.777)	0.993 (0.950)	0.976 (0.835)
Ireland		1.143 (0.244)	1.151 (0.225)	1.158 (0.206)	1.157 (0.218)	1.073 (0.556)
Denmark		1.315** (0.015)	1.318** (0.015)	1.320** (0.015)	1.312** (0.022)	1.301** (0.026)
Latvia		0.899 (0.366)	0.901 (0.384)	0.904 (0.403)	0.924 (0.517)	0.883 (0.316)
Portugal		1.235* (0.060)	1.243* (0.054)	1.237* (0.061)	1.284** (0.030)	1.201 (0.116)
Spain		1.049 (0.677)	1.050 (0.669)	1.047 (0.689)	1.064 (0.600)	1.003 (0.977)
Product (<i>baseline: hatchback car</i>)						
Toy			0.794* (0.081)	0.797* (0.086)	0.796* (0.085)	0.803* (0.096)
Sweater			1.470*** (0.003)	1.479*** (0.002)	1.484*** (0.002)	1.480*** (0.002)
Washing machine			1.057 (0.677)	1.058 (0.673)	1.061 (0.658)	1.056 (0.684)
Office chair			0.816	0.817	0.819	0.828

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
			(0.139)	(0.141)	(0.146)	(0.168)
Age (<i>baseline: 18-34</i>)						
35-54				1.187 (0.120)	1.294** (0.024)	1.199 (0.118)
55-64				1.167 (0.266)	1.262 (0.110)	1.126 (0.422)
65+				1.282** (0.036)	1.389* (0.061)	1.213 (0.275)
Financial status (<i>baseline: very easy to make ends meet</i>)						
Easy to make end meet					1.044 (0.762)	1.052 (0.725)
Difficult to make ends meet					0.887 (0.432)	0.898 (0.486)
Very difficult to make ends meet					0.973 (0.900)	0.952 (0.824)
No answer					0.972 (0.901)	0.973 (0.904)
Educational level (<i>baseline: low; up to and including secondary education</i>)						
Medium (up to and including bachelor's degree)					1.029 (0.777)	1.055 (0.605)
High (Master's degree or higher)					1.208 (0.131)	1.222 (0.112)
No answer					0.949 (0.897)	0.979 (0.958)
Occupational status (<i>baseline: employed</i>)						
Not employed or retired					1.297** (0.027)	1.261** (0.049)
Retired					1.047 (0.771)	1.038 (0.816)
Internet use (<i>baseline: low</i>)						
Medium						1.091 (0.408)
High						0.957 (0.695)
Importance of product safety (<i>baseline: not very important</i>)						
Very important						1.597*** (<0.001)

N 10,013 10,013 10,013 10,013 10,013 10,013
 Note: odds-ratios shown. Number in parentheses provides p-value of the odds-ratio. * p < 0.01, ** p < 0.05, *** p < 0.01.

Table 98: Content and layout of recall messages (stage 1) – multivariate analysis; alternative baseline for the treatment variable

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Messaging within the recall notification (<i>baseline: Safety</i>)						
Voluntary recall	1.538**	1.540**	1.414**	1.421**	1.438**	1.439**

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
	(0.012)	(0.012)	(0.044)	(0.042)	(0.036)	(0.038)
Regular recall	1.278*	1.279*	1.193	1.204	1.208	1.218
	(0.068)	(0.068)	(0.193)	(0.173)	(0.168)	(0.154)

For odds-ratios of other variables, see Table 97

Note: odds-ratios shown. Number in parentheses provides p-value of the odds-ratio. * p < 0.01, ** p < 0.05, *** p < 0.01.

In the recall notification stage (stage 2)

The outcome variable of interest for the tables below is whether a respondent engaged with the prompt to recall in stage 2 of the recall experiment, provided that they engaged with the prompt in stage 1.

Table 99 below only shows the results for the models taking “Voluntary recall” as the baseline of the treatment variable. For completeness, Table 100 provides the results for the models taking different variants as baseline. A change in the baseline for the treatment variable does not impact the results for the demographic variables. Therefore, odds-ratios for the demographics are not reproduced in Table 100.

Table 99: Content and layout of recall messages (stage 2) – multivariate analysis

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Messaging within the recall notification (<i>baseline: Voluntary recall</i>)						
Safety	0.778 (0.427)	0.802 (0.487)	0.825 (0.552)	0.849 (0.606)	0.879 (0.691)	0.925 (0.811)
Regular recall	0.581* (0.069)	0.589* (0.078)	0.596* (0.085)	0.604* (0.094)	0.596* (0.088)	0.602* (0.095)
Severe	0.553** (0.047)	0.565* (0.058)	0.553* (0.051)	0.548** (0.048)	0.547** (0.048)	0.555* (0.050)
Simple	0.450*** (0.008)	0.460** (0.011)	0.468** (0.012)	0.475** (0.013)	0.482** (0.014)	0.481** (0.012)
Image	0.565* (0.050)	0.577* (0.059)	0.604* (0.088)	0.624 (0.108)	0.620 (0.109)	0.585* (0.063)
Border	0.544** (0.041)	0.551** (0.046)	0.557* (0.050)	0.558** (0.048)	0.561* (0.053)	0.539** (0.036)
Emotion	0.819 (0.513)	0.829 (0.543)	0.842 (0.579)	0.886 (0.699)	0.893 (0.720)	0.904 (0.744)
Country (<i>baseline: Belgium</i>)						
Bulgaria		1.113 (0.577)	1.174 (0.415)	1.172 (0.423)	1.205 (0.379)	1.093 (0.685)
Croatia		1.153 (0.487)	1.186 (0.415)	1.209 (0.367)	1.198 (0.403)	1.098 (0.672)
Czech Republic		0.971 (0.894)	0.963 (0.866)	0.970 (0.894)	0.950 (0.831)	0.914 (0.714)
Germany		1.279 (0.241)	1.342 (0.168)	1.334 (0.180)	1.305 (0.225)	1.289 (0.250)
Ireland		0.921 (0.687)	0.933 (0.744)	0.923 (0.706)	0.922 (0.710)	0.830 (0.398)
Denmark		0.840 (0.391)	0.833 (0.375)	0.834 (0.381)	0.823 (0.363)	0.808 (0.325)
Latvia		0.925	0.907	0.929	0.933	0.916

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
		(0.716)	(0.659)	(0.744)	(0.764)	(0.710)
Portugal		0.892 (0.573)	0.913 (0.660)	0.907 (0.638)	0.891 (0.588)	0.818 (0.356)
Spain		1.148 (0.501)	1.148 (0.456)	1.136 (0.541)	1.134 (0.551)	1.036 (0.871)
Product (<i>baseline: hatchback car</i>)						
Toy			0.810 (0.384)	0.800 (0.358)	0.767 (0.282)	0.780 (0.322)
Sweater			0.554*** (0.009)	0.570** (0.012)	0.556*** (0.009)	0.571** (0.014)
Washing machine			0.516*** (0.006)	0.521*** (0.006)	0.514*** (0.005)	0.506*** (0.005)
Office chair			0.840 (0.485)	0.829 (0.449)	0.834 (0.462)	0.847 (0.501)
Age (<i>baseline: 18-34</i>)						
35-54				1.623** (0.016)	1.723** (0.011)	0.938** (0.012)
55-64				1.343 (0.235)	1.421 (0.177)	1.425 (0.190)
65+				1.219 (0.362)	1.447 (0.259)	1.500 (0.237)
Financial status (<i>baseline: very easy to make ends meet</i>)						
Easy to make end meet					0.929 (0.769)	0.937 (0.796)
Difficult to make ends meet					0.956 (0.864)	0.963 (0.886)
Very difficult to make ends meet					0.563 (0.148)	0.551 (0.145)
No answer					1.329 (0.488)	1.433 (0.369)
Educational level (<i>baseline: low; up to and including secondary education</i>)						
Medium (up to and including bachelor's degree)					0.984 (0.931)	0.998 (0.993)
High (Master's degree or higher)					0.928 (0.732)	0.894 (0.614)
No answer					1.796 (0.368)	1.755 (0.375)
Occupational status (<i>baseline: employed</i>)						
Not employed or retired					1.053 (0.820)	1.101 (0.669)
Retired					0.842 (0.552)	0.880 (0.663)
Internet use (<i>baseline: low</i>)						
Medium						1.135 (0.500)
High						1.546** (0.035)

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Importance of product safety (<i>baseline: not very important</i>)						
Very important						1.3608 (0.079)
N	2,221	2,221	2,221	2,221	2,221	2,221

Note: odds-ratios shown. Number in parentheses provides p-value of the odds-ratio. * p < 0.01, ** p < 0.05, *** p < 0.01.

Table 100: Content and layout of recall messages (stage 2) – multivariate analysis; alternative baselines for the treatment variable

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Messaging within the recall notification (<i>baseline: Safety</i>)						
Voluntary recall	1.285 (0.427)	1.247 (0.487)	1.213 (0.552)	1.178 (0.606)	1.137 (0.691)	1.081 (0.811)
Regular recall	0.746 (0.342)	0.735 (0.321)	0.722 (0.303)	0.712 (0.280)	0.677 (0.222)	0.650 (0.187)
Severe	0.710 (0.267)	0.705 (0.260)	0.670 (0.205)	0.646 (0.165)	0.622 (0.137)	0.599 (0.114)
Simple	0.578* (0.078)	0.574* (0.077)	0.567* (0.071)	0.560* (0.060)	0.549* (0.051)	0.520** (0.036)
Image	0.725 (0.287)	0.719 (0.276)	0.733 (0.314)	0.735 (0.313)	0.706 (0.262)	0.632 (0.140)
Border	0.699 (0.244)	0.688 (0.227)	0.676 (0.205)	0.657 (0.171)	0.639 (0.151)	0.582* (0.088)
Emotion	1.051 (0.874)	1.034 (0.915)	1.021 (0.949)	1.044 (0.893)	1.015 (0.962)	0.977 (0.943)

For odds-ratios of other variables, see Table 99

Messaging within the recall notification (<i>baseline: Regular recall</i>)						
Voluntary recall	1.722* (0.069)	1.698* (0.078)	1.678* (0.085)	1.655* (0.094)	1.679* (0.088)	1.661* (0.095)
Safety	1.340 (0.342)	1.361 (0.321)	1.383 (0.303)	1.405 (0.280)	1.476 (0.222)	1.537 (0.187)
Severe	0.952 (0.866)	0.959 (0.887)	0.927 (0.797)	0.908 (0.745)	0.919 (0.775)	0.922 (0.789)
Simple	0.774 (0.385)	0.781 (0.406)	0.784 (0.406)	0.787 (0.412)	0.810 (0.465)	0.799 (0.442)
Image	0.972 (0.921)	0.979 (0.941)	1.014 (0.961)	1.033 (0.910)	1.042 (0.887)	0.972 (0.922)
Border	0.937 (0.823)	0.936 (0.820)	0.935 (0.814)	0.924 (0.785)	0.943 (0.839)	0.900 (0.709)
Emotion	1.409 (0.252)	1.408 (0.254)	1.412 (0.250)	1.467 (0.211)	1.499 (0.180)	1.501 (0.186)

For odds-ratios of other variables, see Table 99

Messaging within the recall notification (<i>baseline: Severe</i>)						
Voluntary recall	1.809** (0.047)	1.770* (0.058)	1.809* (0.051)	1.823** (0.048)	1.828** (0.048)	1.803* (0.050)
Safety	1.408 (0.267)	1.419 (0.260)	1.492 (0.205)	1.548 (0.165)	1.607 (0.137)	1.668 (0.114)

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Regular recall	1.051 (0.866)	1.043 (0.887)	1.078 (0.797)	1.101 (0.745)	1.089 (0.775)	1.085 (0.789)
Simple	0.813 (0.482)	0.815 (0.491)	0.846 (0.571)	0.866 (0.627)	0.882 (0.665)	0.867 (0.623)
Image	1.021 (0.941)	1.021 (0.942)	1.093 (0.756)	1.138 (0.657)	1.134 (0.665)	1.055 (0.854)
Border	0.985 (0.957)	0.976 (0.933)	1.008 (0.978)	1.017 (0.953)	1.026 (0.930)	0.971 (0.922)
Emotion	1.481 (0.190)	1.468 (0.202)	1.523 (0.167)	1.616 (0.122)	1.632 (0.112)	1.629 (0.114)
For odds-ratios of other variables, see Table 99						
Messaging within the recall notification (<i>baseline: Simple</i>)						
Voluntary recall	2.224*** (0.008)	2.172** (0.011)	2.138** (0.012)	2.105** (0.013)	2.073** (0.014)	2.079** (0.012)
Safety	1.731* (0.078)	1.742* (0.077)	1.764* (0.071)	1.786* (0.060)	1.823* (0.051)	1.924* (0.036)
Regular recall	1.292 (0.385)	1.280 (0.406)	1.275 (0.406)	1.271 (0.412)	1.235 (0.465)	1.252 (0.442)
Severe	1.229 (0.482)	1.227 (0.491)	1.182 (0.571)	1.154 (0.627)	1.134 (0.665)	1.153 (0.623)
Image	1.256 (0.428)	1.253 (0.434)	1.293 (0.377)	1.314 (0.345)	1.286 (0.381)	1.217 (0.484)
Border	1.210 (0.514)	1.198 (0.542)	1.192 (0.545)	1.174 (0.577)	1.164 (0.593)	1.120 (0.690)
Emotion	1.820** (0.048)	1.802* (0.053)	1.800* (0.053)	1.865** (0.041)	1.851** (0.039)	1.879** (0.034)
For odds-ratios of other variables, see Table 99						
Messaging within the recall notification (<i>baseline: Image</i>)						
Voluntary recall	1.771* (0.050)	1.734* (0.059)	1.654* (0.088)	1.602 (0.108)	1.612 (0.109)	1.709* (0.063)
Safety	1.379 (0.287)	1.390 (0.276)	1.364 (0.314)	1.360 (0.313)	1.418 (0.262)	1.582 (0.140)
Regular recall	1.028 (0.921)	1.021 (0.941)	0.986 (0.961)	0.968 (0.910)	0.960 (0.887)	1.029 (0.922)
Severe	0.979 (0.941)	0.979 (0.942)	0.915 (0.756)	0.879 (0.657)	0.882 (0.665)	0.948 (0.854)
Simple	0.796 (0.428)	0.798 (0.434)	0.774 (0.377)	0.761 (0.345)	0.778 (0.381)	0.822 (0.484)
Border	0.964 (0.897)	0.956 (0.872)	0.922 (0.774)	0.894 (0.694)	0.905 (0.729)	0.921 (0.772)
Emotion	1.450 (0.204)	1.438 (0.213)	1.393 (0.265)	1.420 (0.243)	1.439 (0.222)	1.545 (0.140)
For odds-ratios of other variables, see Table 99						
Messaging within the recall notification (<i>baseline: Border</i>)						
Voluntary recall	1.837** (0.041)	1.814** (0.046)	1.795* (0.050)	1.792** (0.048)	1.781* (0.053)	1.856** (0.036)
Safety	1.430 (0.244)	1.454 (0.227)	1.480 (0.205)	1.521 (0.171)	1.566 (0.151)	1.718* (0.088)

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Regular recall	1.067 (0.823)	1.069 (0.820)	1.070 (0.814)	1.083 (0.785)	1.061 (0.839)	1.117 (0.709)
Severe	1.016 (0.957)	1.025 (0.933)	0.992 (0.978)	0.983 (0.953)	0.974 (0.930)	1.030 (0.922)
Simple	0.826 (0.514)	0.835 (0.542)	0.839 (0.545)	0.851 (0.577)	0.859 (0.593)	0.893 (0.690)
Image	1.037 (0.897)	1.046 (0.872)	1.085 (0.774)	1.118 (0.694)	1.105 (0.729)	1.086 (0.772)
Emotion	1.504 (0.171)	1.505 (0.171)	1.511 (0.166)	1.558 (0.126)	1.590 (0.125)	1.677* (0.088)

For odds-ratios of other variables, see Table 99

Note: odds-ratios shown. Number in parentheses provides p-value of the odds-ratio. * p < 0.01, ** p < 0.05, *** p < 0.01.

A14.4.2 Channel of recall notification

In the background task (stage 1)

The outcome variable of interest for the table below is whether a respondent engaged with the initial prompt to recall in stage 1 of the recall experiment.

Table 101: Channel of notification (stage 1) – multivariate analysis

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Channel of notification (<i>baseline: generic notification</i>)						
Direct notification	1.603*** (<0.001)	1.606*** (<0.001)	1.571*** (<0.001)	1.568*** (<0.001)	1.577*** (<0.001)	1.557*** (<0.001)
Country (<i>baseline: Belgium</i>)						
Bulgaria		1.530*** (<0.001)	1.540*** (<0.001)	1.540*** (<0.001)	1.510*** (<0.001)	1.429*** (0.003)
Croatia		1.226* (0.072)	1.225* (0.076)	1.221* (0.081)	1.258** (0.047)	1.189 (0.139)
Czech Republic		0.697*** (0.003)	0.696*** (0.003)	0.694*** (0.003)	0.720** (0.011)	0.693*** (0.006)
Germany		0.981 (0.867)	0.969 (0.788)	0.970 (0.793)	0.997 (0.981)	0.980 (0.862)
Ireland		1.148 (0.229)	1.157 (0.212)	1.164 (0.193)	1.167 (0.196)	1.083 (0.509)
Denmark		1.323** (0.013)	1.327** (0.013)	1.328** (0.013)	1.322** (0.019)	1.310** (0.023)
Latvia		0.897 (0.359)	0.900 (0.378)	0.904 (0.406)	0.924 (0.521)	0.885 (0.324)
Portugal		1.245* (0.053)	1.257** (0.045)	1.252** (0.049)	1.303** (0.023)	1.221* (0.090)
Spain		1.050 (0.672)	1.060 (0.616)	1.057 (0.632)	1.076 (0.535)	1.016 (0.891)
Product (<i>baseline: hatchback car</i>)						
Toy				0.806 (0.101)	0.805 (0.101)	0.813 (0.116)
Sweater				1.479***	1.492***	1.486***

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
				(0.002)	(0.002)	(0.002)
Washing machine				1.096 (0.491)	1.099 (0.476)	1.093 (0.505)
Office chair				0.837 (0.195)	0.837 (0.196)	0.847 (0.223)
<i>Age (baseline: 18-34)</i>						
35-54				1.171 (0.152)	1.281** (0.030)	1.191 (0.132)
55-64				1.139 (0.348)	1.231 (0.152)	1.106 (0.496)
65+				1.277** (0.040)	1.371* (0.075)	1.201 (0.305)
<i>Financial status (baseline: very easy to make ends meet)</i>						
Easy to make end meet					1.036 (0.803)	1.045 (0.758)
Difficult to make ends meet					0.891 (0.454)	0.903 (0.511)
Very difficult to make ends meet					0.972 (0.900)	0.955 (0.836)
No answer					0.996 (0.987)	0.995 (0.983)
<i>Educational level (baseline: low; up to and including secondary education)</i>						
Medium (up to and including bachelor's degree)					1.026 (0.803)	1.051 (0.628)
High (Master's degree or higher)					1.222 (0.110)	1.238* (0.091)
No answer					0.944 (0.888)	0.982 (0.964)
<i>Occupational status (baseline: employed)</i>						
Not employed or retired					1.310** (0.022)	1.275** (0.039)
Retired					1.067 (0.690)	1.054 (0.745)
<i>Internet use (baseline: low)</i>						
Medium						1.084 (0.448)
High						0.950 (0.651)
<i>Importance of product safety (baseline: not very important)</i>						
Very important						1.574*** (<0.001)
N	10,013	10,013	10,013	10,013	10,013	10,013

Note: odds-ratios shown. Number in parentheses provides p-value of the odds-ratio. * $p < 0.01$, ** $p < 0.05$, *** $p < 0.01$.

In the recall notification stage (stage 2)

The outcome variable of interest for the table below is whether a respondent engaged with the prompt to recall in stage 2 of the recall experiment, provided that they engaged with the prompt in stage 1.

Table 102: Channel of notification (stage 2) – multivariate analysis

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Channel of notification (<i>baseline: generic notification</i>)						
Direct notification	5.656*** (<0.001)	5.676*** (<0.001)	5.679*** (<0.001)	5.727*** (<0.001)	6.099*** (<0.001)	6.014*** (<0.001)
Country (<i>baseline: Belgium</i>)						
Bulgaria		1.348 (0.144)	1.411* (0.097)	1.407 (0.105)	1.326 (0.210)	1.246 (0.331)
Croatia		1.148 (0.524)	1.158 (0.501)	1.184 (0.447)	1.164 (0.504)	1.107 (0.704)
Czech Republic		1.056 (0.822)	1.046 (0.854)	1.059 (0.817)	1.060 (0.825)	1.043 (0.874)
Germany		1.159 (0.510)	1.179 (0.465)	1.170 (0.489)	1.153 (0.534)	1.145 (0.555)
Ireland		0.966 (0.872)	0.974 (0.904)	0.963 (0.865)	0.973 (0.903)	0.904 (0.661)
Denmark		0.737 (0.158)	0.727 (0.150)	0.726 (0.154)	0.709 (0.143)	0.700 (0.129)
Latvia		0.839 (0.434)	0.818 (0.378)	0.839 (0.453)	0.817 (0.411)	0.818 (0.418)
Portugal		0.922 (0.698)	0.923 (0.707)	0.916 (0.683)	0.912 (0.678)	0.873 (0.546)
Spain		1.164 (0.480)	1.170 (0.468)	1.137 (0.558)	1.137 (0.561)	1.077 (0.739)
Product (<i>baseline: hatchback car</i>)						
Toy			0.828 (0.477)	0.816 (0.439)	0.766 (0.313)	0.780 (0.353)
Sweater			0.764 (0.292)	0.792 (0.368)	0.766 (0.299)	0.781 (0.333)
Washing machine			0.537** (0.020)	0.546** (0.023)	0.526** (0.016)	0.528** (0.016)
Office chair			1.023 (0.936)	1.018 (0.948)	1.011 (0.969)	1.031 (0.914)
Age (<i>baseline: 18-34</i>)						
35-54				1.663** (0.020)	1.870*** (0.004)	1.859*** (0.006)
55-64				1.359 (0.264)	1.480 (0.163)	1.445 (0.208)
65+				1.243 (0.362)	1.373 (0.363)	1.350 (0.408)
Financial status (<i>baseline: very easy to make ends meet</i>)						
Easy to make end meet					0.845 (0.549)	0.854 (0.573)

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Difficult to make ends meet					0.867 (0.644)	0.871 (0.655)
Very difficult to make ends meet					0.564 (0.223)	0.564 (0.234)
No answer					1.770 (0.181)	1.859 (0.147)
Educational level (<i>baseline: low; up to and including secondary education</i>)						
Medium (up to and including bachelor's degree)					0.997 (0.988)	1.011 (0.954)
High (Master's degree or higher)					1.210 (0.415)	1.197 (0.450)
No answer					2.436 (0.197)	2.419 (0.204)
Occupational status (<i>baseline: employed</i>)						
Not employed or retired					1.133 (0.615)	1.152 (0.572)
Retired					1.009 (0.977)	1.041 (0.901)
Internet use (<i>baseline: low</i>)						
Medium						0.951 (0.807)
High						1.234 (0.354)
Importance of product safety (<i>baseline: not very important</i>)						
Very important						1.227 (0.294)
N	2,221	2,221	2,221	2,221	2,221	2,221

Note: odds-ratios shown. Number in parentheses provides p-value of the odds-ratio. * p < 0.01, ** p < 0.05, *** p < 0.01.

A14.4.3 Effort to return the product

The outcome variable of interest for the table below is whether a respondent completed the return procedure, provided that the respondent started the return procedure.

Table 103: Effort to return the product – multivariate analysis

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Effort required to complete the return task (<i>baseline: medium</i>)						
Low	2.094 (0.200)	1.748 (0.348)	1.811 (0.326)	1.818 (0.324)	1.746 (0.340)	1.190 (0.310)
High	0.514 (0.106)	0.469* (0.077)	0.443* (0.071)	0.443* (0.072)	0.441* (0.082)	0.466* (0.090)
Country (<i>baseline: Belgium</i>)						
Bulgaria		0.917 (0.858)	0.876 (0.791)	0.956 (0.929)	0.585 (0.369)	0.446 (0.195)

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Croatia		4.645** (0.031)	4.954** (0.027)	5.104** (0.025)	5.185** (0.038)	4.207* (0.081)
Czech Republic		1.154 (0.819)	1.173 (0.806)	1.133 (0.848)	0.952 (0.948)	0.702 (0.650)
Germany		0.607 (0.285)	0.626 (0.320)	0.630 (0.335)	0.557 (0.283)	0.458 (0.179)
Ireland		1.271 (0.640)	1.305 (0.615)	1.163 (0.774)	1.269 (0.694)	0.888 (0.849)
Denmark		1.163 (0.764)	1.268 (0.649)	1.230 (0.689)	1.110 (0.857)	0.974 (0.964)
Latvia		0.965 (0.948)	1.055 (0.924)	1.014 (0.980)	1.084 (0.898)	0.924 (0.905)
Portugal		1.560 (0.432)	1.602 (0.414)	1.711 (0.348)	1.646 (0.436)	1.314 (0.692)
Spain		2.584 (0.132)	2.625 (0.137)	2.600 (0.138)	3.161* (0.095)	2.510 (0.192)
Product (<i>baseline: hatchback car</i>)						
Toy			1.051 (0.936)	1.035 (0.955)	0.896 (0.862)	0.952 (0.932)
Sweater			0.925 (0.899)	0.928 (0.903)	0.816 (0.740)	0.780 (0.671)
Washing machine			1.997 (0.270)	2.039 (0.273)	2.000 (0.314)	1.867 (0.313)
Office chair			1.143 (0.833)	1.169 (0.802)	0.794 (0.712)	0.778 (0.685)
Age (<i>baseline: 18-34</i>)						
35-54				1.024 (0.968)	0.903 (0.875)	0.776 (0.719)
55-64				0.664 (0.549)	0.683 (0.626)	0.583 (0.502)
65+				0.450 (0.171)	0.296 (0.192)	0.322 (0.198)
Financial status (<i>baseline: very easy to make ends meet</i>)						
Easy to make end meet					0.195*** (0.004)	0.189*** (0.005)
Difficult to make ends meet					0.362 (0.121)	0.366 (0.129)
Very difficult to make ends meet					1.385 (0.747)	1.795 (0.580)
No answer					0.078*** (0.001)	0.085*** (0.002)
Educational level (<i>baseline: low; up to and including secondary education</i>)						
Medium (up to and including bachelor's degree)					0.563 (0.232)	0.476 (0.107)
High (Master's degree or higher)					1.313 (0.557)	1.090 (0.859)
No answer					N/A ^[a]	N/A ^[a]

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Occupational status (<i>baseline: employed</i>)						
Not employed or retired					1.836 (0.319)	1.730 (0.393)
Retired					1.108 (0.911)	1.082 (0.924)
Internet use (<i>baseline: low</i>)						
Medium						1.110 (0.828)
High						2.886* (0.077)
Importance of product safety (<i>baseline: not very important</i>)						
Very important						1.390 (0.450)

N	891	891	891	891	881	881
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Note: odds-ratios shown. Number in parentheses provides p-value of the odds-ratio. * p < 0.01, ** p < 0.05, *** p < 0.01.

[a] All 10 respondents in the “no answer” group who started registration also completed it. Therefore, there was no variation within this group of respondents, and the group had to be dropped from the analysis.

A14.4.4 Content of the prompt to register

The outcome variable of interest for the tables below is whether a respondent started the registration process.

Table 104 below only shows the results for the models taking the “Baseline” variant as the baseline of the treatment variable. For completeness, Table 105 provides the results for the models taking different variants as baseline. A change in the baseline for the treatment variable does not impact the results for the demographic variables. Therefore, odds-ratios for the demographics are not reproduced in Table 105.

Table 104: Content of the prompt to register – multivariate analysis

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Content of the prompt to register (<i>baseline: baseline</i>)						
Safety	0.828 (0.199)	0.825 (0.195)	0.845 (0.258)	0.846 (0.261)	0.863 (0.322)	0.859 (0.310)
No marketing	0.815 (0.163)	0.814 (0.164)	0.807 (0.145)	0.811 (0.156)	0.822 (0.183)	0.827 (0.199)
Public authority	1.051 (0.723)	1.051 (0.722)	1.051 (0.722)	1.057 (0.696)	1.064 (0.660)	1.052 (0.722)
Warranty	1.375** (0.024)	1.378** (0.025)	1.379** (0.025)	1.383** (0.024)	1.397** (0.020)	1.407** (0.019)
Strong	1.148 (0.341)	1.152 (0.337)	1.135 (0.386)	1.137 (0.381)	1.157 (0.319)	1.135 (0.394)
Country (<i>baseline: Belgium</i>)						
Bulgaria		0.987 (0.900)	0.987 (0.899)	0.990 (0.921)	0.980 (0.852)	0.952 (0.658)
Croatia		0.867 (0.173)	0.868 (0.177)	0.867 (0.174)	0.890 (0.272)	0.860 (0.162)
Czech Republic		0.549***	0.550***	0.548***	0.599***	0.586***

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
		(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)
Germany		0.647*** (<0.001)	0.648*** (<0.001)	0.649*** (<0.001)	0.662*** (<0.001)	0.648*** (<0.001)
Ireland		1.167 (0.138)	1.167 (0.139)	1.176 (0.121)	1.134 (0.238)	1.072 (0.525)
Denmark		0.944 (0.585)	0.943 (0.581)	0.944 (0.586)	0.897 (0.323)	0.888 (0.287)
Latvia		0.819* (0.063)	0.819* (0.063)	0.825* (0.076)	0.816* (0.066)	0.795** (0.040)
Portugal		1.088 (0.410)	1.088 (0.411)	1.089 (0.407)	1.109 (0.324)	1.067 (0.547)
Spain		0.692*** (0.001)	0.691*** (0.001)	0.692*** (0.001)	0.679*** (<0.001)	0.651*** (<0.001)
Product (<i>baseline: smart phone</i>)						
High chair			0.879 (0.202)	0.879 (0.201)	0.881 (0.211)	0.859 (0.135)
Toaster			1.014 (0.887)	1.015 (0.881)	1.020 (0.839)	1.010 (0.921)
Age (<i>baseline: 18-34</i>)						
35-54				1.071 (0.524)	1.139 (0.239)	1.041 (0.723)
55-64				1.032 (0.813)	1.109 (0.452)	0.956 (0.754)
65+				1.217* (0.093)	1.302 (0.129)	1.084 (0.652)
Financial status (<i>baseline: very easy to make ends meet</i>)						
Easy to make end meet					0.987 (0.928)	0.991 (0.950)
Difficult to make ends meet					0.973 (0.858)	0.979 (0.887)
Very difficult to make ends meet					0.709 (0.108)	0.692* (0.083)
No answer					0.865 (0.507)	0.851 (0.457)
Educational level (<i>baseline: low; up to and including secondary education</i>)						
Medium (up to and including bachelor's degree)					1.245** (0.028)	1.287** (0.012)
High (Master's degree or higher)					1.242* (0.066)	1.276** (0.042)
No answer					1.603 (0.190)	1.635 (0.184)
Occupational status (<i>baseline: employed</i>)						
Not employed or retired					1.116 (0.332)	1.076 (0.523)
Retired					1.018 (0.912)	0.992 (0.962)
Internet use (<i>baseline: low</i>)						

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Medium						0.872 (0.179)
High						0.782** (0.022)
Importance of product safety (<i>baseline: not very important</i>)						
Very important						1.525*** (<0.001)
N	10,013	10,013	10,013	10,013	10,013	10,013

Note: odds-ratios shown. Number in parentheses provides p-value of the odds-ratio. * p < 0.01, ** p < 0.05, *** p < 0.01.

Table 105: Content of the prompt to register – multivariate analysis; alternative baselines for the treatment variable

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Content of the prompt to register (<i>baseline: safety</i>)						
Baseline	1.208 (0.199)	1.212 (0.195)	1.184 (0.258)	1.182 (0.261)	1.159 (0.322)	1.164 (0.310)
No marketing	0.984 (0.910)	0.986 (0.922)	0.955 (0.751)	0.958 (0.771)	0.953 (0.740)	0.962 (0.791)
Public authority	1.269* (0.081)	1.274* (0.076)	1.244 (0.110)	1.250 (0.105)	1.233 (0.128)	1.224 (0.142)
Warranty	1.660*** (<0.001)	1.670*** (<0.001)	1.632*** (<0.001)	1.636*** (<0.001)	1.620*** (0.001)	1.637*** (<0.001)
Strong	1.387** (0.021)	1.396** (0.020)	1.344** (0.041)	1.344** (0.040)	1.341** (0.042)	1.321* (0.055)
For odds-ratios of other variables, see Table 104						
Content of the prompt to register (<i>baseline: no marketing</i>)						
Baseline	1.227 (0.163)	1.229 (0.164)	1.240 (0.145)	1.234 (0.156)	1.217 (0.183)	1.209 (0.199)
Safety	1.016 (0.910)	1.014 (0.922)	1.048 (0.751)	1.043 (0.771)	1.050 (0.740)	1.039 (0.791)
Public authority	1.290* (0.062)	1.292* (0.060)	1.304* (0.053)	1.304* (0.053)	1.295* (0.060)	1.272* (0.080)
Warranty	1.687*** (<0.001)	1.694*** (<0.001)	1.710*** (<0.001)	1.707*** (<0.001)	1.700*** (<0.001)	1.701*** (<0.001)
Strong	1.409** (0.015)	1.415** (0.015)	1.408** (0.017)	1.403** (0.018)	1.408** (0.016)	1.372** (0.027)
For odds-ratios of other variables, see Table 104						
Content of the prompt to register (<i>baseline: public authority</i>)						
Baseline	0.952 (0.723)	0.951 (0.722)	0.951 (0.722)	0.946 (0.696)	0.940 (0.660)	0.951 (0.722)
Safety	0.788* (0.081)	0.785* (0.076)	0.804 (0.110)	0.800 (0.105)	0.811 (0.128)	0.817 (0.142)
No marketing	0.775* (0.062)	0.774* (0.060)	0.767* (0.053)	0.767* (0.053)	0.772* (0.060)	0.786* (0.080)
Warranty	1.308** (0.039)	1.311** (0.038)	1.311** (0.038)	1.309** (0.040)	1.313** (0.038)	1.338** (0.027)

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Strong	1.093 (0.510)	1.095 (0.500)	1.080 (0.570)	1.076 (0.589)	1.088 (0.536)	1.079 (0.579)
For odds-ratios of other variables, see Table 104						
Content of the prompt to register (<i>baseline: warranty</i>)						
Baseline	0.727** (0.024)	0.726** (0.025)	0.725** (0.025)	0.723** (0.024)	0.716** (0.020)	0.711** (0.019)
Safety	0.602*** (<0.001)	0.599*** (<0.001)	0.613*** (<0.001)	0.611*** (<0.001)	0.617*** (0.001)	0.611*** (<0.001)
No marketing	0.593*** (<0.001)	0.590*** (<0.001)	0.585*** (<0.001)	0.586*** (<0.001)	0.588*** (<0.001)	0.588*** (<0.001)
Public authority	0.764** (0.039)	0.763** (0.038)	0.762** (0.038)	0.764** (0.040)	0.761** (0.038)	0.748** (0.027)
Strong	0.835 (0.186)	0.836 (0.191)	0.823 (0.156)	0.822 (0.152)	0.828 (0.169)	0.807 (0.120)

For odds-ratios of other variables, see Table 104

Note: odds-ratios shown. Number in parentheses provides p-value of the odds-ratio. * p < 0.01, ** p < 0.05, *** p < 0.01.

A14.4.5 Timing of the prompt to register

The outcome variable of interest for the tables below is whether a respondent started the registration process.

Table 106 below only shows the results for the models taking the “Point-of-Sale” variant as the baseline of the treatment variable. For completeness, Table 107 provides the results for the models taking the “With package” variant as the baseline. A change in the baseline for the treatment variable does not impact the results for the demographic variables. Therefore, odds-ratios for the demographics are not reproduced in Table 107.

Table 106: Timing of the prompt to register – multivariate analysis

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Timing of the prompt to register (<i>baseline: Point-of-Sale</i>)						
With package	0.199*** (<0.001)	0.196*** (<0.001)	0.195*** (<0.001)	0.195*** (<0.001)	0.194*** (<0.001)	0.192*** (<0.001)
General prompt	0.132*** (<0.001)	0.130*** (<0.001)	0.130*** (<0.001)	0.130*** (<0.001)	0.129*** (<0.001)	0.127*** (<0.001)
Country (<i>baseline: Belgium</i>)						
Bulgaria		0.997 (0.979)	0.994 (0.954)	0.997 (0.977)	0.995 (0.966)	0.964 (0.764)
Croatia		0.865 (0.206)	0.865 (0.207)	0.863 (0.201)	0.884 (0.290)	0.851 (0.174)
Czech Republic		0.509*** (<0.001)	0.506*** (<0.001)	0.505*** (<0.001)	0.570*** (<0.001)	0.554*** (<0.001)
Germany		0.612*** (<0.001)	0.610*** (<0.001)	0.611*** (<0.001)	0.631*** (<0.001)	0.618*** (<0.001)
Ireland		1.226* (0.067)	1.223* (0.070)	1.233* (0.060)	1.171 (0.164)	1.096 (0.427)
Denmark		0.939 (0.575)	0.936 (0.556)	0.935 (0.551)	0.876 (0.264)	0.871 (0.243)

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Latvia		0.793** (0.041)	0.791** (0.039)	0.798** (0.047)	0.793** (0.047)	0.766** (0.024)
Portugal		1.106 (0.351)	1.104 (0.357)	1.108 (0.345)	1.125 (0.283)	1.071 (0.537)
Spain		0.664*** (<0.001)	0.662*** (<0.001)	0.663*** (<0.001)	0.641*** (<0.001)	0.612*** (<0.001)
Product (<i>baseline: smart phone</i>)						
High chair			0.897 (0.312)	0.897 (0.312)	0.899 (0.322)	0.875 (0.222)
Toaster			1.017 (0.878)	1.017 (0.871)	1.021 (0.846)	1.012 (0.913)
Age (<i>baseline: 18-34</i>)						
35-54				1.031 (0.791)	1.118 (0.349)	1.008 (0.947)
55-64				1.002 (0.987)	1.101 (0.508)	0.934 (0.652)
65+				1.226 (0.104)	1.349 (0.125)	1.096 (0.651)
Financial status (<i>baseline: very easy to make ends meet</i>)						
Easy to make end meet					0.913 (0.537)	0.913 (0.537)
Difficult to make ends meet					0.902 (0.510)	0.899 (0.501)
Very difficult to make ends meet					0.785 (0.302)	0.759 (0.239)
No answer					0.910 (0.695)	0.888 (0.620)
Educational level (<i>baseline: low; up to and including secondary education</i>)						
Medium (up to and including bachelor's degree)					1.359*** (0.004)	1.407*** (0.002)
High (Master's degree or higher)					1.257* (0.077)	1.298** (0.046)
No answer					1.294 (0.511)	1.341 (0.464)
Occupational status (<i>baseline: employed</i>)						
Not employed or retired					1.177 (0.194)	1.123 (0.361)
Retired					1.027 (0.883)	1.001 (0.995)
Internet use (<i>baseline: low</i>)						
Medium						0.908 (0.378)
High						0.771** (0.025)
Importance of product safety (<i>baseline: not very important</i>)						
Very important						1.612***

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
						(<0.001)
N	10,013	10,013	10,013	10,013	10,013	10,013

Note: odds-ratios shown. Number in parentheses provides p-value of the odds-ratio. * p < 0.01, ** p < 0.05, *** p < 0.01.

Table 107: Timing of the prompt to register – multivariate analysis; alternative baseline for the treatment variable

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Timing of the prompt to register (<i>baseline: With package</i>)						
Point-of-Sale	5.022*** (<0.001)	5.102*** (<0.001)	5.123*** (<0.001)	5.128*** (<0.001)	5.157*** (<0.001)	5.220*** (<0.001)
General prompt	0.662*** (0.001)	0.661 (0.001)	0.668*** (0.001)	0.667*** (0.001)	0.664 (0.001)	0.662*** (0.001)
For odds-ratios of other variables, see Table 106.						

Note: odds-ratios shown. Number in parentheses provides p-value of the odds-ratio. * p < 0.01, ** p < 0.05, *** p < 0.01.

A14.4.6 Effort to complete registration

The outcome variable of interest for the table below is whether a respondent completed the registration process, provided they also started it.

Table 108: Effort to complete registration – multivariate analysis

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
Effort to complete registration (<i>baseline: medium</i>)						
Low	2.681*** (<0.001)	2.725*** (<0.001)	2.765*** (<0.001)	2.809*** (<0.001)	2.863*** (<0.001)	2.852*** (<0.001)
High	0.663** (0.026)	0.678** (0.037)	0.697* (0.051)	0.710* (0.067)	0.726* (0.088)	0.710* (0.070)
Country (<i>baseline: Belgium</i>)						
Bulgaria		1.670** (0.017)	1.594** (0.032)	1.602** (0.031)	1.321 (0.235)	1.172 (0.509)
Croatia		1.674** (0.021)	1.649** (0.026)	1.642** (0.027)	1.658** (0.026)	1.521* (0.069)
Czech Republic		0.841 (0.453)	0.787 (0.309)	0.774 (0.276)	0.933 (0.784)	0.859 (0.550)
Germany		0.949 (0.809)	0.922 (0.709)	0.911 (0.668)	0.983 (0.941)	0.979 (0.927)
Ireland		1.627** (0.024)	1.583** (0.034)	1.562** (0.041)	1.458* (0.093)	1.339 (0.198)
Denmark		0.902 (0.616)	0.864 (0.483)	0.851 (0.438)	0.844 (0.442)	0.835 (0.417)
Latvia		1.619** (0.033)	1.567* (0.051)	1.560* (0.053)	1.558* (0.062)	1.509* (0.088)
Portugal		1.379 (0.118)	1.353 (0.148)	1.358 (0.144)	1.379 (0.138)	1.267 (0.285)
Spain		0.885 (0.564)	0.850 (0.447)	0.853 (0.457)	0.854 (0.477)	0.784 (0.279)

	Model					
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Product (baseline: smart phone)</i>						
High chair			0.711* (0.090)	0.691* (0.067)	0.691* (0.071)	0.680* (0.062)
Toaster			1.139 (0.513)	1.114 (0.588)	1.114 (0.586)	1.091 (0.663)
<i>Age (baseline: 18-34)</i>						
35-54				0.832 (0.424)	0.887 (0.623)	0.871 (0.582)
55-64				0.737 (0.266)	0.857 (0.595)	0.853 (0.595)
65+				0.789 (0.326)	1.070 (0.859)	1.083 (0.839)
<i>Financial status (baseline: very easy to make ends meet)</i>						
Easy to make end meet					0.796 (0.417)	0.833 (0.529)
Difficult to make ends meet					0.838 (0.557)	0.885 (0.690)
Very difficult to make ends meet					1.248 (0.608)	1.214 (0.652)
No answer					0.663 (0.381)	0.701 (0.461)
<i>Educational level (baseline: low; up to and including secondary education)</i>						
Medium (up to and including bachelor's degree)					1.493** (0.044)	1.488** (0.048)
High (Master's degree or higher)					1.945** (0.015)	1.920** (0.019)
No answer					0.596 (0.442)	0.625 (0.458)
<i>Occupational status (baseline: employed)</i>						
Not employed or retired					1.035 (0.882)	1.051 (0.831)
Retired					0.787 (0.504)	0.821 (0.593)
<i>Internet use (baseline: low)</i>						
Medium						1.147 (0.506)
High						1.440 (0.100)
<i>Importance of product safety (baseline: not very important)</i>						
Very important						1.515** (0.025)
N	2,584	2,584	2,584	2,584	2,584	2,584

Note: odds-ratios shown. Number in parentheses provides p-value of the odds-ratio. * p < 0.01, ** p < 0.05, *** p < 0.01.

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